

Reaping the Benefits of Financial Globalization

Giovanni Dell'Ariccia, Julian di Giovanni, André Faria, Ayhan Kose,
Paolo Mauro, Jonathan D. Ostry, Martin Schindler, and Marco Terrones



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The following conventions are used in this publication:

- In tables, a blank cell indicates “not applicable,” ellipsis points (. . .) indicate “not available,” and 0 or 0.0 indicates “zero” or “negligible.” Minor discrepancies between sums of constituent figures and totals are due to rounding.
- An en dash (–) between years or months (for example, 2006–08 or January–June) indicates the years or months covered, including the beginning and ending years or months; a slash or virgule (/) between years or months (for example, 2007/08) indicates a fiscal or financial year, as does the abbreviation FY (for example, FY2008).
- “Billion” means a thousand million; “trillion” means a thousand billion.
- “Basis points” refer to hundredths of 1 percentage point (for example, 25 basis points are equivalent to $\frac{1}{4}$ of 1 percentage point).

As used in this publication, the term “country” does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.

Preface

Financial globalization has increased dramatically over the past three decades, particularly for advanced economies, while emerging market and developing countries experienced more moderate increases. Divergences across countries stem from different capital control regimes, as well as from a range of persistent factors, including different degrees of institutional quality and domestic financial development. While, in principle, financial globalization should enhance international risk sharing, reduce macroeconomic volatility, and foster economic growth, in practice its effects are less clear-cut. Countries gain or lose from financial integration depending on their domestic economic and institutional conditions. The results in this Occasional Paper are broadly supportive of an approach envisaging a gradual and orderly sequencing of external financial liberalization and emphasizing the desirability of complementary reforms in macroeconomic policy framework and the domestic financial system as essential components of a successful liberalization strategy.

This paper was prepared by a staff team from the Research Department, under the direction of Jonathan D. Ostry, Deputy Director, and led by Paolo Mauro, chief of the Strategic Issues Division, and comprising Giovanni Dell’Ariccia, Julian di Giovanni, André Faria, Ayhan Kose, Martin Schindler, and Marco Terrones. The authors are grateful to Dionysios Kaltis and Mary Yang for excellent research assistance, and to Usha David for editorial assistance. Esha Ray of the External Relations Department coordinated the production and publication of the paper.

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I Overview

Financial globalization—defined as the extent to which countries are linked through cross-border financial holdings, and proxied in this paper by the sum of countries’ gross external assets and liabilities relative to GDP—has increased dramatically over the past three decades. This trend has been particularly pronounced in advanced economies, with emerging market and developing countries having experienced more moderate increases in their external stock positions over the period. These diverging trends stem from different capital control regimes, as well as from a range of persistent factors, including different degrees of institutional quality and domestic financial development. Persistent factors related to geography and historical linkages—though they can be mitigated to some extent by greater financial market and corporate sector transparency—also help to explain different degrees of financial openness across the IMF’s membership.

While, in principle, financial globalization should enhance international risk sharing, reduce macroeconomic volatility, and foster economic growth, in practice the empirical effects are less clear-cut. Risk sharing has increased somewhat in advanced countries—consistent with their greater levels of financial openness—but has not been noticeably affected in emerging market and developing countries. International financial integration has not increased macroeconomic volatility or crisis frequency in countries with well-developed domestic financial systems and a relatively high degree of institutional quality; it has, however, increased volatility for countries that have failed to meet these preconditions or thresholds. The link between financial globalization and economic growth is also complex. Although foreign direct investment (FDI) and other non-debt-creating flows are positively associated with long-run growth, the impact of

debt seems to depend on the strength of a country’s policies and institutions.

The paper’s empirical results are broadly supportive of the IMF’s “integrated” approach, which envisages a gradual and orderly sequencing of external financial liberalization and emphasizes the desirability of complementary reforms in the macroeconomic policy framework and the domestic financial system as essential components of a successful liberalization strategy. For countries that do not yet meet the relevant thresholds, the focus of policymakers should lie squarely with improving the relevant economic fundamentals. In addition, opening up to FDI—a type of flow that appears to be beneficial even for countries with relatively weak fundamentals—would seem desirable at an early stage. Liberalization to other types of flow should be delayed until country fundamentals are more in line with the relevant thresholds. For countries that are closer to meeting the thresholds, opening to debt flows is unlikely to have strong adverse effects on volatility, though, equally, growth benefits have not been identified as being particularly significant in this case.

In deliberating appropriate policies with respect to the financial account, policymakers need to consider not only the relationship between country fundamentals and relevant thresholds but also the empirical association between financial openness and “collateral benefits”—for example, domestic financial sector development and higher economic efficiency—that in turn foster economic growth. In addition, the pace of liberalization will need to factor in the significant microeconomic costs associated with capital controls. Looking ahead, improved macroeconomic policies in many countries, as well as the increased share of equity and FDI in countries’ external liabilities, suggest that financial globalization may prove to be more beneficial in coming years than in the past.

II Introduction

Financial globalization—defined as the extent to which countries are linked through cross-border financial holdings, and proxied in this paper by the sum of countries’ gross external assets and liabilities relative to GDP (see Box 2.1)—has made the interaction between international financial flows and domestic financial and macroeconomic stability an increasingly central issue for Fund surveillance.¹ In discharging its mandate, a key issue for the IMF is to advise member countries about how they can reap the benefits of international financial integration while limiting its potentially harmful effects on macroeconomic volatility and crisis propensity. On various occasions—including in the context of discussions of recent Biennial Surveillance Reviews (IMF, 2004) and the Independent Evaluation Office’s report on the Fund’s approach to capital account liberalization (IEO, 2005)—Executive Directors have called upon staff to undertake further research into the issue of managing the risks associated with international financial integration in a way that maximizes the net benefits. The present paper focuses on policies and reforms that can be carried out by recipient countries (and especially emerging market and developing countries), with issues related to the role of macroeconomic and prudential policies in source countries being left to later analysis.²

Over the past three decades, *de facto* financial globalization has increased in most member countries, but integration has moved furthest in member countries of the Organization for Economic Cooperation and Development (OECD), where it has primarily taken the form of two-way (“diversification”) asset trade, with large gross holdings of external assets and liabilities, but relatively small net external asset positions. More moderate increases are apparent among middle-income countries, with benign worldwide financial conditions and abundant liquidity having supported the process in

recent years. The smallest increases have been experienced by low-income countries.

The analysis presented below suggests that these trends reflect a number of factors. First, country-specific policies—in particular the relative strength of countries’ *de jure* capital controls—are correlated with relative *de facto* financial globalization. Controls that are maintained for many years seem to have a significant effect in slowing integration, even if controls aimed at fine-tuning the timing or composition of financial flows tend to lose their effectiveness beyond the short run. Early external financial liberalization by advanced countries seems, for example, to be a key factor behind their greater degree of *de facto* integration. Second, beyond financial account policies, the extent of financial integration among emerging market and developing countries—including those with relatively open *de jure* regimes—has been constrained by other factors, including lower degrees of perceived institutional quality (a factor that also seems to affect the composition of a country’s external liabilities) and lower domestic financial sector development. Third, while the bilateral pattern of a country’s external portfolio of assets/liabilities is strongly influenced by geographical distance (as in a standard “gravity” trade model), as well as by linkages related to language and colonial history, domestic policies aimed at reducing informational asymmetries—for example, by making local stock markets more transparent—can help to mitigate the role of persistent “gravity” factors. Financial transparency is thus a potentially important vehicle for boosting financial integration in the presence of a variety of persistent constraints.

Regarding the consequences of greater financial integration, economic theory suggests that financial globalization confers a number of potential benefits. Increases in international asset trade may foster economic growth, particularly if assets are used to finance worthwhile projects, or if they facilitate technology transfer (for example, through FDI), thereby underpinning increases in economic efficiency. In addition, such trade may lead to enhanced international risk sharing—indeed, the sizable gross external stock positions of advanced countries seem indicative of large potential risk-sharing gains, while an enhanced ability

¹The terms “financial globalization,” “international financial integration,” and “financial openness” are used interchangeably throughout this paper.

²The paper also does not examine the issue of managing large or volatile capital inflows, including the role of exchange rate, demand management, and financial policies in dealing with capital flow surges—topics that are to be taken up by IMF staff in the near future.

Box 2.1 Measuring Financial Globalization

A country's degree of financial globalization/integration/openness (terms used interchangeably in this paper) is a multifaceted concept, usually referring to the size of gross *stocks* of external assets and liabilities, the potential for large net *flows* (that is, differences in saving and investment flows), or the absence of arbitrage opportunities between *returns* on assets in different countries. Correspondingly, the various measures of this concept can be divided into three broad categories.

Quantity-based measures. The most widely applicable, and now generally accepted, measure of international financial integration is the sum of gross external assets and liabilities, relative to GDP (Lane and Milesi-Ferretti, 2006). This paper relies mainly on this measure, reflecting the need for a broad cross-country coverage over an extended time span. An alternative stock-based measure compares the size and geographic allocation of a country's external asset holdings with the portfolio predicted by an optimal risk-return frontier. Country coverage of such a measure is, however, limited. Still other quantity-based measures focus on gross financial inflows plus outflows (analogous to measures of trade openness based on imports plus exports). However, stock-based measures—which are less affected by short-term economic fluctuations—are preferable in the context of this paper in light of its long-term focus.

Saving-investment correlations. While investment can differ from domestic saving for countries with access

to international financial markets, investment must equal saving under financial autarky. Saving-investment correlations have thus been used to measure the degree of international financial integration for groups of countries in different historical periods. Measures based on the *size* of net flows are also closely related, the current account surplus being the difference between saving and investment. A drawback of all such measures is that saving and investment are highly correlated even for groups of countries that seem to be fully open to international flows (the “Feldstein-Horioka puzzle”), and a warranted, or benchmark, correlation against which to compare actual correlations is difficult to identify empirically (but see Ghosh and Ostry, 1995; and Obstfeld and Taylor, 2004).

Price-based indices. Under financial integration, there should not be unexploited arbitrage opportunities from trade in similar assets. Comparisons of prospective returns on financial instruments in different countries (for example, covered or uncovered interest parity) thus provide a natural gauge of the extent of international financial integration. Alternative measures focus on *real* interest rate comparisons across countries. The applicability of these measures to emerging market and developing countries is hampered not only by difficulties in controlling for cross-country differences in risk or liquidity premia but also by the possibility that inefficient arbitrage may reflect domestic rather than international financial frictions.

of emerging market and developing countries to borrow abroad in cases of natural disaster or temporary recessions would seem likely to contribute to greater consumption-smoothing. Looking ahead, large potential risk-sharing gains are apparent for emerging market and developing countries in light of their relatively large economic fluctuations while, from the standpoint of advanced-country residents, the ability to invest in emerging market and developing countries would be especially welcome, given the low correlation of these countries' economic fluctuations with the global economic cycle.

While there seem to be sizable potential gains from international financial integration, these will need to be set against the possible costs in the form of greater macroeconomic volatility and vulnerability to crisis. Indeed, the emerging market crises of the 1990s have only served to highlight the potential for sudden reversals of capital inflows in financially open economies, and the associated large and abrupt recessions, often with serious social consequences. External financial liberalization has more generally been seen as amplifying vulnerabilities to possible contagion/herd effects, particularly in cases where domestic institutions and policies are not strong enough to steer through bad times.

Against the background of the large potential gains and costs, what can be said of the actual effects of trends in de facto financial globalization? The results presented below suggest that the impact has varied depending on country characteristics:

- With respect to risk sharing, evidence based on data for the past three decades suggests that, while some gains have accrued to advanced economies, this has not been the case for emerging market and developing countries, perhaps reflecting the more limited increase in financial integration for these countries.
- With respect to volatility, the findings suggest that for countries with sufficiently developed domestic financial systems, relatively open trade systems, good governance, and sound macroeconomic policies (that is, for countries that meet a number of “thresholds” to use the jargon from the globalization literature), greater integration has not been associated with increased macroeconomic volatility or more frequent crises. Volatility is adversely affected for countries that fail to meet such thresholds, though the broad trend toward improved policies and greater trade openness may point to diminishing policy relevance of volatility concerns over time.

- The relationship between financial globalization and economic growth is more complex—consistent with the difficulties the economic literature has encountered in establishing robust empirical evidence linking growth to economic fundamentals more generally. The results presented below point to the importance of unbundling financial globalization into different components in order to uncover its effects. FDI and other nondebt forms of financial globalization are found to be positively and significantly associated with economic growth for all countries, whereas the impact of debt seems to depend on whether borrowers meet certain policy and institutional thresholds. While empirical analysis based on macroeconomic data fails to establish a robust relationship between economic growth and all types of financial integration, it does suggest that greater integration is associated with factors that in turn have been found to support economic growth. Examples of such “collateral benefits” are development of the domestic financial sector, macroeconomic policy discipline, faster trade growth, and improvements in economic efficiency. Indeed, recent microeconomic evidence suggests that the efficiency costs of maintaining capital controls are significant.

In determining an appropriate pace of external financial liberalization, an important consideration is the extent to which countries meet the preconditions, or thresholds, for a favorable impact. However, it bears emphasizing that, even for countries that currently fall somewhat short of meeting the thresholds, greater financial integration—if it engenders collateral benefits as discussed above—may itself facilitate over time progress in attaining relevant policy and institutional thresholds. Moreover, two broad developments

suggest that the impact of financial globalization may be more beneficial in coming years than in the past: first, FDI and other nondebt forms of international asset trade constitute a higher share of external financing today than in recent decades; and second, steps taken by countries to raise their game in relation to policy and institutional fundamentals are likely to imply greater net benefits from financial integration than would be apparent from empirical analysis of past data. The paper’s results are broadly supportive of the “integrated” approach, which envisages a gradual and orderly sequencing of external financial liberalization and emphasizes the desirability of complementary reforms in the macroeconomic framework and the domestic financial system as essential components of a successful liberalization strategy (Ishii, Habermeier, and others, 2002).

The remainder of the paper is structured as follows. Section III summarizes developments in de facto financial globalization for various groups of countries and types of assets and liabilities, and considers a possible relationship with changes in de jure capital controls. Section IV analyzes the determinants of cross-country differences in de facto financial globalization, including the role of both highly persistent factors (such as institutional quality) and factors that can be substantially affected by policies in the relatively near term (such as capital controls). Section V estimates the potential gains from international risk sharing for different segments of the IMF’s membership and reports evidence on the extent to which such gains have been realized in practice. Section VI estimates the impact of financial globalization on macroeconomic volatility, the frequency of crises, and long-run economic growth. Section VII concludes.

III Some Facts on Financial Globalization

The global economy has become substantially more financially integrated over the past three decades. Average de facto financial globalization (measured, as discussed in Box 2.1, by gross external assets and liabilities as a share of GDP) has approximately tripled since the mid-1970s. Experience has differed by income group: the worldwide increase in financial globalization has been driven mainly by high-income countries, where financial integration has accelerated since the early 1990s (Figure 3.1). Although low- and middle-income countries have also become more financially integrated, average increases have been more moderate. Regionally, many countries in developing and emerging East Asia as well as in Eastern and Central Europe have displayed relatively large increases in international financial integration—sixfold and threefold, respec-

tively, on average, compared with a twofold increase in the low- and middle-income countries as a whole.

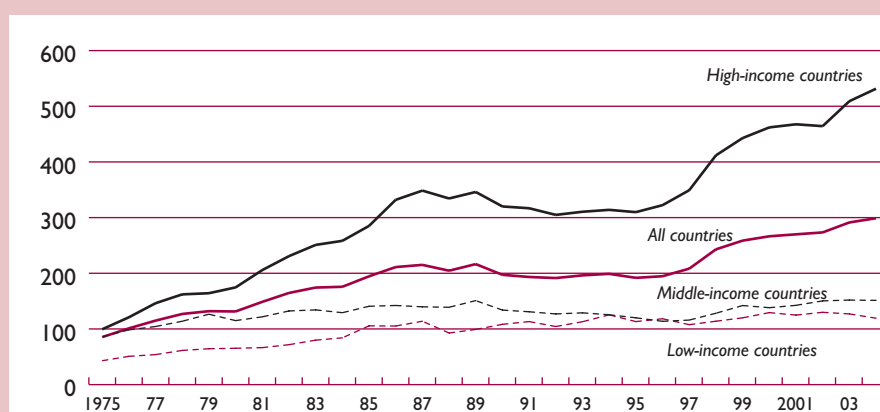
Increasing financial integration among OECD countries has been characterized by two-way, or “diversification,” asset trade—large gross holdings of assets and liabilities that have resulted in a relatively small net external position (Table 3.1).¹ In contrast, for other countries, net liability positions are relatively large. The data also suggest that the composition of external assets and liabilities has shifted away from debt instruments over the past decade, though debt remains—across income groups and regions—the largest component of exter-

¹This section was prepared by Giovanni Dell’Ariccia and Martin Schindler.

¹All cross-border financial holdings are included in the data presented in this paper: debt, bank loans, equity investment, and FDI. Existing data on cross-border holdings of assets and liabilities do not allow a clear-cut distinction between public and private positions. This distinction, even if possible, would in any case be blurred by past conversions of defaulted private obligations into public debt.

Figure 3.1. Gross External Assets and Liabilities by Income Group

(In percent of GDP)



Source: Lane and Milesi-Ferretti (2006).

Notes: Based on a sample of 74 countries (see Appendix I) for which data on de facto financial globalization and de jure capital controls are available for the entire sample period. Income groups are according to the World Bank definition. The graph depicts unweighted averages of countries’ ratios of the sum of external assets and liabilities relative to GDP.

Table 3.1. Gross and Net External Positions, 2004
(In percent)

	External Position		Grubel-Loyd Index
	Gross	Net	
High income	531.5	44.7	92
OECD	462.1	-13.5	97
Non-OECD	664.5	156.4	76
Middle income	151.3	-45.8	70
Low income	119.3	-49.3	59

Sources: Lane and Milesi-Ferretti (2006); and IMF staff calculations.

Notes: Unweighted averages for each subgroup. A country's gross external position is defined as the sum of external assets (A) and liabilities (L) relative to GDP; the net external position is defined as $(A - L)/GDP$. The Grubel-Loyd index, which indicates the fraction of a country's gross external assets and liabilities that constitutes two-way trade (Obstfeld, 2004) is defined as $1 - |A - L|/(A + L)$.

nal liabilities (Figure 3.2).² FDI inflows have gained importance in many low- and middle-income countries, whereas portfolio equity finance has increased substantially in several high-income countries.

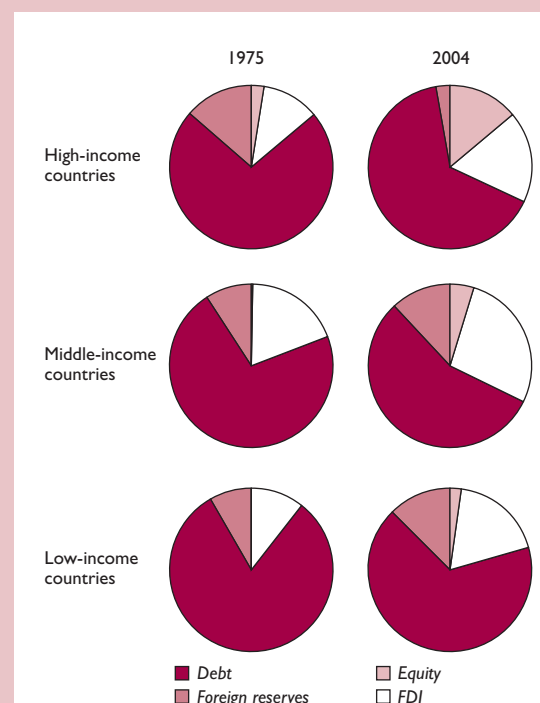
De Jure Financial Openness

Legal (de jure) controls on capital account transactions—a policy variable—are potentially important determinants of de facto financial globalization.³ Over the past three decades, most countries have relaxed de jure controls on the capital account, though the process of liberalization has slowed since the mid-1990s. This broad trend is apparent for both the relatively liberalized and the relatively nonliberalized countries, though liberalization efforts took place somewhat earlier in the former group than in the latter group (Figure 3.3, left panel). About one-half of the countries in the sample are

²There is also evidence that the currency composition of emerging market debt is changing: the share of local-currency-denominated debt in marketable sovereign debt rose from 73 percent in 1996 to 82 percent in 2004 (IMF, 2006).

³For the purposes of this paper, indices that measure controls on inflows and outflows separately, as well as controls on different categories of assets (equity, debt, and direct investment), have been developed for 91 countries for 1995–2005, drawing on the information in the *Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)*; see Appendix II and Schindler (2008) for further details. Long-term trends since 1975 draw on the *AREAER*'s original binary index, which was extended to 2005 for the purposes of this paper. Shortcomings common to all indices based on the *AREAER* are that they do not capture differences in enforcement and the economic impact of controls across countries and time periods.

Figure 3.2. Composition of Gross External Assets and Liabilities, 1975 and 2004
(In percent)



Source: Lane and Milesi-Ferretti (2006).

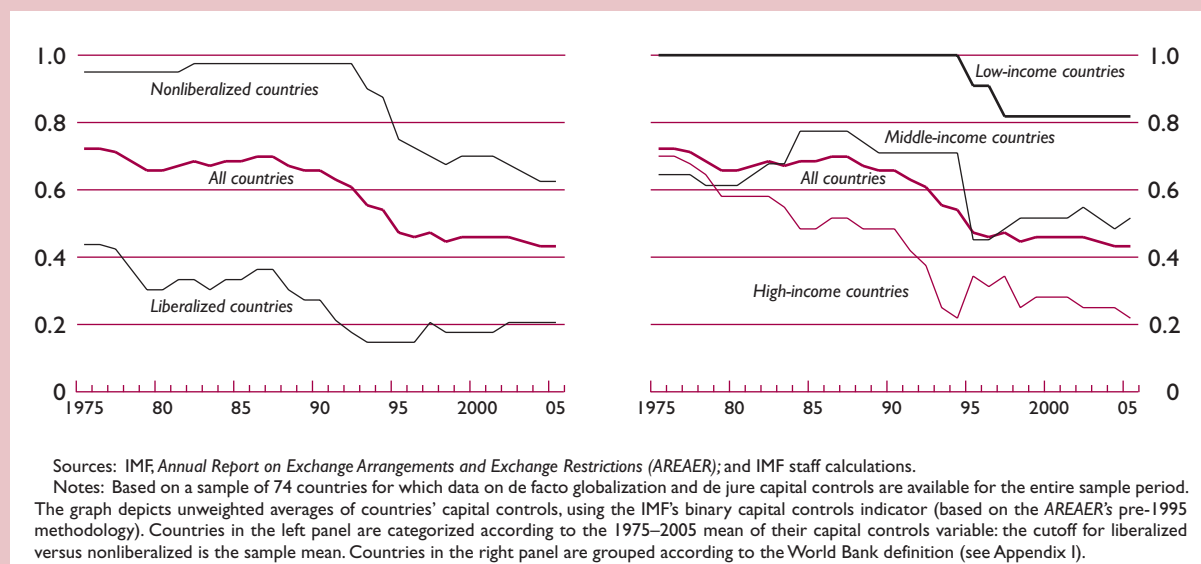
Notes: Based on a sample of 32 high-income, 31 middle-income, and 11 low-income countries. For each year and income group, the pie charts depict the shares of each type of external assets plus liabilities in total external assets plus liabilities. Group averages are unweighted.

currently considered fully open to capital flows, up from under one-third in 1975. While liberalizations were the dominant trend over the period, about 10 percent of the countries in the sample tightened their controls, often in response to crises. The capital controls index developed in this paper indicates that 17 countries not fully open in 1995 had fully opened their capital accounts by 2005, while only 4 countries opted to fully close their capital accounts between 1995 and 2005.⁴

Although the level of controls appears to be inversely related to a country's per capita income, countries in all income groups—on average—have relaxed capital controls over the past three decades (Figure 3.3, right panel). Liberalizations were pervasive among

⁴Countries with an aggregate capital controls index greater than 0.9 are here defined as fully closed, and those with an index less than 0.1 as fully liberalized. Using instead a definition based on the extreme values of the index (0.0 and 1.0), only 2 countries became fully closed, whereas 14 countries fully opened up.

Figure 3.3. Capital Controls by Financial Openness and Income Group



OECD countries—many of which moved from a highly restricted financial account position in 1975 to being fully open by 2005, while among emerging market and developing economies there were regional differences. Many countries in Eastern Europe and Latin America liberalized their financial accounts—owing, in a number of cases, to prospective accession to the European Union (EU) or bilateral or regional trade agree-

ments (IEO, 2005, p. 32; and Árvai, 2005). In contrast, several countries in East Asia and the Middle East tightened capital controls, and most countries in sub-Saharan Africa maintained financial account restrictions. Several high-income oil-exporting countries also introduced new restrictions during the 1990s.

Among countries that retained capital controls, on average outflows were somewhat more restricted than

Table 3.2. Capital Controls by Type, 1995–2005

Type of Control	All Countries		1995–2005 Average		
	1995	2005	Low income	Middle income	High income
Aggregate	0.36	0.30	0.56	0.38	0.17
Inflows	0.32	0.26	0.50	0.33	0.16
Outflows	0.40	0.34	0.63	0.44	0.18
Equity	0.37	0.30	0.61	0.38	0.18
Debt	0.33	0.32	0.50	0.40	0.15
Short term	0.34	0.30	0.59	0.40	0.15
Long term	0.33	0.33	0.41	0.40	0.15
FDI	0.38	0.27	0.54	0.37	0.20

Sources: IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*, various years; and IMF staff calculations.

Notes: Unweighted averages of countries' capital controls, based on a capital controls index constructed by staff. Data for long-term debt refer to 1997 in the left panel and 1997–2005 in the right panel, respectively.

Box 3.1. The Integrated Approach to Capital Account Liberalization

As noted in the Independent Evaluation Office’s report (IEO, 2005), the IMF’s “integrated” or “sequencing” approach to capital account liberalization, developed in the late 1990s/early 2000s, appears to be widely accepted among IMF staff and underlies much of the institution’s policy advice in this area. The approach considers capital account liberalization as part of a broader economic reform package encompassing the macroeconomic policy framework, the domestic financial system, and prudential regulation. The approach also emphasizes the importance of following a sequence of measures and reforms.¹

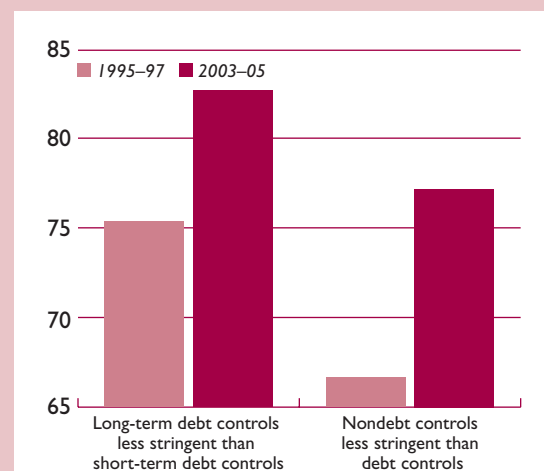
The integrated approach consists of the following 10 general principles: (1) capital account liberalization is best undertaken against a background of sound and sustainable macroeconomic policies; (2) financial sector reforms that support and reinforce macroeconomic stabilization should be given priority in implementation; (3) financial sector reforms that are mutually reinforced and operationally linked should be implemented together; (4) domestic financial reform should be complemented by prudential regulation and supervision and financial restructuring policies; (5) liberalization of capital flows by instruments and/or sectors should be sequenced to take into account concomitant risks—in general, long-term and non-debt-creating flows (especially FDI) should be liberalized before short-term and debt-creating flows; (6) the pace of reform should take into account the conditions in the nonfinancial sector; (7) reforms that take time should be started early; (8) reforms need to take into consideration the effectiveness of controls on capital flows in place at the time of liberalization; (9) the pace, timing, and sequencing of liberalization need to take account of political and regional considerations; and (10) the arrangements for policy transparency and data disclosure should be adapted to support capital account opening.

The evidence reported in this paper suggests that member countries have increasingly followed the integrated approach to liberalization. Taking a “snapshot” of countries’ capital control structures, the extent to which countries follow the approach should be reflected in the share of countries with more controls on short-term debt than on long-term debt; and with more controls on debt than nondebt flows. As shown in Figure 3.5, the degree to which countries’ practice appears to conform to the approach has increased since the mid-1990s. More generally, as shown in Appendix III, most countries covered in the case studies have also liberalized FDI inflows early on, long-term before short-term flows, and nondebt flows before debt flows, particularly in the more recent period.

¹Eichengreen and others (1998); and Ishii, Habermeier, and others (2002).

Figure 3.4. Patterns of De Jure Financial Openness, 1995–97 Versus 2003–05

(In percent of all countries)



Sources: IMF, *Annual Report on Exchange Arrangements and Exchange Restrictions*; and IMF staff calculations.

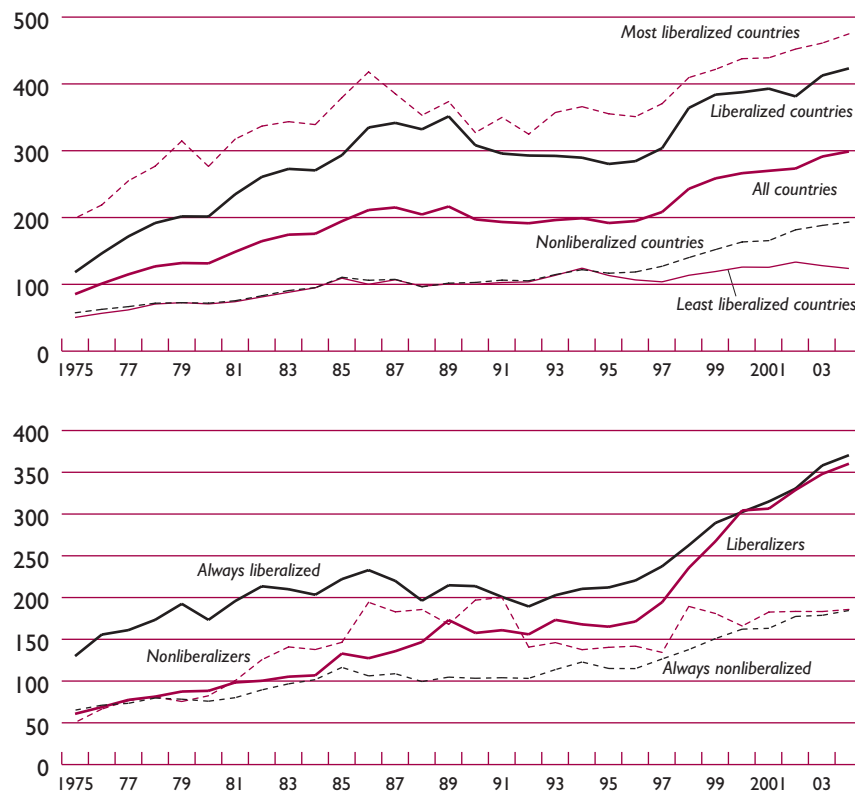
Notes: Based on a sample of 73 countries with continuously closed (1) or open (0) financial accounts during 1995–2005. The first pair of bars shows the fraction of countries where, on average during 1995–97 and 2003–05, respectively, long-term debt flows were less restricted than short-term debt flows, while the second pair of bars shows the fraction of countries where nondebt (equity and FDI) flows were less restricted than debt (bonds and money-market) flows. These comparisons provide a snapshot of the percent of countries whose capital controls structure was consistent (in 1995–97 and 2003–05, respectively) with the two aforementioned aspects of the integrated approach described in the text.

inflows while, in low-income countries, restrictions on short-term debt were more common than those on long-term debt (see Table 3.2 on p.7). It is also worth noting that controls on equity, and especially FDI, were brought down considerably between 1995 and 2005 across the membership, whereas controls on debt remained essentially unchanged, on average. More generally, in recent years, changes in the structure of capital controls have brought more countries in line with what has come to be referred to as the “integrated approach” (Box 3.1). According to the approach, countries should liberalize FDI inflows first; this should generally be followed by lifting controls on other long-term and nondebt flows, such as equity and outward FDI, before the liberalization of short-term flows and debt flows.⁵ In fact, as shown in Figure 3.4, both the number of countries with more liberal long-term than

⁵The liberalization of some short-term flows into the banking system may be required at an early stage to foster the development of key domestic financial markets, notably the interbank money and

Figure 3.5. Gross External Assets and Liabilities by Levels and Changes in De Jure Financial Openness

(In percent of GDP)



Source: Lane and Milesi-Ferretti (2006).

Notes: The graph depicts unweighted averages of countries' ratios of the sum of external assets and liabilities relative to GDP. The top panel is based on a sample of 74 countries for which data on de facto globalization and de jure capital controls are available for the entire sample period. Countries are categorized according to the 1975–2005 mean of their capital controls variable. The cutoff for liberalized versus nonliberalized is the sample mean; the most (least) liberalized countries represent the bottom (top) decile of the capital controls variable. In the bottom panel, six oil-producing countries are excluded. For each of the subperiods 1975–89 and 1990–2005, countries are categorized as liberalized (nonliberalized) if the mean of a country's capital controls variable is below (above) the sample mean for the subperiod. Countries switching from nonliberalized in 1975–89 to liberalized in 1990–2005 are labeled liberalizers, and vice versa for nonliberalizers.

short-term flows, and the number of countries with more liberal nondebt flows, increased by 10–15 percent between 1995–97 and 2002–05.⁶

foreign exchange markets. Suitable prudential measures in the banking system should be adopted in parallel.

⁶This exercise takes a “snapshot” of whether a country's capital controls structure is broadly in line with the integrated approach, though this is only a rough indication of consistency, because the approach allows for deviations from the broad patterns being considered when warranted by country-specific circumstances. Also, the exercise does not examine whether individual countries have adhered to the *sequencing* of liberalization implicit in this approach.

Countries' de facto financial integration has been influenced by their de jure financial account openness (Figure 3.5, top panel). First, during 1975–2004, de jure “liberalized” countries (defined as those with a lower-than-average index of capital controls over 1975–2005) had gross external assets and liabilities (relative to GDP) nearly twice as high as the nonliberalized countries (defined as those with a higher-

⁷Árvai (2005), who examines liberalization efforts of eight EU accession countries, reports that sequencing was broadly in line with the integrated approach.

than-average index of capital controls).⁷ Second, the “least liberalized” countries (those in the decile with the highest controls) saw smaller increases in de facto globalization than were experienced by countries with less restrictive regimes, though even the least liberalized countries did not isolate themselves completely from the trend toward greater de facto financial globalization—the ratio of their gross external assets and liabilities to GDP almost doubled over the period. Third, for countries that went from having above-average de jure restrictiveness during the first half of the sample period to below-average restrictiveness during the second half, de facto integration reached levels similar to those in countries that had been open throughout. Conversely, in countries that tightened controls during 1990–2005, financial integration converged to the lower and flatter trend of countries that had been closed throughout (Figure 3.5, bottom panel). These effects, it bears noting, portray the medium-run impact of highly durable characteristics of the capital control regime, rather than the impact of specific measures maintained for a relatively short time. On this latter issue, evidence from case studies suggests that when controls are re-imposed in countries that have experienced relatively liberal flows for a number of years, they tend to lose their effectiveness relatively quickly, especially where domestic financial markets are well developed (Obstfeld, 2007).

Beyond the relationship between the de jure regime and the overall level of de facto financial integration, there is also some evidence—for example, Eichengreen and others (1998)—that the *structure* of capital controls affects the *composition* of countries’ external

assets and liabilities. Indeed, other things equal, the evidence suggests that controls on portfolio equity and FDI are easier to enforce—and therefore more likely to be effective—than controls on debt and bank flows (Edwards, 1999). This evidence would seem to be broadly consistent with the observation that the share of FDI and equity in countries’ external portfolios has increased during the past three decades, over the same period that de jure controls on FDI and equity were reduced compared with other types of controls.⁸

On the whole, the stylized facts in this section underscore the degree to which countries that have maintained controls in place for many years have experienced smaller increases in de facto globalization than countries that were always open. However, even the countries that maintained the strictest controls in the sample experienced some increase in financial integration, perhaps because trade in financial assets is closely associated with trade in goods, and it would have been too costly for these countries to isolate themselves from globalization in the broader sense. While durable aspects of the capital account regime seem to have long-term effects on financial integration, controls aimed at fine-tuning the level and composition of flows tend to lose their effectiveness relatively quickly, and may become increasingly difficult to enforce as countries’ financial systems develop.

⁷These results also hold when controlling for per capita income.

⁸A more formal approach, based on panel regressions, however, does not find significant evidence linking the shift toward equity and FDI finance to changes in the structure of capital controls (Faria and others, forthcoming). It is possible that the cross-country variation in lifting controls on equity and FDI compared with other flows has been insufficient for its impact to be captured in regressions.

IV Determinants of Financial Globalization: A Cross-Country Perspective

What determines cross-country differences in de facto financial globalization (in contrast to the evolution over time in integration discussed in the previous section)? Despite the major increase in de facto financial globalization documented in Section III, countries' *relative* success in attracting international investors has been broadly stable over time: comparing countries' rankings by de facto financial globalization in different years, the rank correlation is 0.4 between the rankings in 1975 and 2004, and 0.7 between the rankings in 1995 and 2004. Such stability suggests that persistent country characteristics are likely to be key drivers of a country's de facto international financial integration. This section analyzes the role of such persistent factors, as well as that of capital controls.

Cross-country differences in de facto financial globalization may be related to both foreign investors' and domestic policymakers' views on whether foreign financing will be put to productive use. For example, foreign investors are likely to prefer to hold external liabilities of countries where such financing is expected to yield higher returns, while policymakers are likely to embrace financial globalization if they believe it will lead to higher growth without engendering excessive volatility. In fact, cross-country evidence drawn from two waves of financial globalization (1870–1913 and 1970s–present) suggests that key determinants of the productivity of foreign capital—including the quality of broad institutions and, to some extent, measures of human capital—are also the main determinants of international investors' willingness to hold a country's external liabilities (Faria and others, 2006). Similar factors also seem to affect the composition of a country's external liabilities: in a cross section of emerging market and developing countries, equity-like liabilities (FDI and portfolio equity) as a share of countries' total external liabilities are positively and significantly associated with indicators of educational attainment, natural resource abundance, and especially, institutional quality (Faria and Mauro, 2004).

This section was prepared by Julian di Giovanni, André Faria, and Paolo Mauro.

Table 4.1. Determinants of Gross External Liabilities Per Capita, 2004

	Total Liabilities (1)	FDI and Portfolio Equity (2)	Debt (3)
GDP per capita (log)	0.86*** (0.07)	0.97*** (0.10)	0.80*** (0.08)
Institutional quality index	0.48*** (0.13)	0.35** (0.17)	0.50*** (0.15)
Trade openness	0.46*** (0.16)	0.81*** (0.18)	0.29 (0.20)
Controls on inflows	-0.46*** (0.15)	-0.36** (0.17)	-0.55*** (0.20)
Constant	-0.10 (0.15)	-1.58*** (0.22)	-0.41*** (0.16)
R ²	0.94	0.92	0.90

Sources: Liabilities and their components are from Lane and Milesi-Ferretti (2006). Debt includes portfolio debt, bank loans, and currency deposits. Total liabilities consist of the sum of debt, FDI, portfolio equity, and financial derivatives. GDP per capita is from the World Bank's *World Development Indicators* (WDI). The institutional quality index is the simple average of six indicators from Kaufmann, Kraay, and Mastruzzi (2005): voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. Trade openness is the sum of imports and exports, divided by GDP, also from WDI. Controls on inflows are averages of all available years between 1995 and 2004 of indices of capital controls on total inflows (1), equity inflows (2), and debt inflows (3). Capital controls index constructed by staff based on the IMF's *Annual Report on Exchange Arrangements and Exchange Restrictions*.

Notes: The sample consists of 96 observations. Offshore financial centers are excluded. Estimated by OLS, with robust standard errors in parentheses. The symbols *, **, and *** indicate statistical significance at the 10 percent, 5 percent, and 1 percent level, respectively.

Controlling for the persistent factors identified above, empirical analysis suggests that domestic policies vis-à-vis the financial account also have an impact on countries' external liabilities. Table 4.1 presents estimates of the impact of capital controls, institutional quality, trade

