The Changing Patterns of Financial Integration in Latin America

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Abstract

This paper describes how Latin America and the Caribbean has been integrating financially with countries in the North and South since the 2000s. The paper shows that the region is increasingly more connected with the rest of the world, even relative to gross domestic product. The region's connections with South countries have been growing faster than with North countries, especially during the second half of the 2000s. Nevertheless, North countries continue to be the region's principal source and receiver of flows. The

changes reflect significant increases in portfolio investments, syndicated loans, and mergers and acquisitions. Growth of greenfield investments has been more subdued after the initial high level. Greenfield investments in the region have been in sectors in which the source country has a comparative advantage, not where the receiver country has an advantage. Mergers and acquisitions have been in sectors in which the receiver country has a comparative advantage.

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1. Introduction

Developing *South* countries have been gaining space in the global economy and in global finance, both as senders and as receivers, as is documented in the recent Flagship Report (de la Torre et al., 2015).¹ In particular, since the 2000s, South countries have become a significant source and target of foreign direct investment (FDI), bank lending, and portfolio investments. For example, while South countries received about 26% of global capital inflows during the 1990s, by the end of the 2000s they received almost 55% of the total flows. As sources of capital flows, South countries sent about 53% of global capital outflows by the end of the 2000s, up from 14% in 1990. Moreover, before the 2000s, most of the capital exported from South countries had a developed *North* country as a target.² In more recent years, however, South countries have become an important source of capital flows for other South countries. In fact, the number of active South-South financial connections as a ratio of all active connections in the world increased faster than the North-North, North-South, and South-North connections, reflecting a higher degree of connectivity within the South. Moreover, current projections suggest that these patterns are not temporary and the South will continue to gain space in the years to come. Although the growth in South-South capital flows reflects developing countries' increasing integration into global financial markets, countries from the North still stand alone at the center of the global financial network. A significant number of South countries still needs to be connected with a wide set of countries in the world.

To better understand the South's integration in global finance, this paper expands upon the existing evidence by exploring how Latin American and Caribbean (LAC) countries have been integrating financially with both North and South countries. In particular, the paper addresses the following main questions about LAC's financial integration. How are LAC countries connecting financially with countries in the North, countries in other regions of the South, and other LAC countries? How have these connections evolved during the 2000s? What role have new connections played in the evolution of these flows?

The paper also investigates if trade is an important factor behind the dynamics of LAC's financial flows. In recent years, there has been growing interest in understanding the link between international trade and financial flows. The classical Heckscher-Ohlin-Mundell paradigm predicts that exports are based on endowments, the North exports capital and countries invest in economies where

¹ Other studies make similar points. See, for example, Aykut and Ratha (2003) and World Bank (2006, 2011, and 2013).

² In this paper, the North comprises the G-7 and Western European countries. The South includes all other economies, though in the empirical analysis in this paper, we separate the South into LAC and non-LAC countries.

they cannot export their goods, thereby gaining access to domestic markets. As a consequence, trade integration reduces incentives for capital to flow to capital-scarce countries. Recent theoretical work on international investments argues, however, that trade integration can foster capital flows and that the South exports capital to the North (Antras and Caballero, 2009; Ju and Wei, 2011; Jin, 2012). Part of these effects might be rooted in firm-level motives to export and invest abroad (Greenway and Kneller, 2007; Alfaro and Charlton, 2009).

On the empirical front, some papers use data from the early 2000s to understand whether financial flows are explained by gravity models, where aggregate trade is one of the key variables capturing distance and transaction costs and, thus, explaining capital flows.³ The most disaggregated level at which the links between financial and trade flows have been studied so far is the country-pair level, generally pooling both exports and imports. However, the empirical relevance of the interaction between trade and capital flows is not yet fully understood. In particular, little is known about the cross-country sectoral allocation of capital and how that is related to the sectoral composition of exports. This paper expands this strand of the literature by analyzing to what extent LAC's financial integration is related to its trade flows. In particular, the paper analyzes the sectoral allocation of both financial and trade flows and studies if the comparative advantage of LAC countries has helped in attracting financial flows.

To shed light on all these topics, the paper uses a novel dataset encompassing cross-border portfolio investments, syndicated loans, mergers and acquisitions (M&A), and greenfield flows, and analyzes in detail how LAC has been integrating financially with the rest of the world. In addition, it uses sector-level trade data to study the relation between trade and financial flows.

Some of the main patterns that arise from the analysis can be summarized as follows. First, accompanying the trends in the South, LAC countries appear to be increasingly more connected with the rest of the world in terms of both cross-border portfolio holdings and capital flows. The largest increases took place in LAC's investments abroad, even though the investments of the rest of the world in LAC have also increased across all types of financial flows. Second, despite these increases in recent years, cross-border investments into LAC countries far outweigh foreign investments by LAC countries. That is, LAC is more important as a receiver than as a sender of investments. Third, LAC's connections with other South countries grew more rapidly than with North countries, especially during the second half of the 2000s. This growth has increased the participation of South countries as

³ See, for example, Aviat and Coeurdacier (2007), Stein and Daude (2007), Daude and Fratzscher (2008), Lane and Milesi-Ferretti (2008), Dailami et al. (2012), and Okawa and van Wincoop (2012).

senders of resources to LAC countries, particularly in M&A. In addition, North-LAC flows have been increasing at a slower pace than North-South flows. LAC countries have therefore been losing ground with respect to the South as receivers of North flows. Despite these changes, the North remains by far the principal source (receiver) of the flows to (from) LAC countries. Fourth, within-LAC flows have increased substantially as well, in some cases more than flows to the North, reflecting a higher degree of connectivity among the countries of the region.

What is behind these patterns of integration? Although higher GDP growth explains much of the growth, the data indicate that LAC countries have become more important in the global financial transactions even relative to GDP. The patterns reflect large increases in portfolio investments, syndicated loans, and M&A flows, the types of investments that experienced the highest growth rates. Greenfield investments grew less than other flows in recent years, but these cross-border investments were already well established at the beginning of the 2000s, especially between LAC countries and elsewhere in the South. The different growth trajectories across types of investments may reflect the fact that, as LAC has become more developed, investors have become more comfortable conducting more arm's length transactions and shifting to other types of contracts that require less or no actual production in the target countries (providing loans and purchasing securities rather than opening a foreign plant).

The growth of LAC's connections with the rest of the world has been due to an increase in both the number of new connections (extensive margin) and the intensity of preexisting connections (intensive margin). For portfolio investments, the intensive margin explains almost all of the growth in cross-border holdings. In contrast, for syndicated loans, M&A, and greenfield flows, the extensive margin plays a more important role, especially in the connections between LAC and countries in other South regions and within LAC countries. North-LAC links were already well established in the 1990s; the intensive margin drove their growth.

The patterns above are partly explained by the dynamics of trade flows. Greenfield investments and trade seem to be complements: countries in the North and South invest in the same sectors in which they have a relative comparative advantage, not necessarily in the sectors in which LAC has a relative comparative advantage. This complementarity is also observed in South-LAC flows of syndicated loans. It is not observed in M&A flows and North-LAC syndicated loans flows. In these cases, foreign investments have gone to sectors in which the receiver country has a comparative advantage.

The rest of the paper is organized as follows. Section 2 describes the data. Section 3 shows the main patterns of financial integration of LAC with the North and the South. Section 4 analyzes how much of the expansion in LAC's global connections is due to the growth in the number of new connections. Section 5 explores the relation between bilateral trade and financial flows. Section 6 concludes.

2. Data

To analyze LAC's patterns of financial integration, we assemble a comprehensive dataset covering bilateral data on portfolio investments and sector-level cross-border transactions (FDI and syndicated loans) between LAC countries and the rest of the world.⁴ For portfolio investments, we work with the Coordinated Portfolio Investment Surveys (CPIS) from the International Monetary Fund (IMF) on the stock of portfolio assets covering the period 2001-2011 for 75 source countries and 207 recipient countries.⁵ The dataset includes 40,052 observations for debt contracts and 38,427 observations for equity contracts. Of these observations, 21,092 involve a LAC country (as a sender or a receiver). For FDI, we use firm-level transaction data on M&A from Thomson Reuters' SDC Platinum and on (announced) greenfield investments from the Financial Times' fDi Markets, which are aggregated to construct a bilateral country-level dataset. The former covers the period 1990-2011 for 139 source and 162 recipient countries; the latter covers the period 2003-2011 for 157 source and 193 target countries. For syndicated loans, we use Thomson Reuters' SDC Platinum transaction-level data for 1996-2012 covering 111 source and 183 recipient countries, which is also aggregated to the bilateral country level.

Because the CPIS data are on stock holdings, the estimates on portfolio assets are much larger than the estimates on syndicated loans, M&A, and greenfield investment, which are based on annual transactions. Therefore, these different datasets cannot be compared in terms of size. Nonetheless, the overall patterns on their evolution across and within the different types of financial assets are still informative.

⁴ Appendix 1 provides a comparison of the new bilateral dataset assembled with the more standard aggregate balance of payments data on gross capital flows.

⁵ The CPIS covers portfolio investment securities held by monetary authorities but not their reserve assets. The central banks of many LAC countries (such as Brazil, Chile, Colombia, and Costa Rica) classify all their foreign securities as reserves assets. In these cases, the CPIS database does not cover the investments made by the central banks. Central banks from other LAC countries (such as Mexico, Panama, and República Bolivariana de Venezuela) do not classify all their holdings as reserves assets. For these countries, the CPIS survey covers all their holdings that are not reserves assets. As a consequence of these differences, the figures presented in this paper may be lower than LAC countries' actual holdings in the rest of the world.

In addition, to study the link between trade and financial flows in LAC we explore the sectoral dimension of the different datasets. The information on trade flows we retrieve from Comtrade has bilateral sectoral-level data, covering the 1990-2012 period for 205 source and recipient countries. This database has yearly information at the five-digit SITC (Standard International Trade Classification) level. For financial flows, the Thomson Reuter's SDC Platinum and the Financial Times' fDi databases contain transaction-level information at the four-digit SIC (Standard Industrial Classification) level. Hence, for each year, we aggregate the transaction-level observations into a bilateral sectoral-level dataset. That is, for each country pair in each year, we track financial flows in different sectors. We then match these data on foreign investments (both M&A and greenfield) and syndicated loans at the bilateral sectoral level with trade data with the same level of aggregation. Notice however that the sectoral classification of the data in the different datasets is not directly comparable: the SITC is a classification of goods while the SIC identifies the industry. We use Eurostat's conversion tables to obtain for each SITC code the associate four-digit ISIC (International Standard Industrial Classification) code. Our final dataset is aggregated into the following 14 sectors: agriculture, hunting, forestry, and fishing; mining; crude petroleum and natural gas; manufacturing of food, beverage, and tobacco; textiles and apparel; wood and paper related products; manufacturing of refined petroleum and related; chemicals and plastics; non-metallic minerals; metals; machinery and equipment; transport equipment; utilities and infrastructure; and other manufacturing.⁶ The M&A dataset at the sectoral bilateral level contains 21,199 observations, while the greenfield and syndicated loans datasets encompass 31,925 and 39,386 observations, respectively. Of these observations, 2,635 involve a LAC country (as a sender or a receiver) in the M&A dataset, 3,598 observations in the greenfield dataset, and 3,970 in the syndicated loans dataset.

We also obtain information on gravity control variables at the bilateral level. In particular, we gathered country-pair information on the geographical distance between countries (from CEPII's GeoDist database), differences in latitude and longitude (calculated based on data from the CIA World Factbook), differences in time zones, whether they share a common language (CEPII's GeoDist database), whether they have a common legal origin (from La Porta et al., 1998), and whether the receiver (sender) country is (or have been) a colony of the sender (receiver) (from CEPII's GeoDist database).

⁶ It is worth pointing out that that we do not explore the data on the broadly defined services sector - SIC codes [1500-2000) and [5000-9900) - because of the lack of trade data in services at the same level of aggregation. Hence, we drop all transactions with a classification in one of the following sectors: financial intermediation; public sector; and other services.

As pointed out above, in this paper, the North comprises the G-7 and Western European countries, whereas the South includes all other economies.⁷ In order to assess whether the patterns of financial integration of LAC countries differ from those of other South countries, throughout this paper we split the South into LAC and non-LAC countries.

3. The Role of LAC in International Financial Transactions

Although the existing literature has already described how the South has been gaining space in global finance, little is known about the role that LAC countries have played in this process. As mentioned above, South countries have broadened and deepened their connections not only with North countries, but also with other South countries. LAC has participated in this trend as well, though at a lower rate relative to Asia. In fact, across all different types of transactions, LAC has been gaining ground over time, both as a receiver and a sender of these transactions. Table 1 illustrates many aspects of LAC's financial integration.

LAC countries are increasingly more connected with the rest of the world. While the investments of the rest of the world to LAC have increased in almost all the categories, the largest increases took place in LAC's investments abroad. LAC countries' portfolio holdings in the rest of the world (North and South countries) rose from an average annual of \$45.3 billion (in 2011 U.S. dollars) in 2001-2005 to an average of \$152.5 billion in 2006-2011. Growth in cross-border syndicated loans and M&A flows has been substantial as well.⁸ Between 2001-2005 and 2006-2011, the average annual volume of syndicated loan from LAC to the rest of the world jumped from \$2.1 billion to \$4.0 billion and the volume of M&A flows rose from \$4.2 billion to \$12.9 billion. When using a longer time span the growth is even more impressive. Greenfield growth has been more subdued, but these cross-border investments were already well established at the beginning of the 2000s (compared to syndicated loans and M&A).

Although there has been an important rise in the role played by LAC as a sender region, cross-border flows to LAC countries far outweigh flows from LAC countries. For syndicated loans, M&A, and greenfield investment, total flows to LAC countries from North and South countries in 2006-2011 were almost nine times larger than flows from LAC countries to North and South countries.

⁷ Western Europe comprise the following countries: Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Norway, Portugal, San Marin, Spain, Switzerland, Sweden, and the United Kingdom.

⁸ The dataset for syndicated loans also covers 2012; the later period is thus 2006-2012. For simplicity, this period is referred to as 2006-2011 throughout the paper.

These sharp differences may explain why LAC's financial connections in all types of financial transactions have increased more as a sender than as a receiver, especially with respect to other South countries.

Another notable feature of the growth in LAC's financial integration with the rest of the world is that (except for greenfield investments) LAC's connections with other South countries have been growing faster than with North countries, especially during the second half of the 2000s. This growth has increased the participation of South countries as financiers of LAC countries, particularly in M&A. Annual flows from South to LAC countries averaged \$1.6 billion for syndicated loans and \$0.4 billion for M&A during 2001-2005, while for 2006-2011 they reached \$5.6 and \$7.6 billion (growing 253% and 1,771%), respectively. In contrast, average annual North-LAC flow of syndicated loans rose 40% (from \$46.5 to \$64.9 billion), and flows of M&A increased only 33% (from \$23.3 to \$30.9 billion). In fact, North-LAC flows increased at a slower pace than North-South flows, and therefore LAC countries lagged other South countries.⁹

Flows within LAC countries have also increased substantially, in some cases more than those to the North, reflecting a higher degree of connectivity among countries in the region. Portfolio holdings averaged \$3.5 billion during 2001-2005, while for 2006-2011 they reached \$11.4 billion (growing 227%). Between 2001-2005 and 2006-2011, the average annual volume of syndicated loans within LAC countries rose from \$0.6 billion to \$1.6 billion (increasing 190%), and M&A flows soared from \$3.6 billion to \$6.1 billion (growing 67%). In contrast, greenfield investment—the level of which was already high in the first half of the 2000s (compared with syndicated loans and M&A)—remained stagnant.

Although flows between LAC and South countries have increased more rapidly, the North is still by far the principal source (receiver) of flows to (from) LAC countries. Figures 1 and 2 show these patterns for LAC as a sender and as a receiver, respectively.

Figure 1 shows that North countries are still the main destination of LAC cross-border flows in portfolio investments, syndicated loans, and M&A. During 2006-2011 North countries accounted for 89% of LAC's portfolio investments abroad, 65% of LAC's syndicated loans, and 53% of LAC's

⁹ The volume of syndicated loans from North to South countries increased 86% and M&A flows rose 94% over this period. North-South portfolio investments increased 135% between 2001-2005 and 2006-2011, and North-LAC portfolio investments rose 97%. Tables 3 and 4 provide more details.

M&A flows. Greenfield investment is the only type of flow for which North countries are not the main destination of LAC flows.¹⁰

For LAC as a receiver, Figure 2 shows that North countries are by far the main source of cross-border flows to LAC countries, accounting 96% of portfolio investments, 90% of syndicated loans, 69% of M&A, and 76% of greenfield flows in 2006-2011. Given the faster growth of South connections, however, there has been gradual decline in the share of North countries, mostly in M&A.

Because the patterns documented thus far are expressed in constant dollars, they might be driven by the fact that the real economic activity has been growing relatively fast in LAC countries. To account for this possibility, Table 1, Panel B shows that even when considering transactions relative to LAC's GDP, there is still an increase in the cross-border investments from/to LAC in portfolio, syndicated loans, and M&A flows.¹¹ In contrast, greenfield flows have grown more slowly than LAC's GDP between the earlier part of the sample (2003-2005) and the later one (2006-2011). When using as a benchmark the average GDP of the sender and receiver region, similar patterns emerge (Table 1, Panel C).

Figure 3 shows the annual evolution of different types of LAC flows. It indicates that the integration of LAC countries with the rest of the world has not been a smooth process. Cross-border investments to and from LAC have been characterized by boom and bust patterns. Moreover, the growth periods for different types of investments seem to be correlated, particularly in syndicated loans and M&A (the data for which the sample periods are longer) and for LAC as a receiver. In both cases there was an increase in flows to LAC countries during the mid-1990s, a decrease at the beginning of the 2000s, and a rise since then and until the 2008–2009 global financial crisis. As explained in more detail in Appendix 2, the effect of the global financial crisis seems to be different in these two types of investments.

4. Growth in the Intensive and Extensive Margins

¹⁰ Figure 1 shows that the South increased substantially its participation as receivers of M&A flows during 2006–2011 (from 1% to 15%), whereas participation by LAC countries declined (from 46% to 32%). However, only two large transactions drove this result. The first was the 2006 acquisition of the Canadian mining company Inco by the Brazilian company Vale. This \$17.2 billion deal accounted for 28% of LAC-North flows between 2006 and 2011. The other transaction was the 2007 acquisition of the Australian Rinker Group by the Mexican cement company Cemex. This \$14.2 billion transaction accounted for 85% of LAC-South flows between 2006 and 2011. Excluding these two transactions, non-LAC South countries would have received just 4% of LAC M&A flows in 2006–2011 and LAC countries would have received 44%.

¹¹ The only exception is North-LAC syndicated loans and M&A flows.

How much of the growth in LAC's connections reflects growth in the intensive margin (which captures increases in the value of transactions for existing connections) and how much reflects growth in the extensive margin (which captures increases in the proportion of active connections)? Before addressing this question, we first describe the main patterns regarding the evolution of the extensive margin.

Figures 4-7 show the evolution of the extensive margin for each type of investment and that of the total value of these connections. To measure the active connections, we compute the number of country-pairs that have a positive flow in each year over the number of country-pairs with a positive or zero flow. Appendix Figure 1 shows the number of active connections.¹² When comparing the level of the extensive margin of portfolio investments with the level of syndicated loans, M&A, and greenfield flows, one needs to recall that portfolio investments are stocks while the other measures are flows. The extensive margins of these types of transactions are thus expected to be very different.¹³

In general, the evidence shows that LAC countries are connected with a higher percentage of North countries than with South ones. Since the beginning of the 2000s, however, LAC countries have broadened their connections with the South and with other LAC countries. The evidence also shows that the percentage of active connections is greater when LAC is a receiver: the percentage of active North-LAC links is larger than the percentage of active LAC-North links (except for portfolio investments), and the percentage of active South-LAC connections exceeds the percentage of active LAC-South links.

Regarding portfolio investments, Figure 4 shows that LAC countries are connected (both as receivers and senders) with a much higher percentage of North countries than South ones. For example, over the entire sample period the percentage of active connections from LAC to North countries was around seven times greater than the percentage of active connections between LAC and South countries. Since the beginning of the 2000s, however, LAC countries have broadened their connections with South and LAC countries. The share of active LAC-South connections increased

¹² Figures 4-7 show the percentage of active connections but they do not provide information regarding the number of active connections. Given that the South category includes many more countries, the extensive margin computed in these figures could be a misleading indicator of the number of active connections between two regions. Appendix Figure 1 tries to account for this.

¹³ For portfolio investments, the extensive margin might be underestimated if investors in a country hold internationally diversified mutual funds that invest in many other countries. However, international mutual funds are not very well diversified (Didier, Rigobon, and Schmukler, 2013). Therefore, even if some of the portfolio investments are in mutual funds, the degree of diversification or the extensive margin may not be significantly larger.

from 4% in 2001 to almost 11% in 2011 and the share of active LAC-LAC links increased from 24% in 2001 to 42% in 2011.

Figure 5 shows that for syndicated loans, LAC countries as receivers are much more connected with North countries than with South or other LAC countries. In 2011 the share of active connections was 11% for North-LAC links, and less than 2% for both South-LAC and LAC-LAC connections. The larger number of banks in the North that have traditionally engaged in syndicated loans may explain these figures. However, there is a downward trend in both the extensive margin and total flows of North-LAC connections (especially during the crisis years) and an upward trend in the connections from South to LAC and within LAC. As a sender, the percentage of active connections and the total amount financed by LAC to any other region is very low, suggesting that banks in LAC countries still have not engaged in this type of transactions across borders.

In line with the previous findings, Figure 6 shows that during the 1990s LAC countries as receivers of M&A were much more connected with North countries than with South, including countries in LAC. In 1999 the share of active connections was almost 7% for North-LAC, 0.1% for South-LAC and 2% for LAC-LAC connections. However, since the 2000s there has been an upward trend in the extensive margins of LAC-LAC and South-LAC connections, whereas North-LAC connections remain almost stagnant. Although these developments have narrowed the gap in the extensive margin across regions, the North-LAC percentage of active connections still remains larger. In 2011, 7% of North-LAC, 4% of LAC-LAC, and 1% of South-LAC links were active. As senders, LAC countries are equally connected with North countries and other LAC countries: in 2011 the share of both types of active connections was about 4%. In contrast, the share of active connections (and the total amount financed) by LAC in South countries is very low and displays significant volatility.

Figure 7 shows similar patterns for greenfield investment: the percentage of active connections is greater when LAC is a receiver and LAC is connected with a higher percentage of North countries than South ones. However, there is a distinctive characteristic for greenfield investments: unlike syndicated loans and M&A flows, there is an upward trend since the 2000s in the percentage of active North-LAC connections.

To explicitly separate between the growth of the extensive and intensive margin, we measure how much of the growth of the financial transactions is due to the establishment of new connections. Table 2 shows both the evolution of the flows for different regions with respect to LAC and the share of the increase in these flows that is driven by new connections relative to the initial period (for each type of flow) and the previous period.

Overall, the intensive margin accounts for almost all of the growth of cross-border portfolio investments. It also explains North-LAC flows. For other types of investments, the extensive margin plays a more important role, especially in LAC-South and within LAC links.

For portfolio investments, although there was an important increase in the value of stock holdings during 2006-2011, few new connections were created; the increase reflects a deepening of the intensive margin. Average LAC-North holdings increased from \$44.3 billion in 2001-2005 to \$146.1 billion in 2006-2011, but only 0.08% of the increase was attributable to new connections. Similarly, the increase in North-LAC investments attributable to new connections was only 0.1%. This pattern reflects the fact that even at the beginning of the 2000s, the links between LAC and North countries were already well established. For South-LAC and LAC-LAC links, there was some increase in investments as a result of new connections, but this increase represents less than 10% of the expansion in cross-border holdings.

For syndicated loans and M&A, new connections played a more important role in augmenting cross-border flows, especially LAC-South and LAC-LAC flows. For example, within LAC, 92% of syndicated loan flows during 2006–2011 were attributable to connections established after 1996–2000. New connections represented 57% of 2006–2011 M&A flows. Even between 2001–2005 and 2006–2011 there was a significant increase in flows between South and LAC (and within LAC) as a result of new connections, suggesting that syndicated loan and M&A links are still expanding. New connections represented a much smaller fraction of North-LAC flows in 2006–2011 (2% for syndicated loans and 18% for M&A). This result suggests that North-LAC links were already well established in the 1990s. For greenfield investment, a large fraction of the 2006–2011 flows was attributable to new connections, mostly LAC-South and South-LAC links.

To capture the growth in the extensive and intensive margins more formally, Tables 3 and 4 show the results of regressions that include source and receiver fixed effects and gravity controls. The extensive margin regressions (Table 3) are Probit regressions where the dependent variable is an indicator variable that takes the value of 1 whenever there is a bilateral positive flow between the two countries involved, and 0 otherwise. These regressions include gravity control variables which help explain different levels of financial flows between each country pair based on their geographic distance, differences in latitude and longitude, differences in time zones, whether they have a common language, whether they have a common legal origin, and whether the receiver (sender) country is (or has been) a colony of the sender (receiver). The regressions also control for source- and target-country dummies, and region-pair dummies (North-North, North-South, North-LAC, South-North, South-

South, South-LAC, LAC-North, LAC-South, and LAC-LAC). Having controlled for these factors, the regressions measure the trends in financial connections across regions. Table 3 also reports the results of a two-tailed P-value test for the differences between these trend coefficients to analyze if LAC countries have been integrating faster than other South countries in the financial network (both as senders and receivers).

The regressions in Table 3 show a positive trend for almost all the region pair connections. The only negative trend is observed in the case of North-LAC flows of syndicated loans, which is consistent with the patterns described in Figure 5. In addition, for all types of financial investments, the coefficients of South-LAC and LAC-LAC trends are higher than North-LAC ones.¹⁴ This is consistent with the fact that North-LAC links were already well established even at the beginning of the 2000s, as shown in Table 2. As expected, the gravity controls coefficients show that the probability of a connection between two countries is decreasing on the geographical distance between the countries. On the other hand, the fact that the countries share a common language, have a common legal origin, or have a colony relation, increases the probability of a connection.

The intensive margin regressions (Table 4) are OLS regressions with the log of the bilateral flows (the value of the connections) as a dependent variable. In order to capture the intensive margin, these regressions only include links that were already established in the first period of each investment type.¹⁵ Unlike Table 3, these regressions use region-region and country-region level data (not country-country level) and therefore there is no need to use gravity controls. Table 4 also reports the differences between the trend coefficients (as in Table 3).

The regressions of Table 4 show an increase in the value of the preexisting connections for portfolio investments (even in terms of GDP). This is consistent with the results of Table 2, which show that the growth in cross-border portfolio investments was driven mostly by the intensive margin. For M&A, there is a rise in the intensive margin of connections between North and LAC and within LAC countries (even in terms of GDP), but not for links between LAC and other South countries.¹⁶ For syndicated loans, many of the trend coefficient are not significant (when measuring in terms of GDP), suggesting that the extensive margin played a more important role. Finally for greenfield flows

¹⁴ Although not reported, the differences are significant for portfolio investments, syndicated loans, and M&A flows, but not for greenfield investments.

¹⁵ That is, we only include connections that were already established in 2001-2005 for portfolio investments, 1996-2000 for syndicated loans, 1990-1995 for M&A, and 2003-2005 for greenfield flows.

¹⁶ For M&A, the LAC-South trend is omitted because none of the 1996-2011 connections existed in 1990-1995 (as shown in Table 2).

(the ones that remained almost stagnant), the regressions show a decrease in the value of the preexisting connections (in terms of GDP).

The main result from Tables 3 and 4 is that North-LAC connections are increasing more slowly than North-South connections in both the intensive and extensive margins, with the exception of greenfield investment. LAC is therefore losing ground relative to other regions of the South in terms of flows from the North. In contrast, for LAC as a sender, there is no clear evidence whether LAC-North (neither LAC-South) links are increasing more rapidly or slowly than South-North (South-South) connections.

Are the previous trends driven by large countries only, or have small countries expanded their connections as well? The following analysis highlights the role that large countries (in particular, Brazil and Mexico) have played. It shows that Brazil and Mexico drove LAC's connections with the rest of the world, while for within-LAC links their role, while important, was more subdued.

Using maps, Figure 8 depicts every LAC-South connection whose flows are greater than \$1 million (measured at 2011 prices). The graphs show an increase of the extensive margin in all four types of investments. However, except for portfolio investments, the two largest countries of the region seem to be behind this trend, as they accounted for the majority of the connections. Brazil and Mexico accounted for 10 of the 17 connections between LAC and South countries for syndicated loans in 2006–2011. They accounted for 11 of the 15 LAC-South links for M&A and for 56 of the 69 greenfield links. Although not reported, for LAC-North links, they accounted for almost half of the links.¹⁷

In contrast, they play a less critical role as senders within the LAC region (Figure 9). Of 38 syndicated loan connections during 2006–2011, Brazil and Mexico accounted for just 7 links. In the case of M&A, they accounted for 18 out of the 62 links. In greenfield investments, they accounted for 30 of the 122 links. Nevertheless, as shown below, these connections still represent an important share of the flows.

Figure 10, Panel A shows the value of cross-border investments within LAC and from LAC to the rest of the world and indicates the percentage share attributable to Brazil and Mexico. These two countries accounted for the majority of the outflows in the case of FDI flows to the North and South (more than 80% for both M&A and greenfield flows), whereas they accounted for just 45% of M&A flows and 62% of greenfield flows within LAC countries. For portfolio investments and

¹⁷ For syndicated loans, Brazil and Mexico accounted for 14 of the 31 links between LAC and North countries in 2006–2011. They accounted for 19 of the 48 LAC-North links for M&A and for 21 of the 51 greenfield links.

syndicated loans, the share of flows captured by Brazil and Mexico is similar for flows within LAC and for flows to the rest of the world. In addition, portfolio investment is the only type of venture in which other countries of the region rather than Brazil and Mexico accounted for the great majority of the investments.

The role of Brazil and Mexico as receivers of flows from the North and South is even more striking, as they accounted for the great majority of the inflows in the four types of investment considered (Figure 10, Panel B). Moreover, flows to Brazil and Mexico have increased at a faster pace than flows to other LAC countries, and therefore they have increased their participation as receivers of flows. For flows within LAC countries, while important, their role was more subdued. Within LAC, other countries of the region such as Argentina, Chile, Colombia, Peru and República Bolivariana de Venezuela capture an important share of the inflows, especially in greenfield investments.

Summing up, although LAC is more integrated with North and South countries, due to an increase of both the extensive and intensive margins, much of this growth seems to be driven by the two largest countries of the region. Within LAC connections, although the role of Brazil and Mexico is still important, other countries of the region do capture an important share of the flows.

5. LAC's Financial Flows and Trade Flows

The globalization of LAC, which started in the late 1980s and continued strongly during the 1990s, accelerated and intensified in the 2000s. A growing body of evidence suggests that the patterns of financial globalization changed during the 2000s.¹⁸ Aside from size, one aspect of both trade and financial flows that has been changing significantly for LAC (as well as other South countries) is their composition. The sectoral composition of LAC's connections with other South countries is generally different from the composition of its connections with North countries, in both trade and finance. Hence, an important question is the extent to which financial flows reflect the dynamics of trade connections. This section sheds light on the links between these two types of flows and the importance of the link for LAC.

Here we study the role played by the different sectors in the growth of the financial flows to and from LAC countries. In addition, we study the links between trade and financial flows in LAC at the sectoral level. To do so, the data on foreign investments (both M&A and greenfield) and syndicated

¹⁸ Given the relatively short time span of the data on gross capital flows explored in this paper, we are not able to clearly disentangle the extent to which changes in the nature of financial integration of LAC countries are inherent to its globalization process or driven by the changes in the global landscape, such as those associated with the rise of the South for instance.

loans at the bilateral sectoral level are matched with sector-level trade data. As discussed in Section 2, we analyze bilateral data for 14 sectors for which both trade and financial flows information is available. For ease of exposition of the broad trends, we group these sectors into three broad categories: primary, light manufacturing, and heavy manufacturing sectors. The primary sector includes the following sub-groups: agriculture, hunting, forestry, and fishing; mining (coal, metal and mining, and quarrying of nonmetallic); crude petroleum and natural gas. The light manufacturing sector includes: manufacturing of food, beverage, and tobacco; textiles and apparel (including leather); wood and paper related products. The heavy manufacturing sector includes: manufacturing of refined petroleum and related; chemicals and plastics; non-metallic minerals; metals; machinery and equipment; transport equipment.¹⁹

Figure 11 shows the average flows from and to LAC countries by receiver and sender region, as well as their sectoral composition for different sample periods.²⁰ Overall, it shows that the increase in financial flows from LAC has occurred both in the primary and in the heavy manufacturing sector. In contrast, the growth in financial flows to LAC has been mostly driven by the primary sector.

The patterns for LAC as a sender (Figure 11, Panel A) show that no single sector explains the increase in financial flows from LAC countries. For LAC-South and LAC-LAC flows, the primary sector drove the growth in syndicated loans, while the heavy manufacturing sector grew more in M&A and greenfield flows. In contrast, for LAC-North flows, the heavy manufacturing sector accounted for most of the growth in syndicated loans, and the primary sector powered the increase in M&A and greenfield flows.

For LAC as a receiver, the primary sector drove the growth in syndicated loans and M&A flows. Flows to the heavy manufacturing sector also increased during this period, although growth was more subdued. In contrast, there was a small decrease in both North-LAC and South-LAC greenfield flows. The reduction in flows to the primary sector accounts for the decline in North-LAC

¹⁹ In this aggregation of the data into three sectors, we dropped all transactions classified as “other manufacturing” - SIC codes [3900-4000) - and “utilities and infrastructure” - SIC codes [4000-5000) - as they do not clearly fit in either light or heavy manufacturing.

²⁰ Appendix Figure 2 shows the details for the sub regions of LAC, for the period 2003-2011. The specific countries included in each region are as follows. The Caribbean: Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Cuba, Dominica, Grenada, Guyana, Haiti, Jamaica, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands. Central America: Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama. Pacific South America: Chile, Colombia, Ecuador, and Peru. Other South America: Argentina, Bolivia, Brazil, French Guiana, Paraguay, Uruguay, and República Bolivariana de Venezuela.

flows, whereas the decrease in both the primary and heavy manufacturing sectors accounts for the drop in South-LAC flows.

What is behind the sectoral allocation? Is LAC receiving inflows in sectors in which it has a comparative advantage or are the inflows related to the comparative advantage of the source country?

For syndicated loans and M&A flows, Figure 11 shows that LAC receives investments mainly in the primary sector, the sector in which LAC typically has a comparative advantage based on natural resources. During 2006-2011, 57% (65%) of North-LAC (South-LAC) syndicated loans and 56% (91%) of North-South (South-LAC) M&A flows were in the primary sector. The composition of greenfield inflows, on the other hand, is similar to the composition of LAC's imports, as they both are tilted toward the heavy manufacturing sector.

Thus, Figure 11 suggests that LAC's comparative advantage might have played some role in attracting financial flows, but only in the case of syndicated loans and M&A. For greenfield investments, flows have gone to sectors in which (overall) LAC does not have a comparative advantage.

The regressions in Table 5 explore more formally the relation between financial and trade flows using country-pair-level information at the sectoral level, covering all 14 sectors. In particular, they link the financial flows with the comparative advantages of the source and receiver country. The relative comparative advantage (RCA) for both the source and receiver country is constructed following Vollrath (1991), as shown in Equation 1:

$$RCA_{i,j,t} = \ln \left(\frac{X_{i,j,t} / [\sum_j X_{i,j,t} - X_{i,j,t}]}{[\sum_i X_{i,j,t} - X_{i,j,t}] / ([\sum_{i,j} X_{i,j,t} - \sum_j X_{i,j,t}] - [\sum_i X_{i,j,t} - X_{i,j,t}])} \right), \quad (1)$$

where $X_{i,j,t}$ refers to the exports of country i , in industry j , in period t .

The dependent variable is specified as $\log(1 + \text{flows})$, in order to explicitly account for the large number of observations equal to zero. All regressions control for both fixed source- and host-country effects. The regressions also include sector dummies and gravity controls. Moreover, we separate the source of the flows in North and South (including LAC) countries.

The extensive margin regressions in Table 3 showed that the geographical distance affects negatively the probability of establishing a connection between two countries. In Table 5, the negative relation between financial flows and distance holds only for flows from North countries. For flows from South countries (including LAC), distance seems to have no effect in the value of the flows. This seems consistent with the fact that South countries send the majority of their flows to the North (de la Torre et al., 2015). Similarly, in Table 3 we showed that the probability of a connection between

two countries is positively related with the fact that the countries share a common language or have a colony relation. The estimates of Table 5, however, do not show this positive relation for syndicated loans and M&A, suggesting that colony relations and common language affect the extensive but not the intensive margin.²¹ For greenfield flows, while the colony relation affects positively the amount of the financial flows, common language plays no role. Finally, similar to the results of Table 3, the estimates of Table 5 show that sharing a common legal origin increases the volume of the financial flows in the three types of investment.

The estimates of Table 5 show that, even after controlling with gravity variables for common factors that can jointly drive trade and lending decisions, countries in both the North and South (including LAC) invest more in those countries with which they have greater trade flows (measured as the sum of exports and imports). This positive relation appears in all three types of investment considered: syndicated loans, M&A, and greenfield.

Regarding the sectoral allocation of trade and financial flows, Table 5 shows, in general, a positive relation between the RCA of the source country and financial flows. In syndicated loans from South and LAC countries, in M&A flows from North countries, and in greenfield flows from both North and South and LAC countries, foreign investments have gone to sectors in which the source country has a comparative advantage.

The evidence on the relation between the RCA of the receiver country and financial flows is mixed. In general, North countries tend to invest more in sectors in which the receiver country has a comparative advantage, whereas South countries, including countries in LAC, invest more in sectors in which the receiver has a comparative disadvantage. In flows from North countries, there is a positive relation between the RCA of the receiver country and financial flows in syndicated loans and M&A flows but no significant relation for greenfield flows. In contrast, in flows from the South, including LAC, there is a negative relation for syndicated loans and greenfield flows and no statistically significant relation for M&A.

Using interaction variables for the cases when LAC is a receiver, Table 5 breaks down the relation between trade and LAC's financial inflows. Most of the interaction variables are insignificant, suggesting that the relation between capital flows and the RCA is not significantly different for LAC. However, when comparing the LAC-specific results against the aggregate results, two main differences emerge. First, when LAC is a receiver, the comparative advantage of North countries is less related to

²¹ In the case of syndicated loans, common language positively affects the financial flows, but only in the case of flows from South countries.

financial flows of M&A and greenfield investments. Second, for syndicated loans and M&A, South and LAC countries tend to invest more in those industries in which the receiver country has a comparative advantage.

The estimates at the bottom of Table 5 show the relation between capital flows and the RCA for LAC countries (the sum of the RCA and the interaction coefficients). For greenfield investment, the results indicate that North and South countries invest in LAC in the sectors in which they have a comparative advantage, not necessarily where LAC has a comparative advantage. In the case of M&A flows, foreign investments have gone to sectors in which the receiver LAC country has a comparative advantage. For syndicated loans, the evidence is mixed, depending on the source of the flows.

Summing up, the evidence suggests that LAC's comparative advantage seems to have helped attract syndicated loans and M&A but not greenfield investments. As described in Figure 11, greenfield flows to LAC countries from both the North and the South are substantially tilted toward heavy manufacturing, a sector in which (overall) LAC countries do not have a comparative advantage.

6. Conclusions

This paper offers new evidence on how LAC has been integrating financially with both the North and the South. In addition, the paper studies to what extent this process of financial integration has been related to trade flows.

LAC countries are increasingly more connected with the rest of the world, both as senders and as receivers. Although the largest increases took place in LAC's investments abroad, LAC still receives more investments than it sends to other countries. Moreover, LAC's connections with other South countries have been growing faster than with North countries, especially during the second half of the 2000s. Although this growth has increased the participation of South countries as a source of resources to LAC countries, the North continues to be by far the principal source as well as receiver of the flows to and from countries in the region. The financial flows within LAC countries have also increased substantially, in some cases more than those with the North, reflecting a higher degree of connectivity among countries in the region.

The patterns in this paper are explained by a rapid increase in portfolio investments, syndicated loans, and M&A flows, but not by greenfield investments, which were already large in the early 2000s, the beginning of our sample period. That is, the growth in LAC's financial connections with the rest of the world has been driven by an expansion in the connections that are more arm's length. These overall patterns are not explained by just a higher GDP growth. Instead, LAC countries have become

more important in the global financial transactions even relative to their GDP. Moreover, this growth reflects an increase in both the number of new connections (extensive margin) and the intensity of flows in the preexisting connections (intensive margin). For portfolio investments, almost the entire growth in cross-border holdings is explained by the intensive margin. In contrast, for syndicated loans, M&A, and greenfield flows, the extensive margin plays a more important role, especially in the connections between LAC and South countries and within LAC countries. In the case of North-LAC flows, links were already well established in the 1990s, and thus their growth was driven mainly by the intensive margin. Lastly, the increase in the flows to and from LAC countries is not concentrated in flows in a single sector, but is the result of an increase in flows in both the primary and manufacturing sectors.

The dynamics of trade flows play an important role in the evolution of financial flows. We show that, after controlling for factors that can jointly drive trade and financial decisions (such as those typically associated with gravity equations—e.g. geographic distance), both North and South (including LAC) countries invest more in those countries with which they have greater trade flows. This positive relation appears in the three types of investment considered: syndicated loans, M&A, and greenfield. When analyzing how the comparative advantage of LAC countries is related to capital flows, the evidence indicates that LAC's comparative advantage has helped attract capital in the case of syndicated loans and M&A, but not in the case of greenfield. Greenfield flows to LAC countries are substantially tilted toward heavy manufacturing from both the North and the South, sectors in which LAC countries generally do not have comparative advantages.

What do the patterns documented in this paper mean for policymakers, researchers, and practitioners interested in LAC? Although inevitably speculative in nature, the broad set of stylized facts presented here leads to some conclusions and conjectures, but also raises several questions.

First, the observed dynamics of financial flows shed some light on where the future expansions might be. The patterns suggest that LAC is gaining ground in the types of investments that are more arm's length. Therefore, facilitating the financial contracting environment might ease further expansion in these investments, to the extent North and South countries are more willing to invest in LAC in new instruments. The expansion in LAC's financial transactions might take place even when LAC is more financially connected to the rest of the world than in the real side, in particular because LAC's financial connections with the South and other LAC countries are still small relative to the investments that LAC has received from the North.

Second, and related to the point above, LAC has received more flows than it has sent abroad. One could argue that at some point these trends might change, and the more rapid increase of LAC's investments abroad might be evidence of this shift. In net terms, the patterns observed so far are the counterpart of the persistent current account deficits run over the years by many countries in the region. To the extent that these deficits are reduced, the net capital inflows into LAC will diminish. And to the extent that what LAC has borrowed will have to be repaid, the investments into LAC are likely to stabilize. Furthermore, as LAC becomes richer, it will invest more abroad. This is particularly the case vis-à-vis the North, with which the growth differentials are more consistently positive in LAC's favor.

And third, the recent expansion in capital flows between LAC and South countries has occurred to a significant degree due to an increase in the extensive margin. That is, LAC is connecting more with other LAC and South countries. To the extent that these new connections are stable and countries learn to invest in each other, it is possible that the growth in the intensive margin deepens over time, following this growth in the extensive margin. Namely, countries might invest more and more in the links that have already been established, especially if there is dynamic learning in these connections.

7. References

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Appendix 1. How Do the Bilateral Data Compare to the Balance of Payments Data?

How do the bilateral data used in this paper compare with the flows reported by the financial account of the balance of payments (BoP)? In particular, (i) do bilateral flows systematically underestimate or overestimate the flows reported by the BoP? and (ii) do these bilateral flows move over time in a manner that is consistent with the flows derived from the BoP?

BoP data come from the International Monetary Fund (IMF) and provide country-level information on an annual basis from 1970 until 2012 on different types of capital flows measured in current U.S. dollars. The data are divided into two major categories: the current account and the financial account. The financial account is divided into four subcategories: direct investments, portfolio investments, other investments, and international reserve assets. While the BoP data provide aggregate figures for each country with respect to the rest of the world, the data employed in this paper are at the bilateral (country-pair) level. Therefore, we need to aggregate them to compare the two databases.

For FDI (M&A and greenfield flows), the two databases can be compared directly. Appendix Figure 3 shows the total flows to/from North and South (including LAC) countries for each of the two databases.

At the region-year-level, the figure shows a significant positive correlation between the two datasets and similar values for both of them. However, for South countries (both inflows and outflows) the bilateral data seems to overestimate slightly the flows reported in the BoP accounts, possibly because the bilateral data are gross inflows, while the BoP data are net inflows (e.g., the net of inflows and outflows of foreigners). In addition, the greenfield data used reflect announced investments and they may differ from the actual flows recorded in the BoP data. Still, at the country-year-level, the correlation between the bilateral data and the BoP data is still rather high: 0.89 in the case of outflows and 0.86 in the case of inflows.

For syndicated loans, direct comparison between the bilateral data and the BoP data is not possible, because the “other investment” category in the BoP database covers not only syndicated loans but short- and long-term trade credits, loans, currency and deposits (transferable and other—such as savings and term deposits, savings and loan shares, shares in credit unions, etc.), and other accounts receivables and payables (IMF, 1993). Thus, syndicated loans enter only as part of the other investment category in the BoP.

For portfolio investments, the BoP database covers transactions in equity and debt securities, while the bilateral database used in this paper (the CPIS) contains information about the holdings of

portfolio investment securities (that is, the stock of bilateral investments). In principle, holdings information could be used to estimate the investment flows. However, according to the CPIS guide, flows reflect changes associated with both transactions and other flows (IMF, 2002). The latter covers changes that are recognized under three broad sub-categories: “revaluations due to changes in exchange rates,” “revaluations due to price changes,” and “other changes in volume.” The CPIS does not contain enough information to distinguish between transactions and other flows and, therefore, cross-border securities transactions can be derived from the CPIS only with significant noise. These caveats notwithstanding, we compute a proxy for transactions using the CPIS holdings and measure the correlation between this variable and the flows covered in the BoP database. Given that the CPIS database does not have information on revaluations caused by price changes, the proxy variable simply computes the difference between the holdings at the end of the period and the holdings at the beginning of the period. Despite these shortcomings, the correlation between the two variables is significant (0.69 for outflows and 0.82 for inflows).

Appendix 2. The Effects of the Global Financial Crisis

The effects of the 2008-2009 global crisis varied for the different investments types, as Figure 3 indicates. Portfolio holdings and syndicated loans flows to LAC countries declined more than flows from LAC countries. This finding is consistent with previous evidence showing that foreign investors pulled out sharply from emerging countries when the crisis hit (Broner et al., 2013). In contrast, M&A flows from LAC countries fell more than M&A flows to LAC. The crisis did not affect greenfield flows to or from LAC. This finding is consistent with a large body of literature showing that FDI tends to be more stable than other types of flows (Sarno and Taylor, 1999; Levchenko and Mauro, 2007).

Several examples illustrate the behavior of different flows and the magnitude of their collapse during the global financial crisis. While the portfolio investments by LAC countries abroad decreased by 18% in 2008, this fall was much more subdued than the one experienced by foreign investors investing in LAC countries (44%). Nevertheless, both reductions are significant given that these are stocks (not flows). These effects were temporary, however: by 2009 both holdings were very close to their 2007 values. The size of these fluctuations might be explained by the behavior of asset prices during the crisis. As mentioned in de la Torre et al. (2010, 2012), foreign investors held equity positions in LAC, whose value dropped substantially during the crisis; whereas LAC investors held debt abroad (including U.S. Treasury bonds and other developed countries' sovereign debt), whose prices fell by much less.

The crisis did not affect flows of syndicated loans from or to LAC countries until 2009, when it sharply hit flows to LAC and to a lesser extent from LAC. In both cases, the effects have persisted: even in 2011 the flows to and from LAC were smaller than they were in 2007.

M&A seems to be the only case in which flows from LAC were affected significantly more than flows to LAC. The flows from LAC decreased 77% in 2008 with respect to the 2007. However, part of this decrease is explained by the fact that the 2007 flow was very large due to the M&A of the cement Mexican Cemex and Australian Rinker Group, which summed \$14.2 billion and represented 41% of the 2007 total flow. However, even if we exclude this observation for the 2007, the fall in 2008 was still significant (61%), and much higher than the decrease of flows to LAC (26%). In addition, the contractionary effects of the crisis were more spread over time in the case of the flows from LAC.

The crisis also affected the extensive margin of the cross-border investments, especially for North-LAC connections. Following the crisis, the percentage of active North-LAC connections decreased for portfolio holdings, syndicated loans, and M&A flows. Although the downward trend

for syndicated loans and M&A flows started at the beginning of the 2000s, the decrease was steeper after the crisis. In contrast, for portfolio holdings the extensive margin of North-LAC connections had been increasing steadily until 2007 and has been decreasing every year since the crisis.

Table 1. Cross-border investments, by pairs of regions

Panel A. In Millions of 2011 U.S. Dollars

Table 2.1. In trillions of 2011 U.S. Dollars												
		Portfolio Investments of Region A in Region B		Flows from Region A to Region B								
Syndicated Loans				M&A				Greenfield				
Source	Receiver	2001-2005	2006-2011	1996-2000	2001-2005	2006-2012	1990-1995	1996-2000	2001-2005	2006-2011	2003-2005	2006-2011
LAC	North	44,325	146,054	598	2,055	3,614	1,362	2,331	4,193	10,065	1,991	2,705
LAC	South	928	6,442	9	49	357	0	342	56	2,791	3,858	4,051
North	LAC	291,555	573,452	59,914	46,498	64,932	6,489	46,961	23,333	30,935	70,923	79,262
South	LAC	1,847	10,527	968	1,591	5,623	517	876	405	7,579	15,348	14,894
LAC	LAC	3,475	11,370	109	558	1,619	709	3,388	3,627	6,054	10,069	10,054

Panel B. Normalized by LAC's GDP

		Portfolio Investments of Region A in Region B		Flows from Region A to Region B								
Source	Receiver			Syndicated Loans			M&A				Greenfield	
		2001-2005	2006-2011	1996-2000	2001-2005	2006-2012	1990-1995	1996-2000	2001-2005	2006-2011	2003-2005	2006-2011
LAC	North	1.63%	3.15%	0.02%	0.07%	0.08%	0.06%	0.08%	0.16%	0.24%	0.08%	0.06%
LAC	South	0.03%	0.14%	0.00%	0.00%	0.01%	0.00%	0.01%	0.00%	0.07%	0.14%	0.09%
North	LAC	10.83%	12.43%	2.11%	1.74%	1.43%	0.28%	1.67%	0.88%	0.67%	2.63%	1.69%
South	LAC	0.07%	0.22%	0.03%	0.06%	0.12%	0.02%	0.03%	0.02%	0.15%	0.55%	0.33%
LAC	LAC	0.13%	0.25%	0.00%	0.02%	0.03%	0.03%	0.12%	0.14%	0.14%	0.35%	0.22%

*Panel C. Normalized by Sqrt (GDP of Source Region * GDP of Receiver Region)*

		Portfolio Investments of Region A in Region B		Flows from Region A to Region B								
Source	Receiver	2001-2005	2006-2011	Syndicated Loans			M&A				Greenfield	
				1996-2000	2001-2005	2006-2012	1990-1995	1996-2000	2001-2005	2006-2011	2003-2005	2006-2011
LAC	North	0.46%	1.08%	0.01%	0.02%	0.03%	0.02%	0.02%	0.04%	0.08%	0.02%	0.02%
LAC	South	0.02%	0.07%	0.000%	0.001%	0.004%	0.00%	0.01%	0.00%	0.03%	0.07%	0.04%
North	LAC	3.05%	4.27%	0.64%	0.49%	0.49%	0.08%	0.50%	0.25%	0.23%	0.73%	0.58%
South	LAC	0.03%	0.11%	0.02%	0.03%	0.06%	0.01%	0.02%	0.01%	0.07%	0.28%	0.16%
LAC	LAC	0.13%	0.25%	0.00%	0.02%	0.03%	0.03%	0.12%	0.14%	0.14%	0.35%	0.22%

This table shows for syndicated loans, M&A, and greenfield investments the yearly average flow from one region to another. For portfolio investments, the table shows the yearly average value of the holdings by source and receiver region. Panel A shows the results measured in millions of 2011 U.S. dollars. Panel B shows the results normalized by LAC's GDP. Panel C shows the results normalized by the average GDP of the sender and receiver region. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample.

Table 2. Intensive margin of financial connections across regions, by pairs of regions

SourceReceiver			Portfolio Investments of Region A in Region B		Flows from Region A to Region B								
					Syndicated Loans			M&A				Greenfield	
								1990-1995	1996-2000	2001-2005	2006-2011	2003-2005	2006-2011
Source	Receiver		2001-2005	2006-2011	1996-2000	2001-2005	2006-2012	1990-1995	1996-2000	2001-2005	2006-2011	2003-2005	2006-2011
LAC	North	Value of investment (millions of 2011 U.S. dollars)	44,325	146,054	598	2,055	3,614	1,362	2,331	4,193	10,065	1,991	2,705
		Investment attributable to non-existing links during the first period	.	0.08%	.	35%	62%	.	13%	5%	11%	.	11%
		Investment attributable to non-existing links during the previous period	.	0.08%	.	35%	16%	.	13%	59%	13%	.	11%
LAC	South	Value of investment (millions of 2011 U.S. dollars)	928	6,442	9	49	357	0.3	342	56	2,791	3,858	4,051
		Investment attributable to non-existing links during the first period	.	10%	.	100%	89%	.	100%	100%	100%	.	71%
		Investment attributable to non-existing links during the previous period	.	10%	.	100%	96%	.	100%	100%	100%	.	71%
North	LAC	Value of investment (millions of 2011 U.S. dollars)	291,555	573,452	59,914	46,498	64,932	6,489	46,961	23,333	30,935	70,923	79,262
		Investment attributable to non-existing links during the first period	.	0.10%	.	2%	2%	.	5%	7%	18%	.	5%
		Investment attributable to non-existing links during the previous period	.	0.10%	.	2%	2%	.	5%	3%	10%	.	5%
South	LAC	Value of investment (millions of 2011 U.S. dollars)	1,847	10,527	968	1,591	5,623	517	876	405	7,579	15,348	14,894
		Investment attributable to non-existing links during the first period	.	6%	.	9%	25%	.	79%	80%	85%	.	42%
		Investment attributable to non-existing links during the previous period	.	6%	.	9%	29%	.	79%	66%	56%	.	42%
LAC	LAC	Value of investment (millions of 2011 U.S. dollars)	3,475	11,370	109	558	1,619	709	3,388	3,627	6,054	10,069	10,054
		Investment attributable to non-existing links during the first period	.	6%	.	72%	92%	.	55%	26%	57%	.	16%
		Investment attributable to non-existing links during the previous period	.	6%	.	72%	28%	.	55%	3%	33%	.	16%

This table shows the evolution of portfolio investments, syndicated loans, M&A, and greenfield cross-border flows and computes how much of the increase is driven by new connections relative to the initial period and relative to the previous period. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample.

Table 3. Extensive margin of cross-border financial investments

Level of Data Aggregation	Country-Country Level			
Dependent Variable	Indicator Variable: =1 if investment>0 and =0 otherwise			
Database	Portfolio Holdings	Syndicated Loans	M&A	Greenfield
North-North Trend	0.118 ***	0.029 ***	0.031 ***	0.026 ***
North-South Trend	0.078 ***	0.008 ***	0.042 ***	0.038 ***
North-LAC Trend	0.052 ***	-0.015 **	0.025 ***	0.062 ***
South-North Trend	0.113 ***	0.047 ***	0.049 ***	0.050 ***
South-South Trend	0.148 ***	0.051 ***	0.062 ***	0.057 ***
South-LAC Trend	0.107 ***	0.040 ***	0.070 ***	0.084 ***
LAC-North Trend	0.127 ***	0.055 ***	0.046 ***	0.028
LAC-South Trend	0.097 ***	0.063 ***	0.046 ***	0.047 ***
LAC-LAC Trend	0.085 ***	0.058 ***	0.045 ***	0.067 ***
Gravity Controls				
Geographical Distance between Countries	-0.614 ***	-0.671 ***	-0.704 ***	-0.794 ***
Differences in Latitude	0.000	0.003 ***	0.001	-0.002 ***
Differences in Longitude	0.004 ***	0.001	0.004 ***	0.002 **
Differences in Time Zones	-0.039 **	0.019	-0.033 *	0.022
Colony Dummy	0.336 ***	0.511 ***	0.482 ***	0.483 ***
Common Legal Origin Dummy	0.207 ***	0.078 **	0.239 ***	0.145 ***
Common Language Dummy	0.420 ***	0.419 ***	0.354 ***	0.479 ***
Region-pair Dummies	Yes	Yes	Yes	Yes
Source Country Dummies	Yes	Yes	Yes	Yes
Receiver Country Dummies	Yes	Yes	Yes	Yes
Number of Observations	120,078	264,401	386,584	217,350
Differences between Trend Coefficients				
(LAC-North) Trend - (South-North) Trend	0.014	0.008	-0.002	-0.021
(LAC-South) Trend - (South-South) Trend	-0.051 ***	0.013	-0.016	-0.009
(LAC-LAC) Trend - (LAC-South) Trend	-0.012	-0.005	-0.002	0.019
(North-LAC) Trend - (North-South) Trend	-0.025 ***	-0.022 ***	-0.017 ***	0.024 **
(South-LAC) Trend - (South-South) Trend	-0.042 ***	-0.011	0.008	0.027 **

This table shows the different trends for the extensive margin. The regressions are Probit models where the dependent variable is an indicator variable that takes the value of 1 whenever there is a bilateral positive flow (stock) between the two countries involved, and 0 otherwise. The level of data aggregation is country-country level. The regressions include gravity control variables which help explain different levels of financial flows between each country pair based on the geographic distance between the two countries (in logs), differences in latitude and longitude, differences in times zones, whether the receiver (sender) country is (or has been) a colony of the sender (receiver), whether they have a common legal origin, and whether they share a common language. The regressions also control for source and receiver country dummies and region pair dummies. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Standard errors are cluster by country-pairs. *, **, and *** represent statistical significance at 10%, 5%, and 1%, respectively.

Table 4. Intensive margin of cross-border financial investments

Panel A

Database	Portfolio Investments				Syndicated Loans			
Level of Data Aggregation	Region-Region		Country-Region		Region-Region		Country-Region	
Dependent Variable	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]
North-North Trend	0.072 ***	0.045 ***	0.082 ***	0.055 ***	0.012	-0.007	0.059 ***	0.039 ***
North-South Trend	0.149 ***	0.078 ***	0.167 ***	0.097 ***	0.069 ***	0.018	0.056 ***	0.005
North-LAC Trend	0.118 ***	0.058 ***	0.075 ***	0.015	0.003	-0.032	-0.007	-0.042 ***
South-North Trend	0.132 ***	0.061 ***	0.166 ***	0.095 ***	0.073 ***	0.022	0.096 ***	0.045 ***
South-South Trend	0.197 ***	0.082 ***	0.264 ***	0.150 ***	0.120 ***	0.038 ***	0.110 ***	0.028 ***
South-LAC Trend	0.275 ***	0.171 ***	0.133 ***	0.029	0.177 ***	0.111 *	0.033	-0.035 *
LAC-North Trend	0.206 ***	0.146 ***	0.224 ***	0.163 ***	0.153 ***	0.118 ***	0.086 ***	0.050 *
LAC-South Trend	0.275 ***	0.171 ***	0.225 ***	0.121 ***	0.131 *	0.052	0.222 ***	0.142 ***
LAC-LAC Trend	0.190 ***	0.096 ***	0.143 ***	0.049 **	-0.002	-0.054	0.041 *	-0.001
Region-pair Dummies	Yes	Yes	No	No	Yes	Yes	No	No
Country-Region Dummies	No	No	Yes	Yes	No	No	Yes	Yes
Number of Observations	99	99	5,545	5,545	136	136	4,101	4,101
R-squared	0.991	0.997	0.973	0.988	0.997	0.993	0.985	0.992
Differences between Trend Coefficients								
(LAC-North) Trend - (South-North) Trend	0.074 ***	0.085 ***	0.058 ***	0.068 ***	0.080 *	0.096 **	-0.010	0.005
(LAC-South) Trend - (South-South) Trend	0.078	0.089	-0.039	-0.029	0.011	0.014	0.112 ***	0.114 ***
(LAC-LAC) Trend - (LAC-South) Trend	-0.085	-0.075	-0.082 **	-0.072 *	-0.133	-0.106	-0.181 ***	-0.143 ***
(North-LAC) Trend - (North-South) Trend	-0.031	-0.020	-0.092 ***	-0.082 ***	-0.066 **	-0.050 *	-0.063 ***	-0.047 ***
(South-LAC) Trend - (South-South) Trend	0.078 **	0.089 ***	-0.131 ***	-0.121 ***	0.057	0.073	-0.077 ***	-0.063 ***

Panel B

Database	M&A				Greenfield			
Level of Data Aggregation	Region-Region		Country-Region		Region-Region		Country-Region	
Dependent Variable	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]	Log(Value)	Log[Value/ Sqrt(GDPa* GDPb)]
North-North Trend	0.068 ***	0.053 ***	0.078 ***	0.063 ***	0.015	-0.002	-0.007	-0.024 *
North-South Trend	0.103 ***	0.066 ***	0.092 ***	0.054 ***	-0.029	-0.094 ***	-0.031 **	-0.096 ***
North-LAC Trend	0.068 ***	0.040 *	0.053 ***	0.024 **	0.039	-0.022	-0.038	-0.099 ***
South-North Trend	0.111 ***	0.074 ***	0.099 ***	0.061 ***	0.067 **	0.002	-0.007	-0.072 ***
South-South Trend	0.124 ***	0.064 ***	0.093 ***	0.030 ***	-0.011	-0.124 ***	-0.003	-0.116 ***
South-LAC Trend	0.086	0.034	0.028	-0.028	-0.082 **	-0.191 ***	-0.028	-0.137 ***
LAC-North Trend	0.141 ***	0.112 ***	0.119 ***	0.089 ***	0.070	0.009	0.054	-0.007
LAC-South Trend	-	-	-	-	-0.211 **	-0.321 ***	-0.138 *	-0.247 ***
LAC-LAC Trend	0.100 ***	0.058 *	0.037*	-0.007	0.044	-0.061	0.043	-0.064
Region-pair Dummies	Yes	Yes	No	No	Yes	Yes	No	No
Country-Region Dummies	No	No	Yes	Yes	No	No	Yes	Yes
Number of Observations	174	174	4,084	4,084	81	81	3,844	3,844
R-squared	0.991	0.985	0.949	0.981	0.998	0.996	0.971	0.988
Differences between Trend Coefficients								
(LAC-North) Trend - (South-North) Trend	0.030	0.038	0.020	0.028	0.003	0.007	0.061	0.065
(LAC-South) Trend - (South-South) Trend	-	-	-	-	-0.200 **	-0.197 **	-0.135	-0.131
(LAC-LAC) Trend - (LAC-South) Trend	-	-	-	-	0.255 ***	0.260 ***	0.181 *	0.183 *
(North-LAC) Trend - (North-South) Trend	-0.035	-0.026	-0.039 ***	-0.030 **	0.068	0.072	-0.007	-0.003
(South-LAC) Trend - (South-South) Trend	-0.038	-0.030	-0.065 *	-0.058 *	-0.071	-0.067	-0.025	-0.021

This table shows the different trends for the intensive margin. To capture the intensive margin, the regressions only include links that were already established in the first period of each investment type (2001-2005 for portfolio holdings, 1996-2000 for syndicated loans, 1990-1995 for M&A, and 2003-2005 for greenfield investments). There are two levels of aggregation: region-region and country-region. The latter includes both country-region (outflows) and region-country (inflows) observations. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. *, **, and *** represent statistical significance at 10%, 5%, and 1%, respectively.

Table 5. Global financial and trade flows

Dependent Variable	Log(Value+1)					
Database	Syndicated Loans		M&A		Greenfield	
Sample of Source Countries	North Countries	South and LAC Countries	North Countries	South and LAC Countries	North Countries	South and LAC Countries
Log(Total Trade+1)	0.0657 ***	0.0064 ***	0.0244 ***	0.0033 ***	0.0652 ***	0.0096 ***
RCA Source Country	-0.0031	0.0005 *	0.0050 ***	0.0001	0.0180 ***	0.0012 ***
RCA Receiver Country	0.0113 ***	-0.0010 **	0.0050 ***	0.0000	-0.0013	-0.0006 **
RCA Source Country * LAC Receiver Dummy	-0.0004	0.0000	-0.0034 ***	-0.0001	-0.0089 ***	0.0001
RCA Receiver Country * LAC Receiver Dummy	-0.0013	0.0014 **	-0.0012	0.0005 *	0.0035	0.0004
Gravity Controls						
Geographical Distance between Countries	-0.1540 ***	0.0007	-0.0620 ***	-0.0005	-0.0460 **	0.0003
Differences in Latitude	0.0027 ***	0.0001 *	0.0009 *	0.0000	0.0002	-0.0001 **
Differences in Longitude	0.0004	0.0000	0.0001	0.0000	-0.0001	0.0000
Differences in Time Zones	0.0182 **	-0.0014 *	0.0056	-0.0011 ***	0.0113 *	-0.0006
Colony Dummy	0.0234	0.0485	0.0404	0.0149	0.0695 *	0.0559 ***
Common Legal Origin Dummy	0.2370 ***	0.0500 ***	0.1210 ***	0.0390 ***	0.0993 ***	0.0339 ***
Common Language Dummy	-0.0421	0.0137 *	0.0172	0.0055	-0.0179	0.0001
Source Country Dummies * Time Trend	Yes	Yes	Yes	Yes	Yes	Yes
Receiver Country Dummies * Time Trend	Yes	Yes	Yes	Yes	Yes	Yes
Sector Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	540,707	1,743,205	498,248	2,127,160	408,610	1,994,079
R-squared	0.208	0.043	0.089	0.019	0.172	0.031
Sum of LAC coefficients						
RCA Source Country + RCA Source Country * LAC Receiver Dummy	-0.0035	0.0005 ***	0.0017	0.0000	0.0091 ***	0.0013 ***
RCA Receiver Country + RCA Receiver Country * LAC Receiver Dummy	0.0100 **	0.0004	0.0038 **	0.0005 *	0.0022	-0.0002

This table shows the relation between financial and trade flows using sector-level data. Total trade is measured as the sum of exports and imports. The relative comparative advantage (RCA) is based on Vollrath (1991). The LAC Receiver Dummy equals 1 if the receiver is a LAC country and 0 otherwise. The regressions include gravity control variables which help explain different levels of financial flows between each country pair based on the geographic distance between the two countries (in logs), differences in latitude and longitude, differences in times zones, whether the receiver (sender) country is (or has been) a colony of the sender (receiver), whether they have a common legal origin, and whether they share a common language. The regressions also control for source and receiver country dummies and sector dummies. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Standard errors are cluster by country-pairs. *, **, and *** represent statistical significance at 10%, 5%, and 1%, respectively.

Figure 1. Cross-border investment shares by LAC in North, South, and LAC countries

This figure shows the percentage share of North, South, and LAC countries in the investments made by LAC countries. Panel A shows the results for portfolio investments, Panel B for syndicated loans, Panel C for M&A, and Panel D for greenfield investments. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample.

Figure 2. Cross-border investment shares by North, South, and LAC countries in LAC

This figure shows the percentage share of North, South, and LAC countries in the investments made in LAC countries. Panel A shows the results for portfolio investments, Panel B for syndicated loans, Panel C for M&A, and Panel D for greenfield investments. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample.

Figure 3. Cross-border investments to and from LAC countries

This figure shows the yearly investment from (to) LAC countries. Panel A shows the results for portfolio investments, Panel B for syndicated loans, Panel C for M&A, and Panel D for greenfield investments. Investments are expressed in 2011 constant U.S. dollars. Offshore centers are excluded from the sample.

Figure 4. Cross-border holdings and extensive margin of portfolio investments

This figure shows the evolution of the extensive margin for portfolio investments and the evolution of the total value of these connections. The extensive margin is represented by the percentage of active connections, that is, the number of country-pairs that have a positive holding in each year over the number of country-pairs with a positive or zero value in the last year of the sample. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Holdings are expressed in 2011 constant U.S. dollars.

Figure 5. Cross-border flows and extensive margin of syndicated loans

This figure shows the evolution of the extensive margin for syndicated loans and the evolution of the total value of these connections. The extensive margin is represented by the percentage of active connections, that is, the number of country-pairs that have a positive flow in each year over the number of country-pairs with a positive or zero flow in the last year of the sample. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Flows are expressed in 2011 constant U.S. dollars.

Figure 6. Cross-border flows and extensive margin of M&A

This figure shows the evolution of the extensive margin for M&A and the evolution of the total value of these connections. The extensive margin is represented by the percentage of active connections, that is, the number of country-pairs that have a positive flow in each year over the number of country-pairs with a positive or zero flow in the last year of the sample. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Flows are expressed in 2011 constant U.S. dollars.

Figure 7. Cross-border flows and extensive margin of greenfield investments

This figure shows the evolution of the extensive margin for greenfield investments and the evolution of the total value of these connections. The extensive margin is represented by the percentage of active connections, that is, the number of country-pairs that have a positive flow in each year over the number of country-pairs with a positive or zero flow in the last year of the sample. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Flows are expressed in 2011 constant U.S. dollars.

Figure 8. Extensive margin of cross-border investments from LAC to South countries in other regions

Panel A. Portfolio Investments

2001-2005

2006-2011

Panel B. Syndicated Loans

1996-2000

2001-2005

2006-2012

Panel C. M&A

1996-2000

2001-2005

2006-2011

Panel D. Greenfield

2003-2005

2006-2011

This figure shows the bilateral linkages between LAC and South countries. Each line in the maps represents a flow or stock of investment greater than \$1 million (in 2011 U.S. dollars) between a LAC and a South country. In Panel A, holdings of foreign portfolio assets (equity and bonds) are reported. Panels B, C, and D report capital flows associated with syndicated loans, M&A, and greenfield investments, respectively. Offshore centers are excluded from the sample.

Figure 9. Extensive margin of cross-border investments within LAC

Panel A. Portfolio Investments

Panel B. Syndicated Loans

Panel C. M&A

Panel D. Greenfield

This figure shows the bilateral linkages among LAC countries. Each line in the maps represents a flow or stock of investment greater than \$1 million (in 2011 U.S. dollars) between two LAC countries. In Panel A, holdings of foreign portfolio assets (equity and bonds) are reported. Panels B, C, and D report capital flows associated with syndicated loans, M&A, and greenfield investments, respectively. Offshore centers are excluded from the sample.

Figure 10. Cross-border financial investments from and to LAC, by group of countries

Panel A. LAC as Sender

Panel B. LAC as Receiver

Portfolio Investments

Syndicated Loans

M&A

Greenfield

■ Brazil and Mexico ▨ LAC Top 5 (excluding Brazil and Mexico) ■ Rest of LAC countries

This figure shows the yearly average investment from (to) LAC countries by region and group of LAC countries for portfolio investments, syndicated loans, M&A, and greenfield investments. The group "LAC Top 5 (excluding Brazil and Mexico)" includes Argentina, Chile, Colombia, Peru, and República Bolivariana de Venezuela. Panel A shows the investments from LAC countries. Panel B shows the investments to LAC countries. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Values are expressed in 2011 constant U.S. dollars. Investments from (to) North and South countries are measured in the left-hand side axes. Investments from (to) LAC countries are measured in the right-hand side axes.

Figure 11. Sectoral composition of cross-border financial and trade flows to and from LAC

Panel A. LAC as Sender

Panel B. LAC as Receiver

This figure shows the yearly average investment from (to) LAC countries by receiver (sender) region, as well as the sectoral composition for syndicated loans, M&A, greenfield investments, and trade flows. The primary sector includes the following sub-groups: agriculture, hunting, forestry, and fishing; mining (coal, metal and mining, and quarrying of nonmetallic); crude petroleum and natural gas. The light manufacturing sector includes: manufacturing of food, beverage, and tobacco; textiles and apparel (including leather); wood and paper related products. The heavy manufacturing sector includes: manufacturing of refined petroleum and related; chemicals and plastics; non-metallic minerals; metals; machinery and equipment; transport equipment. Panel A shows the flows from LAC countries. Panel B shows the flows to LAC countries. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample. Values are expressed in 2011 constant U.S. dollars.

Appendix Figure 1. Number of active cross-border connections

Panel A: LAC as Sender

Panel B: LAC as Receiver

This figure shows the evolution of the extensive margin for portfolio investments, syndicated loans, M&A, and greenfield investments. Panel A shows the results for LAC as sender. Panel B shows the results for LAC as receiver. The extensive margin is represented by the number of active connections, that is, the number of country-pairs that have a positive flow in each year. North countries are the G7 and Western Europe. South countries are all the others (excluding LAC countries). Offshore centers are excluded from the sample.

Appendix Figure 2. Sectoral composition of cross-border financial and trade flows to and from LAC, by subregion: 2003–2011 average

This figure shows the sectoral composition of flows from (to) the different LAC's sub-regions for the 2003-2011 period. Panel A shows the sectoral composition for LAC as sender and Panel B for LAC as receiver. The countries included in each region are as follows. Caribbean: Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Cuba, Dominica, Grenada, Guyana, Haiti, Jamaica, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands, Virgin Islands. Central America: Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama. Pacific South America: Chile, Colombia, Ecuador, and Peru. Other South America: Argentina, Bolivia, Brazil, French Guiana, Paraguay, Uruguay, and República Bolivariana de Venezuela. The primary sector includes the following sub-groups: agriculture, hunting, forestry, and fishing; mining (coal, metal and mining, and quarrying of nonmetallic); crude petroleum and natural gas. The light manufacturing sector includes: manufacturing of food, beverage, and tobacco; textiles and apparel (including leather); wood and paper related products. The heavy manufacturing sector includes: manufacturing of refined petroleum and related; chemicals and plastics; non-metallic minerals; metals; machinery and equipment; transport equipment.

Appendix Figure 3. Comparison between bilateral and balance of payments account data on FDI investment

This figure compares the FDI flows between the bilateral data used in the paper (SDC Platinum for M&A and Financial Times' FDI Markets for greenfield investments) and the aggregated country-level BoP data. The BoP data come from the IMF. Panel A shows the cross-border flows to North countries and Panel B shows the flows from North countries. Panel C shows the flows to South countries and Panel D shows the flows from South countries. Results are expressed in billions of current U.S. dollars. North countries are the G7 and Western Europe. South countries are all the others (including LAC countries). Offshore centers are excluded from the sample.