

THE PAST AND THE FUTURE OF DOMESTIC FINANCIAL MARKETS IN LATIN AMERICA

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When we study domestic financial markets, the first question we must ask is how to define them. Capital markets are usually defined as those in which capital funds (debt and equity) are traded, including primary (which itself includes private placements) and secondary (possibly organized) markets. The definition of financial markets also includes here the so-called money markets, or short-term liquidity markets. The question is thus what “domestic” or “local” means. In the context of multinational financial institutions and productive firms, being able to identify who owns the firms and who provides the funding and classifying them into “local” or “foreign” becomes complicated. The distinction between local and international financial markets becomes blurred even further when we consider that firms in a country can issue securities abroad and when international investors can buy shares issued by local firms, either directly or via American depository receipts (ADR). We thus adopt an eclectic definition of a domestic financial market. We consider as local a firm that accrues tax obligations (perhaps not exclusively) to the local government. We also define as local an investor for whom (assuming no default risk) investing in local-currency-denominated (possibly inflation-protected) government bonds is riskless, in the sense of assuring him or her a consumption stream that is known in advance.² Thus, a domestic financial market is one in which funds and securities are exchanged between local firms and local investors, between local investors, or between local firms.

As domestic financial markets seem to merge into global exchanges and new electronic forms of trading evolve, it is tempting to infer that local financial markets are becoming less important for the so-called emerging economies. However, viable domestic capital markets have proved to be important for economic development (Levine and Zervos 1998; Rousseau and Wachtel 1998; and Arestis, Demetriades, and Luintel 2001). They are also necessary for building fully funded pension systems throughout the region.

Are Latin American financial markets indeed becoming less important? What are the likely consequences of financial globalization? In the new environment, how relevant may local financial markets be for these economies? To these very important but difficult and general questions we try to provide at least partial answers. We first study the evolution of the region’s

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² This definition ignores the possibility that goods’ relative prices may change.

financial markets to determine if they indeed appear to be drying up. With a tentative finding we go on to identify the distinct role that local financial markets may have in a global context, discuss whether local financial markets seem to have provided the services they may be expected to, and, finally, propose policy recommendations.

Are Latin American Financial Markets Drying Up?

This section provides a description of the evolution of several indicators of capital market development. We show that this process was very dynamic during the first part of the nineties but presents a noticeable slowdown in recent years, especially after the so-called Asian crisis.

Market Values of Different Kinds of Instruments. Most Latin American capital markets have shown extraordinary growth in the last decade. Table 1 shows the recent evolution by instrument type of the three Latin American markets that implemented an early privatization of pension funds: Chile, Argentina, and Peru. In all three cases the table shows an important growth in asset volume during the first half of the nineties. Panel A shows that by 1990 Chile had an equity market size of approximately U.S.\$18 billion. By 1995 this figure more than quadrupled to \$71 billion. These numbers represent a jump in equity value from two-thirds of gross domestic product (GDP) to 1.12 times GDP. During the same period, time deposits and commercial paper almost tripled, from \$17 billion to more than \$46 billion. Simultaneously, corporate bonds and government debt doubled from \$1.2 billion and \$10.8 billion to \$2.4 billion and \$19 billion, respectively.

Something similar in terms of growth of financial markets happened in Argentina and Peru (Panels B and C, respectively). In Argentina, between 1992 and 1995 the market value of government debt and corporate bonds increased by nearly five times while the market value of equity markets and time deposits approximately doubled. In Peru, between 1993 and 1995 the total market value of both time deposits and equity capital doubled.

Things changed importantly after 1995, however. In Chile, between 1996 and 2000 only time deposits increase noticeably, growing from around \$53 billion to \$63 billion. In contrast, government debt, corporate bonds, and equity markets remained frozen at their 1995 values in current dollars; this standstill represents a reduction in real terms. Exactly the same phenomenon can be observed in Peru. In Argentina, the data series are incomplete, but equity markets grew little between 1995 and 1998. However, there was an important increase in market value in 1999 presumably as a consequence of the late privatization process.

Equity market capitalization. We can take a closer look at equity markets in the region using International Finance Corporation (IFC) data. The IFC provides a series of market indicators for emerging economies using data from a large sample of firms in each country. The indices for each country are composed of the most traded stocks until the market capitalization target is reached (between 60 percent to 75 percent of total market capitalization). Information for Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Latin America as a whole is presented in Panel A of Table 2. The table clearly confirms that every Latin American equity market included in the table boomed during the first half of the nineties. In fact, during that period equity market

value in Latin America as a whole increased five times. The table also shows, however, that after 1995 the rate of equity market growth slowed and, in fact, completely halted in nominal terms. Between 1996 and 2000 only the Mexican equity market grew. The equity markets of Argentina, Chile, Colombia, and Peru decreased their market values while the Brazilian market barely increased in nominal terms. The IFC market capitalization indicator for Latin America as a whole was U.S.\$244 billion by 1995, increasing slightly to U.S.\$254 billion by the year 2000.

Cost of capital. The reasons for the high rate of growth in market capitalization in Latin America during the early nineties are most likely related, at least partially, to structural reforms and favorable economic conditions. But another important factor that helps explain this phenomenon is almost certainly related to increased integration experienced by emerging economies at the beginning of the nineties accompanied by a sharp fall in risk premia. Henry (2000) finds that during an eight-month window leading up to the implementation of the initial stock market liberalization there are abnormal monthly returns of 3 percent. For Chile, Walker and Lefort (2000a) estimate a 6 percent equity discount rate drop in 1991, presumably attributable to closer integration of the Chilean capital market with the rest of the world. Table 2 shows that this phenomenon was quite general. Panels B and C show total market return and price-to-book ratios for the six Latin American countries included in the sample. The figures clearly indicate a sharp increase in 1991 both in total market return and price-to-book ratios. In fact, the average annual return in Latin American stock markets in 1991 was 123 percent, by far the largest of the decade. On the other hand, price-to-book ratios increased from 0.66 in 1990 to 1.41 in 1991. Considering a structural break from 1992 on, panel data evidence indicates a near 50 percent permanent and very significant increase in the price-to-book value levels.

The last two panels of Table 2 show two different measures of dividend yields, which can be interpreted as cost-of-capital indicators. The one shown in Panel D is backward looking and considers trailing dividends while the second one is forward looking and considers dividends during the following twelve months.³ Because of the sharp increase in stock prices in 1991, both measures indicate an important fall in the cost of capital for firms. In fact, dividend yields in the region remained relatively low until 1995.

Given the aim of this paper, these results point to an interesting conclusion. If we interpret the drop in the risk premia as an indicator of a higher degree of integration, the evidence provided in Table 2 shows that, at least during the early nineties, globalization—measured as equity market capitalization—did not harm Latin American domestic capital markets. Furthermore, since globalization opens new potential financing sources to firms, it is likely to reduce the overall cost of capital. Economic and capital market development are probably linked through it. Thus, if integration lowers the cost of capital, it may imply increased economic

³ Since the numerator of the dividend yield corresponds to the historical dividends, it may be argued that a high dividend yield could reflect an expected drop in future dividends. To heuristically analyze this possibility, we substitute the historical dividend for the ex post dividend of the following year (assuming perfect foresight).

development even if local capital markets happen to be harmed by it—a point that needs to be proved anyway. However, these considerations do not mean that globalization bears no costs.

It has been argued that Latin American capital markets have slowed down their rate of development in recent years. Table 2 shows that indeed equity market capitalization in most Latin American markets stopped growing after 1997. This phenomenon may be attributed to the increased globalization of financial markets, a process that reduces the importance of domestic capital markets; such is one hypothesis. Nonetheless, as Table 2 points out, this fact may also be related to higher risk premia after the 1998 Asian crisis. Consistent with this interpretation, toward the end of the nineties returns are negative: price-to-book ratios fall and dividend yields increase.

Traded volumes. Trading volumes provide another indicator of capital market development. Using data from Economatica we also constructed measures of stock market trading volumes for a sample of six Latin American countries during the nineties. The results are presented in Chart 1 (see also Table 3). Stocks traded in the domestic market and abroad, as ADRs are presented separately for each country. For most countries, with the exception of Chile, traded volumes peaked in 1997. The chart also shows that trading in ADRs has grown very fast, much faster than local trading volumes. It is difficult to determine whether ADRs have expanded total trading or have just substituted it away from local markets. The lower level of traded volumes in local markets after 1997 may respond to a higher degree of globalization and to the relatively larger traded volumes in ADRs. This explanation would be consistent with the hypothesis that international financial markets are functionally replacing local capital markets. However, except for Brazil, we find positive correlations between local and ADR traded volumes (see Table 3), which contradicts this vision, implying a negative correlation. On the other hand, the reduction in traded volumes could be just a temporary consequence of the Asian crisis of 1998 and its aftermath. Moreover, returns and volumes tend to move together, and returns anticipate economic growth (for example, see Fama 1990 for the United States or Walker 1998, which analyzes the case of Chile). A consequence of the Asian crisis has been lower economic growth. Therefore, lower returns and lower traded volumes are partly explained by this, and one should expect trading volumes to increase after the world and regional economies retake their growth paths. Of course, it is likely that other domestic factors related to fiscal discipline and the general health of the economy have also affected the behavior of local markets, as in the case of Argentina, but the Asian crisis seems to have triggered all of this.

To shed additional light on the issue, we test the following hypothesis on IFC traded volumes: Low traded volumes in local markets have been caused by economic conditions, including low returns and high risk premia.

Beyond the mechanical relationship between traded volumes and returns (via price levels), we propose that volumes have elasticity to returns above one. We also include dummies for possible structural changes. Therefore, the dependent variable considered is the log of the monthly ratio of the traded volume to the stock price level, which gives an indication of *quantum*. As explanatory variables, we include: (1) trailing annual returns, (2) the lagged price-to-book ratio (in order to capture the risk premia, since the ratio is supposed to be low when the risk

premium is high), and (3) a trend and shifts in it both after the structural change (from 1992 on) and after the Asian crisis (from August 1998 on). In this context, we search for evidence of a significant drop in trading volume growth after the Asian crisis.

Results are shown in Table 4. Since we consider the price-level-adjusted traded volumes, residuals show high autocorrelation. However, we are able to reject the unit root hypothesis for the residuals. We have thus corrected the test statistics for autocorrelation. We observe a number of interesting results. First, price-to-book ratios have a significant positive impact in the cases of Latin America, Argentina, and Mexico. For Chile it is significant at a 10 percent level. Second, trailing returns have the expected effect only in the case of Colombia. Third, significant positive trends appear before the structural change related with a higher degree of integration, after it, or in both cases. Thus, long-term expected growth in price-adjusted volumes is positive. Finally, for Latin America as a whole, and in particular for Brazil and Colombia, we find a significant drop in the growth rates associated with the Asian crisis. This can be interpreted as meaning that once the impact of the crisis is over, traded volumes are likely to return to their “normal” paths. Thus, the evidence does not necessarily support the hypothesis that local equity markets are drying up since the long run trends are positive.

Financing sources, new issues, and uses of funds. Using information from Economatica we constructed aggregate series for the sources of funds by country. We were also able to obtain a few uses of funds. This information is useful in analyzing the role that capital markets have had in the past and in assessing whether they have provided the services they are expected to.

Some results are presented in Table 5, where a few interesting facts show up. First, by far the most important source of funding is internal, from firms’ operations. Second, firms tend to obtain very little funding from equity issues. Here there are no clear trends. It is also interesting to notice that in 1998, during the peak of the Asian crisis, except for Mexico, in the other three countries an unusually low number is observed for new equity issues. This may indicate that, as in other countries, firms try to time the market (see Baker and Wurgler 2002), avoiding new equity finance when its cost appears to be unusually high (when price-to-book ratios are unusually low). Third, debt is the preferred source of outside financing. Whenever more detailed information is available, we notice a preference for bank finance. Again, with the exception of Mexico, 1998 was the year with the highest bank finance as a proportion of the total external finance. Table 1 also provides complementary evidence. In the cases of Chile and Peru, corporate bonds show a significant increase in 2000. These findings may also be associated with the idea of market timing. Finally, Chile seems to be the only country with significant public debt issues, but even in this case the numbers are relatively low.

Regarding the most important uses of funds we were able to uncover, dividend payments seem to be relatively low on average. Chile has the highest average ratio of dividend payments to internally generated funds (57 percent), followed by Brazil (39 percent), Peru (28 percent), and Mexico (17 percent). Considering fixed assets and permanent investments as the main productive uses of funds, and assuming no significant cash buildups, we can conclude that for Chile and

Brazil about 40 percent of the funds raised have been used to pay debts, and for Mexico, about 60 percent. Thus, debt maturity would be relatively short, even shorter in Mexico.

Summarizing, we find relatively infrequent equity issues, small dividend payments, low public debt issues, and an important use of bank debt. These are symptoms of underdeveloped capital markets. In addition, we find some indication of attempts to time the capital markets.

Are markets drying up? The evidence regarding trading volumes does not necessarily support this view. Price-to-book values and traded volumes indeed are low on average. Equity issues and other external financing sources direct with the public seem to be at a relatively primitive stage, with no clear trend. However, in the cases of Chile and Peru, corporate bonds have increased significantly. Consequently, there may be a single explanation to the recent developments of Latin American financial markets: the Asian crisis and its aftermath.

The Role of Domestic Financial Markets

The empirical literature following Levine and Zervos (1998) (such as Rousseau and Wachtel 1998 and Arestis, Demetriades, and Luintel 2001) has established a clear relationship between the development of domestic capital markets, economic growth and productivity. However, it has recently been argued that, in an era of globalization and internationalization, large capital markets established in well-developed economies such as the United States and England may provide in a cheaper and more efficient way the standard services required from domestic markets. The question is whether in the context of the global economy domestic capital markets are doomed to be replaced by international capital markets. The recent slowdown of Latin American equity markets both in market values and traded volumes has been associated with this phenomenon.

In this paper we argue that domestic capital markets have competitive advantages in providing services not easily offered by international capital markets. We discuss these issues in this section.

In any case, it is essential to realize that, if large emerging market firms' funding needs are fully resolved in the context of global financial markets, they will not compete for funds in local markets with other local institutions. Thus there will be less of a "crowding out" effect. Just as with banks, whose role may be redefined after a successful pension reform, after capital markets become integrated local markets may have new roles to play.

Services expected from local capital markets. Capital markets are expected to provide two kinds of services: funding of the "appropriate kind," including short-term liquidity, and risk sharing. How may this be different for a relatively small economy open to international capital flows? What becomes the role of local capital markets if firms can raise funds abroad, either via equity or debt? We hypothesize that local capital markets can better provide some services because of considerations such as currency matching, scale factors, transaction costs, and the information asymmetries involved in providing these services from abroad.

Over the different stages of the business cycle, capital markets are expected to provide different services. A first role that we identify for local capital markets is that of an external crises

“shock absorber.” According to Caballero (2001), crises typically happen after terms-of-trade shocks. Then, flows to emerging markets tend to stop or even to be reversed, which produces a short-term liquidity crunch. Thus, the liquidity service that can be provided by local capital markets is most valuable during these crises. It is presumably too expensive for foreign capital markets to provide short-term liquidity services, particularly in local currency.

Even after an emerging economy successfully achieves domestic macroeconomic stability, such as in the case of Chile, the main source of business cycle variability will arise from external shocks. In the medium-term after the initial shock, local firms will increase their need for external finance in order to reduce the real consequences of the shocks. However, since these external shocks affect the risk premia required from emerging markets, equity financing will appear to be particularly expensive. Issuing bonds and selling them abroad may also seem relatively expensive. Thus, given the evidence that firms engage in market timing of their financing sources,⁴ local firms will turn to the domestic capital markets, especially to banks (given less information asymmetry in this case) in order to get the required funding. If domestic capital markets are not well developed, the lack of domestic funding may deepen the downturn in real economic activity. Thus, in this sense, local capital markets still have an important, although possibly redefined, role to play in the context of the global economy.

Second, domestic capital markets are better suited to provide funding denominated in local currency (or linked to the domestic CPI, for example) because of asymmetric risk assessments of the currency unit. The expected bankruptcy costs and risks associated with debt issued in local and foreign currency may be quite different, both from the perspective of investors and firms. For instance, for a local worker, a fixed income, CPI-indexed, government-guaranteed instrument is as close as it gets to a risk-free asset.⁵ This is not necessarily true for the average foreign investor. Also, from the perspective of firms that operate in the nontradable sector of the economy, issuing debt denominated in foreign instead of local currency will increase expected bankruptcy costs. Thus there will be welfare-enhancing and/or risk-reducing contracts between people from the same country or region that would probably not exist between local and foreign agents under similarly favorable conditions.

Third, from the perspective of facilitating firm financing, we distinguish between large and small companies. In the case of large firms, many will have direct access to foreign financing. However, local and foreign funding are not always perfect substitutes. When it comes to raising equity, and after firms have gone through the process of issuing ADRs, local and foreign financing are indeed perfect substitutes. The same is true for debt but only if currency considerations are unimportant. In the case of smaller firms, by virtue of their size and the fixed costs involved in issuing securities abroad, it is likely that they will remain financed by local capital markets, in terms of equity and debt, using local or foreign currency.

⁴ Whether this activity is rational or not is a different discussion.

⁵ It may be thought that since throughout Latin America inflation seems to be under control, there is no need for CPI-indexed bonds. This assumption is probably false in the case of long-term instruments, since

Fourth, domestic capital markets play an important role reducing information asymmetry. Young and riskier firms that require external funding will probably have to go through a screening process performed by the domestic market before they have access to international capital markets. In this sense, we can think of an international “pecking-order theory” perspective. Myers’ (1984) pecking-order theory establishes that, because of information asymmetries, the preferred financing sources will be those that minimize the expected losses that result from it, from the perspective of the issuer. Therefore, young and unknown firms will use local debt, primarily short-term (perhaps bank) debt. As the information asymmetry is reduced, these firms may go on to issuing equity-like instruments. If this theory is valid internationally, and if cross-border information asymmetry is greater, a period of acquaintance with the local market may be necessary before firms go on to issue securities abroad, such as Yankee bonds and ADRs.

In the latter two cases, local financial markets can be understood as the nursery of younger/smaller firms. However, it is also true that new information technologies and remote trading systems imply that distribution and information costs will be reduced over time, even for smaller/younger firms. The point is whether a significant degree of cross-border transaction costs and information asymmetries will remain even after this new technology is in place in order to justify this role. Our hypothesis is that certain information asymmetry, perhaps related to the idiosyncrasies of the different countries, will remain over time.

Finally, regarding risk sharing, simple diversification arguments allow us to conclude that global capital markets may be much more effective for spreading out certain investment risks. However, the benefits associated with sharing these risks internationally have to be balanced against scale economy arguments and currency considerations. In the case of smaller firms, the costs associated with cross-border equity issues may exceed the benefits of international risk sharing. The second point is that “risk” may not have the same meaning for local and foreign investors. As discussed, a long-term CPI-indexed, government-guaranteed instrument may be fairly similar to a risk-free asset from the perspective of a local pensioner, for example, but not from that of a foreign investor. Similar arguments apply to the case of equity. For example, utilities may provide stable and relatively predictable future real cash flows measured in local currency. The risk assessment of such security will depend on the perspective of the investor. As a consequence, we may expect clientele effects for the different kinds of securities. This is a possible explanation for the home-equity bias documented in the literature for institutional stock investments.

Have local capital markets provided such services? We have very limited evidence to answer this question. But our unproven hypothesis is that local capital markets in Latin America are still at an early stage of development and thus have not provided many of the services they are expected to, even in the context of globalized capital markets.

Regarding the role as an external shock absorber, even in a relatively developed case such as Chile’s, local capital markets may prove to be insufficient. Indeed, many local financial

the nature of the inflation risk is that of a “sleeping monster,” which implies that such instruments will have hedging demand. Proof of this is the relative success of TIPs in the United States. See Shiller (1993).

institutions are resident foreign institutions that sharply reduce the supply of domestic credit in an attempt to increase their net foreign currency holdings during a crisis. However, this fact does not necessarily indicate a failure of the local market. It may, rather, be a consequence of the central bank's decision not to allow the local currency price to adjust, which may lead (as it did) to extraordinarily high local interest rate levels. Anyway, this episode allows us to conclude that the ability of local capital markets to provide useful services also depends on the general economic policies implemented by the central authorities and on the economy's macroeconomic balances. These arguments are complementary to those of Arteta, Eichengreen, and Wyplosz (2001), who find that capital account liberalization helps more than it hurts when major economic imbalances have been eliminated. Conclusions are similar with regard to local investors in that they will not behave any differently than the foreign ones if important imbalances are present.⁶

The evidence presented in Tables 1 and 5 indicates that, after the initial shock in 1998, the relative importance of debt (particularly bank) financing seems to have increased. We can say at least for Chile and Perú that an important fraction of the new debt is denominated in local currency (CPI-indexed, in the case of Chile). The evidence of Table 5 discussed before indirectly implies that debt maturities tend to be low. This evidence, along with the relatively small market sizes, suggests that Latin American capital markets have a long way to go in order to provide meaningful long-term public debt financing possibilities to local firms. In Chile, the fact that most debt issues are indexed to the CPI has allowed the development of a relatively successful long-term bond market (see Walker 1998).

We have also argued that issuing securities in the local capital market may be a natural first step in the internationalization process of local firms, particularly in the cases of small and/or less-known firms. It seems that local markets have not fulfilled this role either, since we observe relatively unimportant equity issues even after considering all firms, large and small. Furthermore, in Latin America there exists very significant ownership concentration (see Castañeda 2000 for Mexico, Valadares and Leal 2000 for Brazil, and Lefort and Walker 2000 for Chile). This concentration means that capital markets may not be providing significant diversification services either. LaPorta et al. (1996, 1997) suggest that the lack of development of local equity markets can be attributed to poor corporate governance laws and practices. Bebchuk (1999) argues that ownership concentration occurs because majority shareholders seek to protect their expropriation rents in this way. The wave of takeovers after the Asian crisis and the large premia paid (estimated at 70 percent in the case of Chile) suggests that there is truth in these explanations.

Final Remarks

We have argued that even in the context of globalized economies, domestic capital markets may play an important role in the case of emerging economies. The specific services that may be competitively provided by local capital markets are short-term liquidity, long-term

⁶ In the appendix we propose a list of conditions that may be helpful for capital market development.

financing with matching currency, and equity financing for smaller or younger firms. The reasons we can expect these services to be better provided by the local markets are related to economies of scale, to the perspective and definition of risk, and to eventual informational asymmetries between local and cross-border markets. In addition, local capital markets may provide the only way to mitigate the adverse effects of external shocks. In the short run, liquidity services are required. In the medium to long run, firms need some degree of flexibility in their access to diverse financing sources.

In this context, Latin American capital markets seem to be at a very primitive stage of development and could still provide many valuable services to local firms. Long-term debt in local currency barely exists, new equity finance is scarce, and equity holdings are concentrated. In any case, in recent years traded volumes, market capitalization, and price levels have fallen. We present partial evidence that some of these effects are transitory and attributable to the Asian crisis. However, other facts are endemic, such as the lack of outside finance and property concentration. In the appendix we present conditions that support capital market development, but perhaps the two most important prerequisites are macroeconomic stability and investor protection. After these conditions have been met, we will be able to appreciate whether local capital markets indeed provide the services they should to support higher levels of growth, productivity, and welfare.

Appendix: A List of Conditions for Capital Market Development

Below we identify some of the conditions that, if absent, will limit the development potential of capital markets.

Macroeconomic Stability in the Context of a Market-Oriented Economy. Capital market development can be limited by the lack of macroeconomic stability. It is also true that since capital markets intermediate funds from different sources, well-functioning credit markets and nondistorted fundamental prices are required, such as price levels, real exchange rates, and real interest rates. Although these observations are not necessarily true for all economies, based on the Chilean experience with endemic inflation, we can add to the above list the availability of indexed (inflation-protected) fixed-income instruments.

Adequate Tax Regime. In general, the development of a capital market greatly depends on tax incentives. Also, the degree of inflation- or currency-neutrality in the tax code will have an effect on the specific markets and instruments that will be developed. For example, an inflation-neutral tax code may favor the development of an indexed fixed-income long-term market.

Progressive Capital Control Liberalization. It is likely that restrictions in this aspect negatively affect the overall development of capital markets.

Adequate Regulation and Competition in the Financial Services Industry. Over-regulation or lack of competition in the financial services industry may curtail the growth possibilities of capital markets. For example, competition among security traders and stock exchanges probably imply transaction costs that do not inhibit trading. Also, prudential bank regulation implies fair competition among alternative fund suppliers, including pension funds. If these conditions are not present, slower capital market development is expected.

Clear Property Right Laws, Including Bankruptcy Legislation and Investor Protection. In capital markets, contingent claims on the value of firms are traded. If those claims' boundaries are not well delimited, security prices will be significantly penalized, rendering the issuance of such claims unattractive for firms seeking funds.

Privatization of state-owned companies. Privatization of state-owned firms is likely to have important effects on the development of capital markets. Firms that before relied on centralized credit allocation may now opt for the bond and stock markets. Also, if the privatization process purposely considers a vast dispersion of property, higher transaction volumes in stocks are expected. Pension fund participation may enhance these effects.

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TABLE 1
FINANCIAL MARKETS
December of each year

Panel A. Chile

Year	Government Debt		Time Deposits and Bank Bonds		Corporate Bonds		Equity		GDP (US\$ MM) (3)
	%GDP (%)	Market Size (US\$ MM) (2)	%GDP (%)	Market Size M7 (3) (US\$ MM)	%GDP (%)	Market Size (US\$ MM) (2)	%GDP (%)	Market Size (US\$ MM) (2)	
1990	39.4	10,812	62.5	17,166	4.6	1,256	66.7	18,295	27,446
1991	43.1	13,917	65.7	21,192	5.5	1,791	109.7	35,405	32,279
1992	39.6	15,742	67.7	26,880	5.0	1,972	84.9	33,733	39,718
1993	38.9	16,208	72.5	30,240	4.9	2,056	122.3	51,007	41,701
1994	32.1	16,978	72.5	38,363	4.6	2,452	127.8	67,682	52,947
1995	30.1	19,158	73.1	46,473	3.8	2,410	112.0	71,177	63,556
1996	31.5	20,972	80.9	53,803	3.5	2,315	99.0	65,844	66,518
1997	33.4	23,997	88.0	63,187	2.6	1,902	100.1	71,832	71,775
1998	28.1	19,936	88.8	63,068	3.2	2,256	73.0	51,809	70,985
1999	29.4	19,149	95.7	62,425	3.9	2,574	105.0	68,499	65,232
2000	29.9	19,738	95.6	63,059	5.5	3,643	91.7	60,514	65,961

* Source: 1990-1993, Walker and Lefort (1999).

(1) Since 1994, source: Superintendencia de Administradoras de Fondos de Pensiones.

(2) Since 1994, source: Superintendencia de Valores y Seguros.

(3) Since 1994, source: Banco Central de Chile.

Panel B. Argentina

Year	Government Debt		Time Deposits and Bank Bonds		Corporate Bonds		Equity		GDP (US\$ MM) (2)
	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	
1992		7,025		26,277		496		18,326	
1993		28,481		40,159		932		42,932	
1994	10.7	27,623	18.2	46,916	0.3	720	14.2	36,529	257,440
1995	12.6	32,421	16.7	43,196	0.8	2,007	14.4	37,062	258,032
1996	14.5	39,461	19.7	53,576	1.1	2,937	16.3	44,358	272,150
1997	14.6	42,684	21.4	62,570	0.9	2,547	20.1	58,983	292,859
1998	13.2	39,221					15.2	45,292	298,131
1999	17.4	49,171					29.3	82,982	282,769

Source: CNV - Argentina

(2) Source: Secretaría de Programación Económica y Regional.

Panel C. Peru

Year	Time Deposits and		Leasing Bonds		Corporate Bonds		Equity		GDP (US\$ MM) (3)
	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	%GDP (%)	Market Size (US\$ MM) (1)	
1993	15.4	5,340	0.6	211		n/a	14.7	5,084	34,684
1994	17.0	7,618	0.8	344	0.2	85	18.2	8,162	44,864
1995	17.7	9,480	1.1	599	0.4	209	21.9	11,701	53,500
1996	21.0	11,708	2.0	1,129	0.8	471	24.8	13,842	55,712
1997	22.9	13,511	2.9	1,728	1.2	700	29.5	17,383	58,954
1998	22.7	12,977	4.3	2,482	1.4	801	19.3	11,034	57,080
1999	24.2	12,591	4.4	2,305	1.6	852	25.8	13,407	51,963
2000	23.4	12,624	4.0	2,166	2.2	1,188	19.5	10,511	53,928

Source: Jorge Ramos: "La Experiencia de las Administradoras de Fondos de Pensiones en el financiamiento de las empresas a través del mercado de capitales del Perú". AFP Integra. Lima Peru.

Source: Gerencia de Estudios Económicos AFP Integra. Lima Peru.
Conasev y Banco Central de Reserva del Perú.

(3) Source: INEI y BCRP, Subgerencia del Sector Real

TABLE 2
Equity Market Indicators

	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Latin America
Panel A							
<i>Market Capitalization MM\$ USD</i>							
Year							
1990	2,388.7	7,388.1	9,941.6	1,337.6	21,585.2		48,365.8
1991	15,912.4	21,805.0	19,097.9	3,703.3	74,986.3		144,195.8
1992	14,292.6	23,199.8	21,932.5	5,107.2	66,108.2	1,730.6	135,637.7
1993	31,495.6	60,849.1	28,594.8	6,953.0	124,376.6	2,351.3	257,109.3
1994	18,751.5	111,905.6	45,057.7	11,436.6	83,279.3	5,271.5	279,054.5
1995	22,148.2	94,615.0	48,069.8	8,519.4	60,866.3	7,353.0	244,054.4
1996	26,564.2	94,879.1	35,780.5	9,287.1	72,196.9	7,605.3	253,466.2
1997	35,141.8	102,964.5	44,497.8	11,451.9	108,940.7	9,657.0	321,792.1
1998	24,894.0	65,871.1	31,837.1	6,337.3	67,174.1	6,151.2	206,953.8
1999	23,318.6	107,802.5	42,638.9	5,370.7	118,417.6	7,582.8	309,367.6
2000	12,331.1	103,837.8	35,350.1	3,377.1	91,914.7	4,379.8	254,705.0
Panel B							
<i>Total Return (%)</i>							
Year							
1990	-36.55	-65.68	40.44	37.46	29.69		-3.73
1991	396.92	170.39	98.06	191.32	106.76		123.52
1992	-26.49	0.32	16.18	39.11	21.18		5.72
1993	72.74	99.42	34.60	34.71	49.90	37.19	56.56
1994	-23.25	69.83	44.99	28.90	-40.64	53.48	-0.13
1995	12.69	-20.24	0.58	-23.77	-25.98	11.04	-15.92
1996	22.32	34.44	-14.33	8.05	17.83	3.12	19.13
1997	19.92	24.91	6.63	28.08	50.45	16.62	28.51
1998	-25.99	-38.93	-27.48	-40.71	-37.28	-38.04	-35.58
1999	37.56	76.06	39.94	-14.64	81.65	24.04	62.16
2000	-23.10	-5.11	-12.01	-42.19	-19.43	-24.79	-13.18

TABLE 2 (cont.)

Panel C							
<i>P/BV</i>							
	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Latin America
Year							
1990	0.26	0.33	1.04	0.81	0.99		0.66
1991	1.68	0.76	1.73	2.35	1.84		1.41
1992	1.20	0.37	1.71	1.73	1.99	2.66	1.04
1993	1.94	0.55	2.11	1.80	2.59	3.62	1.31
1994	1.42	0.63	2.51	1.38	2.16	3.00	1.08
1995	1.35	0.47	2.10	0.97	1.71	2.84	0.84
1996	1.62	0.73	1.59	0.84	1.68	2.52	1.11
1997	1.81	1.00	1.64	1.12	2.29	1.98	1.47
1998	1.25	0.61	1.11	0.77	1.41	1.57	0.91
1999	1.52	1.56	1.68	0.79	2.16	1.48	1.66
2000	0.93	1.42	1.44	0.50	1.68	1.09	1.40

Panel D							
<i>Dividend Yield</i>							
$D(t-12)/P(t)$							
	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Latin America
Year							
1990	0.89	9.44	5.00	7.60	3.41		9.78
1991	0.33	0.64	3.55	2.26	0.84		1.53
1992	1.93	0.68	3.82	1.89	0.99		1.89
1993	2.28	0.40	2.74	1.88	1.65	0.79	2.10
1994	2.91	0.66	2.41	1.70	1.82	0.72	1.87
1995	3.48	3.43	3.53	2.64	1.13	1.33	2.96
1996	2.95	2.33	3.95	3.15	1.49	2.43	2.46
1997	2.09	3.92	3.92	2.89	1.53	2.30	2.84
1998	4.02	7.84	4.11	5.14	2.74	3.55	5.08
1999	3.21	3.18	3.00	6.33	0.91	2.15	2.37
2000	3.45	3.67	2.53	5.66	1.42	5.50	2.89

Panel E							
<i>Dividend Yield</i>							
$D(t,t+12)/P(t)$							
	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Latin America
Year							
1990	2.21	14.91	6.55	6.99	2.98	0.00	5.35
1991	1.16	2.27	4.24	2.84	1.17	0.00	1.84
1992	4.10	5.33	3.89	2.17	1.93	1.51	3.11
1993	2.18	1.75	3.29	2.22	1.43	1.14	1.80
1994	3.49	1.92	3.58	1.99	0.96	1.49	2.02
1995	3.18	3.46	3.19	3.42	1.65	2.58	2.96
1996	2.63	4.56	3.67	3.90	2.43	2.86	3.43
1997	2.81	5.15	2.97	2.97	1.79	2.43	3.21
1998	3.66	5.51	4.03	5.33	1.60	2.84	3.74
1999	2.16	3.38	2.24	3.64	1.09	3.52	2.25

TABLE 3

Traded Volumes in Equity Markets						
	Argentina	Brazil	Chile	Colombia	Mexico	Peru
<i>Panel A</i>						
Domestic Markets (MM\$ US)						
Year						
1990						
1991						
1992	8,164	15,155			17,635	301
1993	6,203	27,330		261	35,408	1,213
1994	7,214	58,481	4,571	723	47,141	2,621
1995	3,438	50,154	9,396	319	23,121	2,478
1996	3,767	79,907	7,051	376	30,669	3,080
1997	7,652	156,694	6,777	956	42,582	3,592
1998	6,594	111,063	4,184	514	27,467	2,696
1999	6,891	67,542	6,853	556	32,599	1,774
2000	5,554	84,991	5,733	205	41,123	1,349
<i>Panel B</i>						
ADR's (MM\$ US)						
Year						
1990						
1991			34			
1992			96			
1993			1,006			
1994			3,899		31,682	
1995	11,778		6,829		27,172	104
1996	11,458	869	5,823	85	19,051	1,973
1997	15,173	4,486	9,897	77	26,649	2,932
1998	15,274	17,584	8,679	66	20,638	2,655
1999	14,400	58,190	6,266	38	26,409	1,439
2000	11,856	79,201	5,460	16	57,639	2,385
Correlations	0.89	-0.54	0.11	0.52	0.47	0.27

Source: Economática

TABLE 4
Regressions of Annualized Monthly Stock-Price-Level Adjusted Traded Volumes in US\$*
1987:1 - 2001:7

Variable	Latin America	Argentina	Brasil	Chile	Colombia	Mexico
C	9.71	-24.98	3.29	-41.83	-44.30	0.78
<i>t-test</i>	4.35	-2.97	0.88	-9.42	-8.50	0.13
Price-to-Book(-1)	5.09	1.85	0.02	3.03	-2.75	3.21
	2.72	2.44	0.02	1.64	-1.36	1.99
Trend*Trailing Annual Returns(-1)	-0.02	0.02	0.01	-0.02	0.02	-0.01
	-1.92	1.22	1.42	-1.59	2.01	-0.78
Trend	0.07	0.02	0.11	0.07	-0.02	-0.04
	2.76	0.27	3.07	1.71	-0.48	-0.89
Trend*Dummy Structural Change	0.03	0.05	0.06	-0.01	0.08	0.05
	2.84	1.42	3.15	-0.57	3.30	2.14
Trend*Dummy Asian Crisis	-0.04	-0.03	-0.04	0.00	-0.01	-0.01
	-8.41	-1.77	-5.24	-0.46	-1.90	-0.85
R-squared	0.83	0.42	0.83	0.41	0.56	0.49
Adjusted R-squared	0.82	0.40	0.83	0.39	0.54	0.47
S.E. of regression	2.83	7.25	4.13	5.21	5.00	4.27
Durbin-Watson stat*	1.27	0.46	0.99	1.12	1.43	0.99
Mean dependent var	27.38	-13.84	26.56	-27.26	-41.54	3.81
S.D. dependent var	6.72	9.36	10.01	6.68	7.41	5.88
Sum squared resid	1439.92	9293.90	2935.46	4749.31	4506.92	3232.24
Observations	187	183	178	181	186	183

*Corrected for autocorrelation and heteroskedasticity using a Bartlett Kernel and bandwidth of 12

TABLE 5
Sources and Uses of Funds as Percentages of GDP

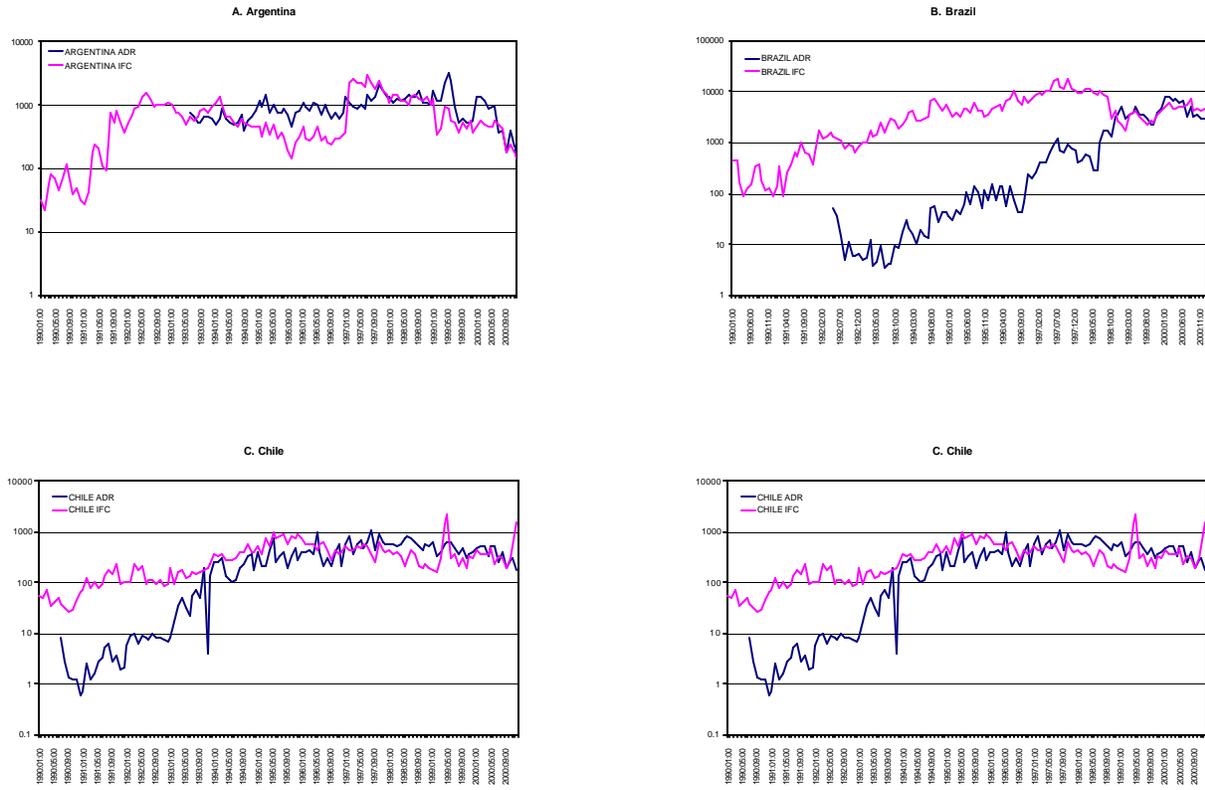
Panel A. Brazil		Sources				Selected Uses			GDP
	Internal	External			Dividends and Share Repurchases	Investment		\$MM US	
	Equity	Debt		Financial and Liabilities LT	Fixed Assets	Permanent Investments			
1990	0.7	0.0	1.2	0.3	0.3	0.7	0.0	464,989	
1991	0.2	0.0	0.0	0.4	0.4	0.6	0.0	407,729	
1992	1.2	0.0	0.1	0.8	1.0	1.4	0.1	390,576	
1993	0.1	0.8	1.7	1.0	0.7	0.9	0.3	438,299	
1994	5.1	1.8	1.5	3.3	1.0	1.7	0.9	546,486	
1995	3.5	1.1	0.6	1.3	1.2	2.6	1.3	703,912	
1996	3.8	2.6	1.2	1.7	1.5	2.6	2.0	774,946	
1997	5.1	2.2	0.9	1.9	2.3	2.8	1.3	820,381	
1998	4.2	0.9	2.8	1.9	1.9	3.0	1.7	778,292	
1999	6.0	1.6	1.8	1.7	2.1	3.5	2.4	529,400	
2000	8.6	1.8	2.4	1.5	2.6	2.8	2.5	587,600	
Average	3.5	1.2	1.3	1.4	1.4	2.1	1.1		

Panel B. Chile		Sources				Selected Uses			GDP
	Internal	External			Dividends	Investment		\$MM US	
	Equity	Debt		Liabilities ST&LT	Fixed Assets	Permanent Investments			
		Public Liabilities	Liabilities	Public Liabilities					
1996	2.5				3.6	3.9		68,570	
1997	8.9	2.8	17.4	2.4	5.6	7.6	2.5	77,082	
1998	5.1	1.1	9.1	1.0	2.6	3.8	4.3	78,025	
1999	5.2	3.7	9.3	2.2	2.8	2.5	8.9	67,700	
2000	4.7	2.8	5.5	1.6	2.2	1.9	5.6	70,700	
Average	6.0	2.6	10.3	1.8	3.4	3.9	5.3		

Panel C. Mexico		Sources					Selected Uses			GDP
	Internal	External				Dividends	Investment		\$MM US	
	Equity (Self finance)	Outside Finance	Debt		Bank and Exchg Financing ST	Bank and Exchg Financing LT	Fixed Assets	Permanent Investments		
1990	2.2	0.2	1.2	1.3	1.2	0.4	1.8	0.4	262,953	
1991	3.0	0.1	0.0	1.3	0.8	0.4	1.9	0.2	314,287	
1992	0.0	0.0	0.3	0.3	0.2	0.0	0.3	0.1	364,183	
1993	0.1	0.3	0.1	0.7	0.3	0.7	0.2	0.1	402,627	
1994	0.7	0.2	3.3	0.0	0.0	0.5	1.9	0.6	420,166	
1995	4.3	0.9	0.5	2.3	1.8	0.5	2.8	0.7	286,140	
1996	5.7	0.3	2.3	1.2	2.5	0.7	2.5	0.8	329,449	
1997	4.2	1.2	0.3	3.8	2.6	0.8	2.4	0.2	402,963	
1998	6.8	1.7	1.5	2.5	2.0	1.2	2.9	0.4	393,218	
1999	6.4	0.9	1.3	1.4	0.8	0.7	2.4	0.5	479,900	
2000	5.7	1.6	1.4	3.5	1.1	0.7	2.6	0.9	574,500	
Average	3.6	0.7	1.1	1.7	1.2	0.6	2.0	0.4		

Sources: Economatica; IBGE; IFC; World Bank.

CHART 1: Monthly Traded Volumes



Source: IFC; for ADRs, Microsoft Network, based on the aggregation of daily closing prices of every ADR of each country.