

Aizenman, Joshua

Working Paper

Financial Liberalizations in Latin-America in the 1990s: A Reassessment

Working Paper, No. 584

Provided in Cooperation with:

University of California Santa Cruz, Economics Department

Suggested Citation: Aizenman, Joshua (2005) : Financial Liberalizations in Latin-America in the 1990s: A Reassessment, Working Paper, No. 584, University of California, Economics Department, Santa Cruz, CA

This Version is available at:

<http://hdl.handle.net/10419/83846>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Financial Liberalisations in Latin America in the 1990s: A Reassessment

*Joshua Aizenman**

UCSC and the NBER

1. INTRODUCTION AND SUMMARY

LATIN America in the 1990s retained its dubious notoriety as the experimental lab of economic policies. The decade started with renewed optimism about the virtues of market-oriented liberalisation. Old concerns about the sequencing of reforms were replaced with the buoyant view that dismantling all the impediments to trade in goods and assets would lead LATAM to quick prosperity, overcoming the lost decade of the 1980s. The resumption of large inflows of capital in the early 1990s, the disinflation in Argentina under Menem, and the growing trade integration of Mexico as part of NAFTA reinforced the optimism of the early 1990s. However, a series of crises starting with the collapse of the Mexican peso in December 1994, continuing with the financial instability in Brazil in the mid-1990s, culminating with the meltdown of the Argentinean currency board, deflated the optimism about the virtues of financial liberalisations in Latin America. The purpose of this paper is to reassess the experience of Latin America with financial liberalisation, putting it into broader perspective by comparing the LATAM experience with that of other developing countries.

The main conclusions of the paper are:

- The rush to reform in the early 1990s was propagated by the presumption that external financing would alleviate the scarcity of saving in developing countries, inducing higher investment and higher growth rates. The 1990s' experience with financial liberalisation suggests that the gains from external financing are overrated. The data suggest that the bottleneck inhibiting

* The views expressed herein are those of the author and do not necessarily reflect the views of the NBER. This research was supported by faculty research funds granted by the University of California, Santa Cruz.

economic growth is less the scarcity of saving, and more the scarcity of good governance. Indeed, in the 1990s, countries that relied less on external finance, grew faster. This observation is consistent with several interpretations, yet the precise channels explaining these findings need further investigation.

- The wave of financial reforms led to deeper diversification, where greater inflows from the OECD financed comparable outflows from developing countries, with little effect on the availability of resources to finance tangible investment.
- The experience of developing countries suggests that increasing the saving and investment rates tends to be a time-consuming process. Some of this inertia may be consistent with habit formation. ‘Habit formation’, however, may be observationally equivalent to adaptive learning in the presence of uncertainty – in countries where private saving and investment were taxed in an arbitrary and unpredictable way, the credibility of a new regime could not be assumed or imposed. Instead, credibility must be acquired as an outcome of a time-consuming learning process. If this interpretation holds, agents in countries characterised by greater political instability would be more cautious in increasing their saving and investment rates following a reform. The past high volatility of policies in Latin America would induce the private sector there to impose ‘stringent’ tests on reforming policy makers.
- The literature on the optimal exchange rate regimes frequently attaches too much importance to the choice of monetary policy. Beyond the short run, monetary and fiscal policies are intertwined via the intertemporal budget constraints. Indeed, one may argue that a deficient fiscal system may lead to crises, independently of the exchange rate regime. Placing too much faith on a fixed exchange rate or on a currency board as the mechanism for fiscal discipline overlooks the fact that the cost of changing the exchange rate regime (and more generally of monetary policy) is much lower than the cost of a fundamental fiscal reform. In these circumstances, the choice of the exchange rate regime will impact only on the timing of the ultimate crisis. Casting the problem in terms of the ‘smart’ choice of an exchange rate regime is potentially hazardous, as it obscures the need to challenge the deeper fiscal deficiencies.
- The view that globalisation makes the sequencing of reforms irrelevant is not supported by recent experience. Indeed, the experience suggests that putting the macro house in good order is a precondition for successful financial reform. A cautious strategy starts with liberalising trade and stabilising the economy before moving towards convertibility, as was suggested by the 1980s literature.

Section 2 discusses the landscape of financial liberalisations in LATAM. Section 3 focuses on possible lessons and reviews selectively the large literature propagated by the LATAM experience. Section 4 closes with interpretative remarks.

2. FINANCIAL LIBERALISATIONS IN THE 1990S: GLOBAL PERSPECTIVES ON THE LATIN AMERICAN EXPERIENCE

The background for the financial liberalisation of the 1990s had been the lost decade of the 1980s – stagnation of economic growth and the rise in inflation associated with the 1982–89 debt crisis. The political economy changes triggered by the crises put in place new managements in the region. The Brady Plan, the resumption of the inflow of capital to LATAM in the early 1990s, and the fresh start offered by the new managements induced the region to adopt sweeping reforms. Argentina, Brazil and Mexico illustrate the trend: countries opted to follow exchange-rate-based stabilisation programmes, coupled with deep trade and financial liberalisations, and privatisation of significant portions of the public sector. The presumption was that the renewed external financing would augment domestic saving, increasing investment and the growth rate.¹ The magnitude of the financial liberalisation in LATAM can be grasped using the index of capital mobility reported in Edwards (2004).² Normalising completely free capital mobility at 100, Edwards reports that the index of capital mobility in LATAM increased from about 40 in the 1980s to about 75 in the 1990s. Throughout that period the index in Asia increased mildly from about 40 in the 1980s to 60 prior to the 1997 crisis, dropping to 55 in the aftermath of the crisis. The Middle East and North Africa experienced a much smaller increase throughout that time, from about 40 to 50. According to this index, the financial liberalisation in LATAM exceeded substantially liberalisation in other continents.

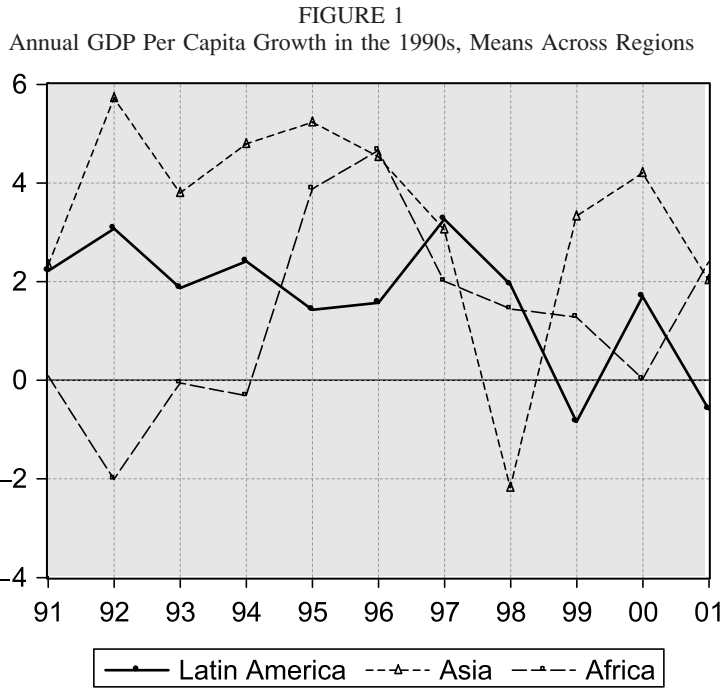
a. Financial Liberalisation and Investment Financing Sources in LATAM, 1990s

Figure 1 traces the growth of the GDP per capita of LATAM and other regions in the 1990s years. Overall, LATAM's growth has been significantly below that of Asia, but better than that of Africa. In order to understand the ultimate impact of the financial liberalisation I rely on a simple diagnostic tool, introduced in

¹ For example, Andrew Crockett, General Manager of the Bank for International Settlements, stated in a keynote address in 13/2/98:

For emerging markets, the consequence of these trends has been that they have rapidly become integrated into international capital markets. This has had a number of advantages. Private debt or portfolio inflows in response to economic liberalisation have expanded sizeably, from less than \$40 billion per year over the period 1983–90, to an average of about \$200 billion a year in the last five years. These capital inflows have provided additional resources to supplement domestic savings and support high levels of investment.

² This index combines the information from Quinn (2003) and Mody and Murshid (2002) with information from country-specific sources. See Edwards (1995) for a detailed account of the liberalisations in the early 1990s.

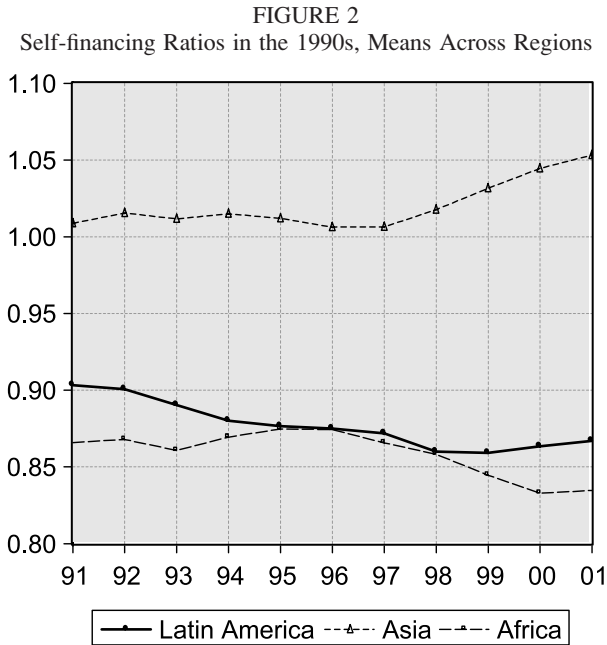


Aizenman, Pinto and Radziwill (2004) – the self-financing ratio. Using the WDI data, we construct a self-finance measure, indicating the share of tangible capital supported by past national saving. The ‘ideal’ self-financing would be obtained by unbounded backward discounting, had we had all the past information:

$$\hat{f} = \sum_{i=1}^{\infty} S_{t-i}(1-d)^{i-1} / \sum_{i=1}^{\infty} I_{t-i}(1-d)^{i-1},$$

where d is the depreciation rate of tangible capital, I_t ; S_t are the gross investment and national saving at time t , in constant PPP, respectively. A value of one of the self-financing ratio would correspond to an economy where the entire stock of domestic capital is self-financed. A self-financing ratio below one indicates some reliance on foreign saving: $1 - \hat{f}_t$ is the foreign-financing ratio, measuring the fraction of domestic capital t that was financed by foreign saving.³ In practice, the unbounded backward discounting is not feasible due to scarcity of data. This limitation induces us to rely on approximated measures of self-financing. As

³ An alternative strategy is to construct self-financing ratios using gross domestic saving instead of national saving (the gap between the two is the net current transfers and income from abroad). This does not affect the main results inferred by relying on the self-financing ratio.



illustrated in Aizenman et al. (2004), the approximated self-financing measure deviates from the ideal financing measure by second-order magnitude.

Figures 1 and 2 report the time patterns of the self-financing ratios, and the corresponding growth rates, in three blocks of developing countries (Latin America, Asia and Africa). Throughout the 1990s, Asia exhibits high self-financing ratios and high growth rates (with the exception of 1998). In contrast, Latin America and Africa display low self-financing ratios, and relatively low growth rates. The growth performance of Latin America was more evenly distributed throughout the 1990s, exhibiting no obvious growth bonus of the drop in the self-financing ratios. Interestingly, the drop in the self-financing ratios in Africa through much of the 1990s was not associated with a sustained growth bonus – the growth rate picked up in the early 1990s, collapsing in the second half. Unlike the experience of Africa, the growth drop of Asia in the aftermath of the 1997–98 crises has been associated with a remarkable increase of the self-financing ratios, pushing it well above one, and with the resumption of robust growth.

Further insight explaining the diverse experience of countries is gained by econometric analysis. Aizenman, Pinto and Radziwill (2004) examine the association between real per capita GDP growth and the self-financing ratios in the 1990s. We find that higher self-financing ratios (implying higher self-financing of a given investment) are associated with a significant *increase* in growth rates, and this effect is convex. The econometric results show also that better institutions are associated with less volatile self-financing ratios, and with a higher growth

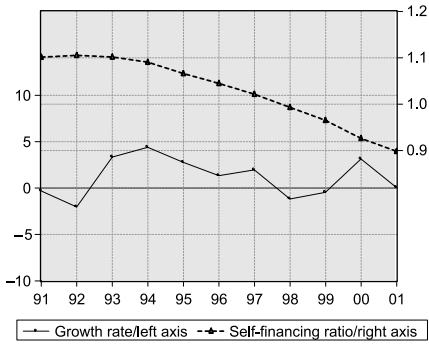
rate.⁴ In a cross-country GDP per capita growth regression, controlling for the level and volatility of self-financing ratios, and the quality of institutions, we found that the quality of institutions variable ‘soaks up’ the explanatory power from the volatility of self-financing ratios, rendering it insignificant, but leaving intact the positive convex effect of self-financing ratios on real per capita GDP growth.⁵ The results are not driven by any obvious regional patterns: adding regional dummies (Asia, Africa and Latin America) to the regression leads to results that are in line with expectations. Africa is growing significantly slower, while all key variables retain previous sign and significance. Notably the correlation between the change in *de facto* financial openness between the 1980s and 1990s and the change in the self-financing ratio between 1991 (result of accumulation in the decade of the 1980s) and 2001 (accumulation in the 1990s) is, for all practical purposes, zero. Also, while the financial opening was substantial – the average and median increases in financial openness were 65 per cent and 30 per cent, respectively – changes in the self-financing rates were insignificant.

Figure 3 traces the experience of selected Latin American countries. Figure 3A focuses on Brazil, a country that experienced a rapid decline in the self-financing ratio, starting from a relatively high initial level. Characteristically, the country failed to benefit from any associated ‘growth bonus’. This is a pattern common to the ‘average’ Latin American country (see Figures 1 and 2). Another typical case is Bolivia, depicted in Figure 3D, a country that is characterised by exceptionally low levels of self-financing, but also mediocre growth performance. Figures 3B and 3C report the dramatic experience of Argentina and Mexico: both experienced serious financial crises and associated ‘sudden stops’ in external financing. Both experiences are characterised by a reversal of declining self-financing ratios around the time of the crisis episode. The financial opening of the 1990s in Argentina is associated with a sizeable *drop* in the self-financing ratio, from about 0.92 to 0.88. This drop ends with the sudden stop, which led to a partial reversal of the earlier decline. As in other countries, the ability to finance a growing share of the domestic capital by foreign saving is not associated with any ‘growth bonus’. In fact, Mexico exhibits a crisis-triggered reversal in its declining self-financing ratio, with economic growth that is on average stronger during the time the self-financing ratio increased. Such a reversal was found to be common to other countries experiencing a sudden stop, and it may reflect both the precautionary and the forced increase in saving, as well as a drop in investment. In some

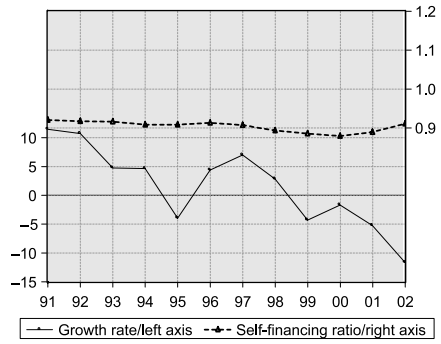
⁴ The quality of institutions was calculated as the average of measures of law and order, corruption and bureaucracy quality from the International Country Risk Guide (2004). The data on trade openness – measured by (exports + imports)/GDP and financial openness – measured by (inflows + outflows of capital)/GDP – are from Frankel and Wei (2004).

⁵ We also attempted to control for other variables that are used frequently in growth regressions (like the initial GDP per capita, etc.), but these controls were insignificant.

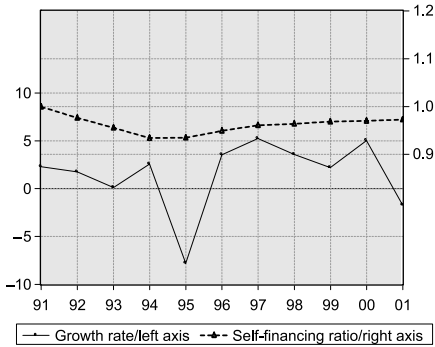
FIGURE 3
Self-financing Ratios and GDP Per Capita Growth Rates in Selected LATAM Countries, 1991–2001



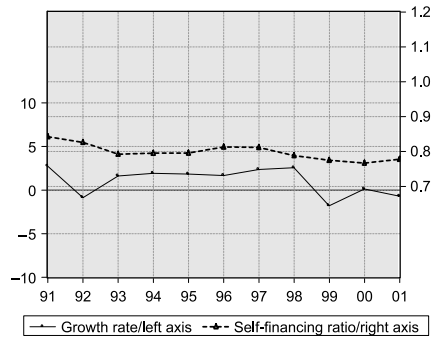
3A Brazil



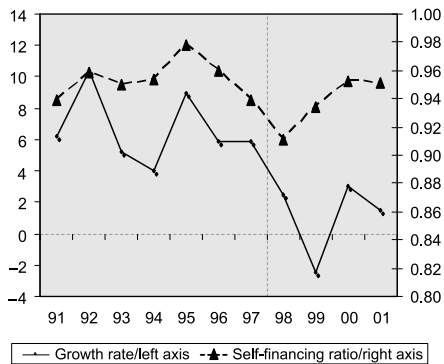
3B Argentina



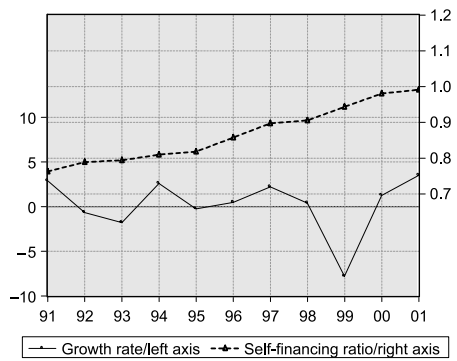
3C Mexico



3D Bolivia



3E Chile



3F Ecuador

circumstances, this decline in investment may be a welcome development, as would be the case in countries characterised by excessive investment prior to the crisis (see Krugman, 2000). These results suggest that political economy factors and political risk diversification are important in understanding the association between the self-financing ratios and growth.⁶

Figure 3E provides the experience of the best performer in Latin America – Chile. Its impressive average growth rate of the GDP per capita, exceeding four per cent, was almost entirely self-financed (Chile's average self-financing throughout that period was 0.95). Chile's experience turned out to be common: countries characterised by higher self-financing ratios in the 1990s experienced, on average, higher growth rates. Yet, there are several examples of countries that experienced large increases in self-financing ratios with no detectable growth bonus. Figure 3F reports the experience of Ecuador – the self-financing ratio increased substantially in the 1990s, at a time when the growth rate was almost flat. Thus, there is no guarantee that a rising self-financing ratio will produce faster growth.⁷ Economic growth depends on all the factors that explain the magnitude and the quality of investment in all types of capital. For most developing countries, the obstacles preventing higher growth are not the degree of financial integration, but other more basic structural obstacles.

b. Possible Interpretations and Case Studies

There are several possible channels that may rationalise the positive association between self-financing and growth. For example, a take-off triggered by relaxing the state's restrictions on private investment and private saving would increase both S and I over time, with little impact on the need to borrow externally, as apparently has been the case in China and India.⁸ Such growth patterns are consistent with the habit-formation hypothesis (see Carroll et al., 2000).⁹

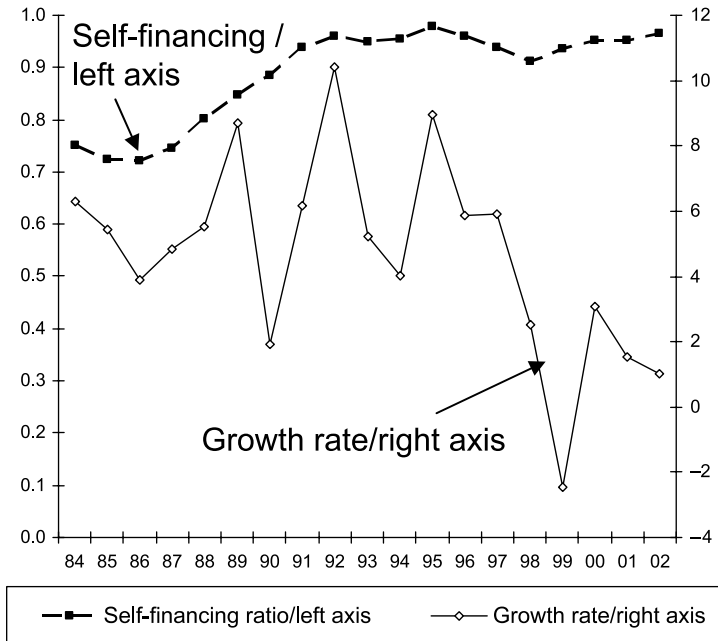
⁶ For example, for countries characterised by economic and political uncertainty, the opening of financial markets would lead domestic agents to put a greater share of their savings in offshore accounts, and in certain cases may lead foreign consumers to purchase domestic assets, betting on the prospect of improvement in domestic conditions. This may lead to large gross flows of capital, with little change in net flows (see Dooley, 1988).

⁷ For example, if a country has unsustainable public debt dynamics and cuts back fiscal spending (including public investment), then this will tend to raise national savings relative to investment, raising the self-financing ratio at the margin; but possibly with a growth slowdown because of the necessary reduction in aggregate demand.

⁸ This pattern is consistent with the notion that higher growth increases the saving rate over time (see Edwards, 1996, who concludes that the rate of output growth has a significant, positive effect on saving).

⁹ The habit formation hypothesis states that people get utility from a comparison of their current level of consumption to the level that they are 'accustomed to', the latter corresponds to the habitual level of consumption, as defined by consumption history. Habits make consumers reluctant

FIGURE 4
Self-financing Ratios and GDP Per Capita Growth Rates, Chile 1984–2002



Another possibility is that agents in various countries react to different exposure to financial risk differently. The desire to diversify these risks may lead to two-way capital flows, with little change in net positions (see Dooley, 1988).

Further perspectives on these issues can be gained by focusing on the experience of Chile, the only country in LATAM that experienced a sustainable take-off in the 1990s. Figure 4 traces the self-financing and growth experience of Chile, 1984–2002. Recalling that in the early 1980s Chile went through a massive financial crisis and depression, 1984–92 may be viewed as the recovery and take-off period, when growth accelerated rapidly. This period is also the time that the self-financing ratio increased from a low of 0.75 in 1984, to 0.96 in 1992. This adjustment is consistent with the habit formation interpretation. The data also suggest that greater confidence in the performance of the economy increases the willingness of domestic agents to engage in deeper self-financing – it raises domestic saving at rates that surpass the increase in domestic investment. This is in contrast to the performance of the Argentinean economy – despite the

to change consumption drastically following fundamental shocks, slowing the adjustment of consumption. Habit formation implies that the consumer is more willing to postpone consumption in response to an increase in productivity, and thus make the saving response to a surge in productivity stronger.

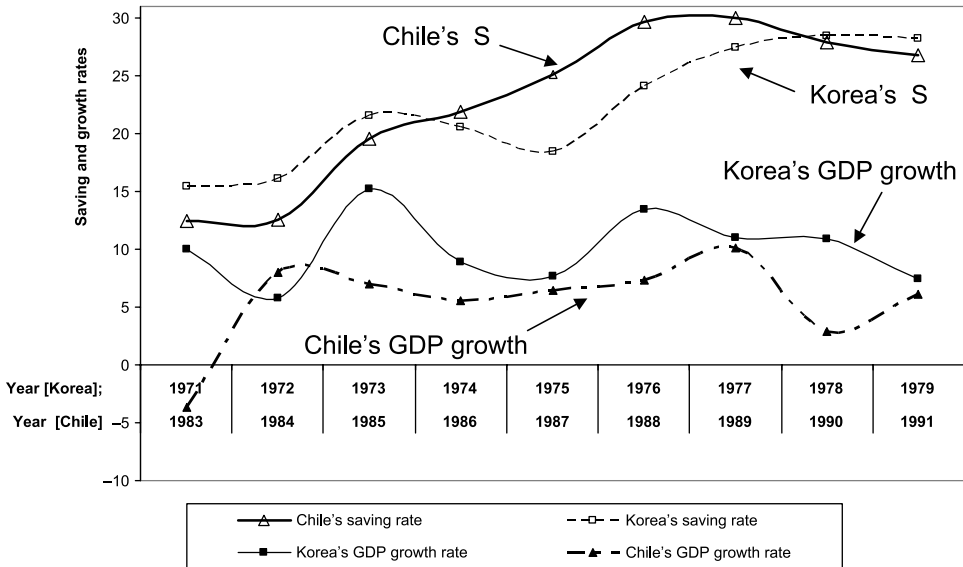
stabilisation of the early 1990s, the self-financing ratio there remained around 0.9, dropping below 0.9 in the second half of the 1990s. Arguably, this suggests a test for the effectiveness of stabilisations – the degree to which it leads to higher self-financing. A stabilisation that fails in increasing the self-financing ratio frequently implies that it does not pass the confidence test of the most exposed agents: the residents of the country undergoing the policy change. Using this perspective, the Argentinean stabilisation did not fail due to the reluctance of foreign investors to invest there (which indeed was not the case), but due to the regime's inability to convince residents of Argentina regarding its staying power. A possible interpretation of the collapse of Argentina's currency board is that it is much easier to fix the exchange rate than to deal with fundamental fiscal imbalances in a weak federal system. Sceptical Argentinean residents preferred to hedge their bets by increasing their offshore saving. This diversification was conveniently financed by the inflow of capital following the reform, leading to deeper diversification of risk, with little impact on the self-financing ratio. The next section will discuss several alternative interpretations and lessons from the Argentinean experience.

To gain further insight regarding this matter, it is illuminating to contrast the experience of Korea with that of Chile. At first sight, Korea is viewed as an 'Asian Tiger', whose performance is in sharp contrast to LATAM countries. Yet, closer scrutiny reveals that Korea's saving patterns before the mid-1970s resembled the experience of LATAM, and that Korea's overall performance resembled that of a typical LATAM country prior to 'taking off'. Furthermore, one can identify distinct policies and changes in the incentive structure in Korea that preceded the taking-off.¹⁰ Chile represents a Latin American example of a country that, following the adaptation of bold reforms, improved its overall growth, and has undergone a transition that resembles the earlier stages of development in Korea. Comparing the two countries, one finds that there is a remarkable similarity between the saving and growth patterns of Chile and Korea around the take-off period (see Figure 5). These observations are consistent with the notion that the saving and growth gap between LATAM and 'Asian Tigers' may be rooted in different incentive structures and economic circumstances. Once Chile adopted the proper incentives and policies, and once the private sector in Chile gained confidence regarding the durability of these measures, Chile embarked on a growth and saving path that resembles that of an Asian Tiger. Yet, it is premature to speculate if Chile will reach the next stage in the experience of Korea, where the take-off has been associated with export-oriented growth, climbing the technology ladder over time.

¹⁰ For a review and interpretation of these policies see Rodrik (1994), Noland (2004) and the references therein.

FIGURE 5

Korea's S and GDP Growth Rates, 1971–79; Chile's S and GDP Growth Rates, 1983–91



It is important to note the striking difference between the two countries in the degree of stability. This is manifested in all macroeconomic measures, including the saving rate. The persistence of the saving rate is much greater for Korea, while the volatility of the saving 'shocks' is much greater for Chile. The standard error of the 'unanticipated' saving shock in Chile is more than twice that of Korea.¹¹ Figure 6 reports the actual and predicted saving rate in the two countries, illustrating the greater volatility of saving rates in Chile. These results are consistent with the interpretation that a key difference between the Latin American and Asian Tigers' experiences is the volatility of the overall economic environment (see Hausmann and Gavin, 1995).

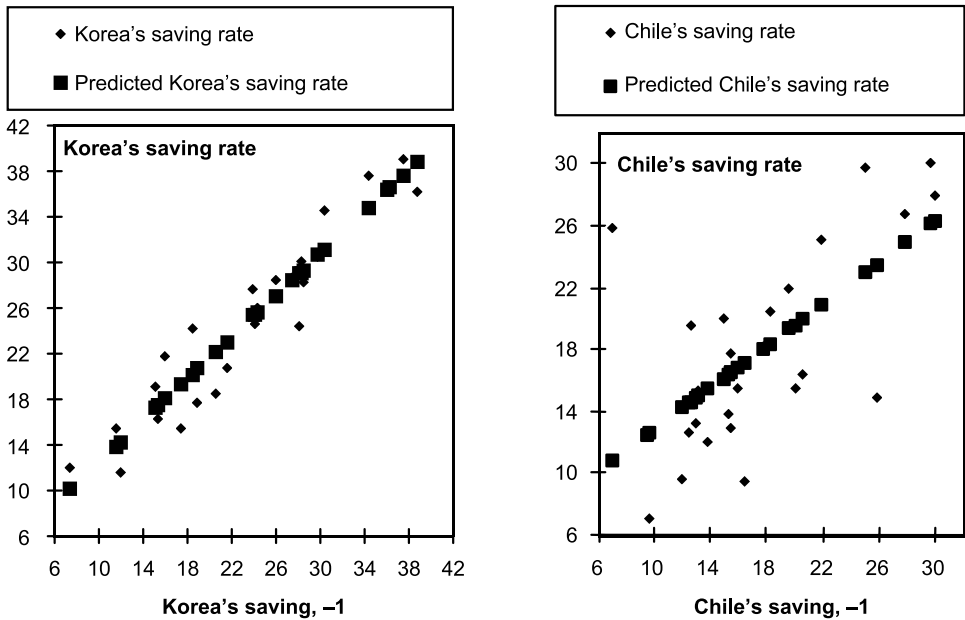
The experience of developing countries suggests that increasing saving rates would not occur overnight, and it may be a time-consuming process. In an important study Carroll and Weil (1994) illustrated that the saving rates of East Asian countries (like Korea, Japan, Singapore and Hong Kong) were much lower

¹¹ For the years 1965–1991, the AR(1) representation of the saving rates for the two countries are:

$$\text{Chile: } s_t = 6.13 + 0.67s_{t-1}; \bar{R}^2 = 0.39; \sigma = 5.06; \\ (2.04) (4.14)$$

$$\text{Korea: } s_t = 3.24 + 0.91s_{t-1}; \bar{R}^2 = 0.908; \sigma = 2.48. \\ (2.19) (15.8)$$

FIGURE 6
 Predicted and Actual Saving Rates (AR(1) Representation), Korea and Chile, 1965–91



several decades ago, and their thriftiness is a more recent phenomenon. They pointed out that the ‘statistical’ causality may run from a higher growth rate to a higher saving rate; and conjectured that the growth-saving causality may be explained in a model where utility depends both on present and past consumption, i.e. habit formation (see also Carroll et al., 2000). ‘Habit formation’, however, may be observationally equivalent to adaptive learning in the presence of uncertainty – in countries where private savings were taxed in an arbitrary and unpredictable way, the credibility of a new regime could not be assumed or imposed. Instead, credibility must be acquired as an outcome of a time-consuming learning process. In these circumstances, a higher growth rate may be viewed as a signal used in this learning process.¹²

If this interpretation holds, agents in countries characterised by greater political instability would be more cautious in increasing their saving and investment rates following a reform. Hence, increasing saving and investment rates in Latin America may be much harder than increasing these rates in Asia, explaining

¹² Frequently the effectiveness of a new administration and its commitment to growth-oriented policies is unknown. In these circumstances the private sector will update its prior regarding the competence of the administration and the saving rate according to various signals (like the duration of a reform, inflation, public debt, etc.). As these signals are positively correlated with the realised growth, growth ‘explains’ saving.

LATAM's relatively low growth rate.¹³ The past volatility of policies was much greater in Latin America, implying that the private sector there would impose more 'stringent' tests on the reforming policy maker. While this behaviour may be fully justified from the point of view of the private sector, it implies that financing the first stage of a 'take-off' is a more challenging task. This gives an advantage to strategies like privatisation, elimination of burdensome regulations and opening the economy to international trade.¹⁴ In these circumstances the first stages of the 'taking-off' would be the outcome of improving incentives via reforms.

A comprehensive study of saving can be found in Edwards (1996), who identified several important regularities.¹⁵ The evidence on the private saving reveals four results. First, similar to Carroll and Weil (1994), the private saving rate increases with the rate of growth. Second, as predicted by Modigliani's life cycle hypothesis, a higher dependency ratio depresses saving. Third, deeper financial systems tend to increase the private saving rate. Fourth, higher government saving reduces private saving, but the offset coefficient is significantly less than one, implying that the net effect of higher government saving is to increase aggregate saving.¹⁶ Finally, a deeper government financed social security system reduces private saving, in line with Feldstein (1980). The evidence on public saving reveals that political instability reduces it, while growth tends to increase it. Capital inflows tend to reduce public saving, but the offset coefficient is less than one.

These results suggest that steps that would increase public saving, increase the funding of social security (like the privatisation in Chile), and deepen the capital market would increase the overall saving rate. Reforms that improve incentives and increase the stability of the economy would further increase the saving rate, as the resultant growth would increase thriftiness over time.

¹³ Various studies pointed out that policy uncertainty and political instability reduce private investment and growth (see Edwards, 1992; Aizenman and Marion, 1993; and Ramey and Ramey, 1995).

¹⁴ This point is further strengthened if the allocative efficiency of public investment is smaller than that of private investment. This would be the case if public investment leads to inefficient public projects as a means of transferring income, reflecting rent-seeking activities, political patronage, etc. In these circumstances the marginal productivity of private investment would exceed that of public investment. Hence, a cross-countries comparison of aggregate saving is providing only partial information regarding the net resources available for investment. Ultimately, both the size and the composition of private versus public saving and investment would determine capital accumulation.

¹⁵ He focused on a cross-country study of 50 countries, for the period of 1983–92, disaggregating between private and public saving.

¹⁶ This result was obtained by Corbo and Schmidt-Hebbel (1991) for a sample of 13 countries. They also found that increasing public saving through expenditure reduction is more effective than increasing taxation. This finding has bearing on the Ricardian equivalence, which suggests that government saving fully offsets private saving. The above results imply that the Ricardian hypothesis does not hold, as one may expect in distorted economies characterised by political uncertainties.

3. FINANCIAL LIBERALISATION: LESSONS AND POLICY DEBATES

The financial liberalisations of the 1990s validated empirically the assertion ‘*Good-bye financial repression, hello financial crash*’ (Diaz-Alejandro, 1985). Yet, some economists found tenuous evidence that financial liberalisation tends to increase growth over time. Both observations suggest an intertemporal trade-off. In the short run, the fragility induced by financial opening frequently leads to crises. Yet, if these crises would force the country to deal with its structural deficiencies, financial opening may induce a higher growth rate in the long run. For example, it remains hard to gauge if Korea would have been better off by refraining from financial opening in the early 1990s, or if Chile would have benefited by retaining financial repression in the 1980 and 1990s.¹⁷ The answers to these questions depend crucially on the time horizon of the analysis, as well as on the evaluation of what is the relevant counterfactual, both issues to which there are no satisfactory answers.¹⁸

a. Financial and Trade Opening – Cost Benefits and Sequencing

A useful survey of financial liberalisation is Williamson and Mahar (1998), who focused on 34 countries that undertook financial liberalisation between 1973 and 1996. Overall, they found a mixed record of financial liberalisation – the gains are there, but the liberalisation carries the risk of leading to financial crisis. Financial liberalisation has yielded greater financial depth, and increased efficiency in the allocation of investment. Yet, it has not brought a boost in saving. The drawback in the liberalisation process is the danger that the liberalisation will lead to a financial crisis. For the majority of countries, capital account liberalisation increases the probability this occurs. The challenge is to design

¹⁷ Obviously, the financial crisis in 1997 adversely impacted Korea’s welfare. One may argue, however, that it prevented a much deeper and longer calamity, akin to Japan’s recession in the 1990s. Arguably, had Korea continued with financial repression, a Japanese type of a correction would have hit Korea later. Korea’s development path resembles that of Japan – its domestic banks accumulated over time large non-performing loans. These loans were the heritage of the earlier development strategy, where large corporations had selective access to preferential lines of credit. According to this argument, the crisis of 1997 prevented a larger buildup of these loans, saving Korea from a much deeper correction. Obviously, it is hard to provide a sound test of this argument. Similar ambiguities apply to Chile, which has been the best-performing Latin American country in recent years, and is credited with a sound banking system. Yet, Chile experienced a massive banking crisis in the 1980s, following earlier financial opening. Arguably, one may credit the superior recent performance of Chile to the painful earlier reforms, reforms that were triggered by the crises of the early 1980s.

¹⁸ A welfare evaluation of these issues may depend on the degree to which there are political economy trade-offs between a large crisis versus a series of smaller crises – a large crisis may be needed to overcome entrenched opposing interest groups, yet it may lead to larger welfare costs.

a liberalisation programme that does not bring a financial crisis in its wake. The main recommendations emerging from their study are akin to Hellman, Murdock and Stiglitz (2000) – start with macroeconomic stabilisation, improve bank supervision, while delaying capital-account convertibility till the end of the process. In the transition, ‘mild financial repression’, in the form of a ceiling on deposit interest rates, may be advantageous. This follows from the observation that exceedingly high interest rates encourage risk taking by borrowers – moral hazard induced by self-selection. Banks in stress may wish to ‘gamble for resurrection’ by lending to such borrowers, at a cost to the taxpayer. Williamson and Mahar conclude that maintaining high spreads may be needed in a transition until banks are able to work off the legacy of bad debt inherited from the period of financial repression. In such an environment, free entry of foreign banks may be a mixed blessing. The efficiency gains should be balanced against the threat of ‘gamble for resurrection’ by older domestic banks losing their franchise value. Imposing higher capital requirements increases the cost of a ‘gamble for resurrection’ strategy. In these circumstances, deposit rate controls may complement capital requirements.

The overall effect of financial opening on growth remains debatable. Levine (1997) found a positive association, whereas Rodrik (1998) failed to detect any positive effects of financial opening on investment, growth and inflation. While Levine’s interpretation attaches the direction of causality from financial deepening to growth, the old dictum that correlations do not indicate causality remains valid. Beck, Levine and Loayza (2000) evaluated the empirical links between the level of financial intermediary development and economic growth, TFP growth, physical capital accumulation and private savings rates. The main findings are that financial intermediaries exert a large, positive impact on total factor productivity growth, which feeds through to overall GDP growth. Yet, the long-run links between financial intermediary development and both physical capital growth and private savings rates are tenuous. Bekaert, Harvey and Lundblad (2001) found that equity market liberalisations, on average, lead to a one per cent increase in annual real economic growth over a five-year period. The investment/GDP ratio increases post-liberalisation, with the investment partially financed by foreign capital, inducing worsened trade balances. The liberalisation effect is enhanced by a large secondary school enrolment, a small government sector and an Anglo-Saxon legal system.¹⁹

Rodrik’s earlier methodology has been revisited by Arteta, Eichengreen and Wyplosz (2001). While they found indications of a positive association between capital account liberalisation and growth, the effects vary with time, with how

¹⁹ As is frequently the case with empirical studies relying on macro data, endogeneity and reverse causality remain a valid concern in interpreting some of these results.

capital account liberalisation is measured, and with how the relationship is estimated. The evidence, that the effects of capital account liberalisation are stronger in high-income countries, is fragile. There is some evidence that the positive growth effects of liberalisation are stronger in countries with strong institutions. Capital account liberalisation appears to have positive effects on growth only in countries that have already opened more generally, hence sequencing matters. But there are significant prerequisites for opening, including a reduction of trade barriers and an ability to eliminate macroeconomic imbalances. These conclusions are akin to Edwards (2001) who reported that, after controlling for other variables (including aggregate investment), countries with a more open capital account have outperformed countries that have restricted capital mobility. There is also evidence that an open capital account affects growth positively only after a country has achieved a certain degree of economic development. This provides support to the view that there is an optimal sequencing for capital account liberalisation.

b. On the Gains from FDI

Our earlier discussion focused on the patterns of external financing in LATAM, relying on a macroeconomic perspective. Similar questions can be explored at a more disaggregated level, focusing on more disaggregated patterns of external financing, especially FDI. The rush to reform and the growing importance of manufacturing led to optimistic assessments of the gains from FDI inflows. This is vividly reflected in the tendency of developing countries to subsidise multinationals investment by means of tax breaks, land grants, etc. While the debate about the gains from FDI is not over, the recent literature is consistent with the notion that gains from FDI were overrated. Attempts to identify positive spillover from FDI to domestic productivity led to mixed outcomes, and frequently the effects were found to be small or insignificant. For example, Aitken, Harrison and Lipsey (1996) calculated wage spillovers from FDI in Mexico and Venezuela. In Mexico, wages in domestically-owned plants appeared to be lower where foreign ownership was high, but the coefficients were not statistically significant. In Venezuela, there seemed to be a significant negative influence of foreign presence on wages in domestically-owned plants. These results could reflect a reallocation of the better labour force to foreign plants, or the acquisition of higher-paying plants by foreigners. Aitken and Harrison (1999) found that increases in foreign equity participation were correlated with increases in productivity for small plants, but that increases in foreign ownership in an industry negatively affected productivity in domestically-owned plants in the same industry. The positive effects within the foreign plants exceeded the negative effects, but only slightly (see Lipsey, 2002, for a review of the literature).

Hanson (2001) pointed out that:

While multinationals are attracted to high-productivity countries, and to high-productivity industries within these countries, there is little evidence at the plant level that FDI raises the productivity of domestic enterprises. Indeed, it appears that plants in industries with a larger multinational presence enjoy lower rates of productivity growth . . . Empirical research thus provides little support for the idea that promoting FDI is warranted on welfare grounds.

Indeed, the experience of Brazil suggests that competition among states for FDI may be welfare reducing. This is in contrast with the experience of Costa Rica, attracting Intel and other multinationals by its good infrastructure and stable business environment, without providing special concessions to multinationals.

c. Fiscal, Monetary and Structural Reforms

Crises are frequently the delayed manifestations of political economy factors. Reforms that ignore these factors run the risk of inducing too optimistic an assessment of countries, leading over time to a large exposure, and ultimately to greater vulnerability. The literature on optimal exchange rate regimes frequently attaches too much importance to the choice of monetary policy. Beyond the short run, monetary and fiscal policies are intertwined via the intertemporal budget constraints (see Aizenman, Kletzer and Pinto, 2005). Indeed, one may argue that a deficient fiscal system may lead to crises independently of the exchange rate regime. In these circumstances, the choice of the exchange rate regime will impact only the timing of the ultimate crisis. After all, sovereign risk and exchange rate risks have different causes. Casting the problem in terms of the 'smart' choice of an exchange rate regime is potentially hazardous, as it obscures the need to challenge the deeper fiscal deficiencies (see Calvo and Mishkin, 2003, for related analysis).

These considerations are illustrated in contrasting the policies undertaken by Brazil and Argentina in the last 15 years. During the 1980s, both countries were characterised by similar fiscal deficiencies, stemming from their organisation as loose federal systems. The provincial states and municipalities had significant bargaining power relative to the federal centres. In the early 1990s, both countries went through successful exchange-rate-based stabilisations. The nominal anchor provided by pegging the exchange rate, supported rapid disinflation in both countries. Argentina, however, put a much greater emphasis on the importance of a peg – it adopted a rigid currency board. In contrast, Brazil put greater emphasis on dealing with its fiscal imbalances, thereby reducing the relative power of the provincial states.²⁰ In addition, Brazil moved, over time, from a

²⁰ While it is premature to conclude that Brazil has accomplished all the adjustments called for under the Fiscal Responsibility Act of 2001, it started the painful process of curbing the biases towards provincial overspending. See Dillinger and Webb (1999) for further details about the reforms.

fixed exchange rate regime towards discretionary exchange rate management, accommodating external adverse shocks with occasional depreciations. As recent events have painfully illustrated, Brazil's choice allowed it to steer away from a deep crisis, whereas Argentina's choice has led over time to increased vulnerability, and to the ultimate recent crisis.

One possible justification for 'bailing out' countries is the presence of multiple equilibria. Exposure to multiple equilibria is a by-product of the maturity transformation accomplished by financial intermediation, where short-term deposits are used to finance longer-term real projects (see Diamond and Dybvig, 1983, for a banking model; and Chang and Velasco, 1999, for an open-economy model of bank and currency runs). In these circumstances, the presence of the lender of last resort is supposed to prevent the bad equilibrium. As Rogoff (1999) discussed, a lender of last resort comes with a hefty cost to the taxpayer. Some may view the fate of Argentina as an example of a country suffering from the adverse consequences of a switch to a bad equilibrium. Supporters of this view point out that conventional measures (current account, fiscal deficits, etc.) failed to flag Argentina as a highly vulnerable country in the 1990s. Indeed, Argentina's fiscal measures were comparable to those of 'respected' OECD countries. Can we infer from this that a lender of last resort would have prevented the Argentinean crisis?

While it is hard to test this assertion, there are fundamental challenges facing the multiple equilibria argument. Vulnerability to a crisis may depend on the flexibility of an economy to adjust to changing circumstances. This includes the ability of the fiscal system and the labour market to adjust to unforeseen events. More generally, country risk may be determined by the interaction between shocks, and the quality of the institutions of conflict management (see Rodrik, 1999). In the context of Argentina, the multiple equilibria interpretation is challenged by the view that Argentina is a quasi-European-style welfare state, standing on the shoulders of a very thin tax base. This situation is further exacerbated by the provincial states' bias towards overspending. Hence, one may conclude that there are fundamental reasons to view Argentina as a risky destination for global capital, even if its fiscal deficits and current account deficits are comparable to OECD countries.

The insistence of the Argentinean authorities on preserving the currency board despite the growing strength of the dollar in the 1990s, and the occasional real depreciations of Brazil, may be viewed as a manifestation of these risks – viewing the currency board as the main safeguard against inflation runs the hazard of providing a signal that deeper fiscal problems are still there. Placing too much faith on the currency board as the mechanism for fiscal discipline overlooks the fact that the cost of changing the exchange rate regime (and more generally of monetary policy) is much lower than the cost of a fundamental fiscal reform. Hence, a country like Argentina runs the risk of being viewed as fiscally unstable, independent of the realised path of current account and fiscal deficits. In

the long run, according to this view, the fiscal side will determine the strength of the system. Short of resolving fiscal deficiencies, a country like Argentina will find it hard to convince the market that it is a prudent destination for capital.

One may rephrase the above discussion in terms of the rules versus discretion literature, where there are gains from delegating monetary policy to a conservative agent. As was illustrated in Rogoff's (1985) seminal work, the optimal commitment to the conservative course depends on the stochastic structure. If the balance of shocks tilts over time towards adverse real shocks, a less conservative course is preferable. The success of Brazil and the failure of Argentina may be viewed as a vivid example of this principle. The success of the structural reform would also require challenging the fiscal deficiencies that determine, in the long run, the course of monetary policy. Hence, the relative success of Brazil is attributed to its success in curbing the bias towards provincial overspending, and to the more appropriate use of discretionary exchange rate and monetary policy.

One may argue that luck (or the absence of it) plays a key role in determining the outcome of policies. Accordingly, the Argentina currency board would have passed the test of time if the recent weakening of the dollar and the commodity boom had started in the mid-1990s. While this assertion has its own logic, it points out the fallacy of the currency board strategy, and confirms the insight of Rogoff (1985) – Argentina's currency board policy gambled on the success of Argentina's macro stance on exogenous factors, without paying attention to exit strategies needed to deal with the downside risk associated with adverse external developments.

d. Alternative Perspectives: Original Sin, Debt Intolerance and Currency Mismatch

We close this section with a review of alternative perspectives about the challenges facing LATAM and other developing countries. The view articulated in Section 2 argued that the gains from external finance are overrated, and that in the 1990s countries that relied less heavily on external borrowing performed, on average, better. This interpretation is consistent with the earlier literature cautioning about developing countries' tendency to overborrow,²¹ and with the sceptical assessment of the growth and the welfare benefits attributed to financial liberalisations.²²

²¹ See McKinnon and Pill (1996) and Corsetti, Pesenti and Roubini (1999) on overborrowing due to moral hazard and euphoric expectations, leading to crises. Overborrowing may also occur due to congestion externalities, where atomistic agents do not internalise the full effects of marginal borrowing on future welfare (Aizenman, 1989). Overborrowing due to free-rider problems in economies short of international collateral, generated by imperfections of the domestic capital market is the focus of Caballero and Krishnamurthy (2001).

²² See Kohn and Marion (1992), Rodrik (1998) and Gourinchas and Jeanne (2004).

Alternative perspectives are offered by the Original Sin approach (see Eichengreen, Hausmann and Ugo, 2003). This approach focuses on the structure of global portfolios and international financial markets, arguing that the inability to borrow externally in domestic currency inhibits the performance of developing countries, inducing large welfare costs, and explaining the difficulty developing countries have in servicing debts. The authors point out that the Original Sin approach differs from Currency Mismatches: an approach that explains exposure to crises due to differences in the values of the foreign currency denominated assets and liabilities on the balance sheets of the economy as a whole.²³ By definition, Original Sin implies a gross foreign debt denominated in foreign currency. But the country may or may not also incur a currency mismatch, depending on how the authorities respond to the act of borrowing.

In contrast, the Debt Intolerance view (Reinhart, Rogoff and Savastano, 2003) argues that institutional weaknesses of emerging-market (EM) economies lead to weak and unreliable policies. Debt Intolerance is reflected in the EM's inability to manage levels of external debt that are manageable for OECD. Credit ratings fall more rapidly with debt in emerging markets than in advanced countries, as if the former have less debt management capacity. Possible interpretations of Debt Intolerance include institutional weaknesses of emerging-market economies which lead to weak and unreliable policies. Countries' histories have bequeathed a situation where they find it difficult to run strong policies.

The focus on external borrowing by the Original Sin school is motivated by the observation that, in the absence of other distortions, world welfare would be enhanced if capital flowed from capital-rich advanced countries to their more capital-poor emerging market counterparts. Had Original Sin been the only distortion, then removing it would have been welfare improving. Yet, in practice, developing countries are struggling with a large number of distortions. Hence, the welfare effect of removing one distortion is ambiguous. Specifically, if removing the Original Sin would increase the volume of other distorted activities, it may be welfare reducing.

While the Original Sin, Debt Intolerance and Currency Mismatch views offer different perspectives, in practice it is hard to design a 'horse race' that will provide a clear ranking of the importance of the various approaches. Short of conducting controlled experiments, available empirical procedures have limited power in identifying the independent role of the various alternatives. This difficulty is aggravated by the fact that Original Sin measures of most developing countries are practically the same. This suggests a censoring problem. In addition, theory predicts a non-linear interaction between the various approaches. It

²³ See Cespedes, Chang and Velasco (2003) and Goldstein and Turner (2003) for discussion of the economic impact of balance sheet effects and currency mismatches.

may be hard to pick up such non-linearity in a log-linear model, especially if one is not testing a tightly specified model.

Alternative reasoning may focus on case study methodology. A possible clue to the issues at hand is that there is very little variation in Original Sin measures across countries, yet there is large variation in performance. This observation suggests that countries may take off without solving Original Sin and without solving 'institutional weaknesses'. Such a take-off may be accomplished by relaxing the grip of the state on the private sector, encouraging, instead of penalising, entrepreneurship (as apparently has been the case of China, India, etc.). Hence, prolonged growth acceleration may happen without dealing with constraints imposed by the Original Sin, or the constraints imposed by existing institutions.

Another example of the contrast between the various approaches is the comparison of the economic records of Chile and Australia. Eichengreen, Hausmann and Ugo (2003) argued that Chile's performance resembled that of LATAM and not that of Australia due to Original Sin considerations. Chile is a favourite example of a country with increasingly strong institutions and policies. Standard institution strengthening measures have not impacted the capacity to borrow abroad in an EM's own currency, over policy-relevant horizons. The Original sin approach views this inability as a key shortcoming explaining the problems facing emerging markets. An alternative interpretation is provided by Caballero et al. (2004), who contrasted country-trust versus currency-trust. They argue that the lack of country-trust is a more fundamental and serious problem behind sudden stops. They point out that Chile needs external insurance more than Australia does, precisely because its Terms of Trade shocks are amplified by the resulting contraction in the supply of external funds. So Original Sin is a greater problem for Chile than for Australia. 'But importantly, Original Sin is not the primitive problem behind the need for substantial insurance; the problem is a lack of country-trust.' This is vividly illustrated by the observation that Australia's inflation has been four per cent since federation (about 102 years ago), exceeding 20 per cent in only one year. In contrast, Chile's inflation exceeded 20 per cent in approximately half the years during that period. Australia has a long history with no default by the Federal or State governments. Australia's trust was generated by experiencing several substantial negative external shocks without defaulting, unlike most LATAM countries.²⁴

The Caballero et al. (2004) reading of the contrast between Chile and Australia is consistent with the Debt Intolerance view. It is also consistent with the view

²⁴ The latest WDI reveals that the real GDP per capita growth rate of Chile was double that of Australia during 1986–2003 (0.04 versus 0.02). This provides more evidence that, while Original Sin plays a role, it is not the major obstacle to growth.

that the key to debt intolerance is deeper structural factors, including polarisation, distribution of income and political instability. More generally, debt intolerance may be related to the ability of the social contract to deal with shocks. History impacts the investors' priors about these concerns. All the above may explain the root sources of emerging markets' vulnerability, as has been articulated in past contributions.²⁵

4. CONCLUDING REMARKS

We close the reassessment of the financial liberalisations in LATAM in the 1990s with an overview of qualifications and open issues. The sceptical view regarding the beneficial role of external financing in propagating long-run growth does not imply that external financing does not play a role in helping a take-off. Korea provides a good example where the large aid following the Korean War supplemented domestic policies, helping in engineering the impressive take-off.²⁶ Yet, the degree to which the Korean example is relevant to other take-offs is debatable. First, aid may be essential in dealing with the aftermath of a major war, like Korea in the 1960s, or the Marshall Plan following the Second World War; but it may matter less (or even hinder development) in more normal circumstances. As the experience of China, Chile and India in the 1990s illustrated, take-offs may occur without relying on external funding. More research along the lines of Hausmann, Pritchett and Rodrik (2004) is needed to provide further insight about the issues at hand.

The sceptical view regarding external financing advanced in this paper does not imply that policies inhibiting financial openings are beneficial. The strongest argument for financial opening may be the pragmatic one. Like it or not, greater trade integration erodes the effectiveness of restrictions on capital mobility. Indeed, *de facto* financial openness (measured by the sum of gross private capital inflows and outflows as per cent of GDP) depends positively on lagged trade openness, controlling for macroeconomic and political economy factors.²⁷ Hence, for successful emerging markets that engage in trade integration, financial opening is not a question of if, but of when and how – a country that undergoes rapid

²⁵ See Alesina and Tabellini (1989), Cukierman, Edwards and Tabellini (1992) and Rodrik (1999).

²⁶ Interestingly, the role of foreign aid in Korean development fizzled by 1970. Korea's saving and investment rates followed the prediction of the habit formation approach: both gross national saving and investment more than tripled from the 1960s to the 1980s; the Korean self-financing ratio reached one in the mid-1980s (see Noland, 2004, for an insightful case study of Korean economic history).

²⁷ Aizenman and Noy (2004) studied the endogenous determination of financial and trade openness. The data suggest almost a symmetric two-way feedback between (lagged) financial and trade openness.

commercial integration will find it impractical to enforce rigid financial repression. This result is consistent with the view that sequencing of reforms is important, and that the timing of financial reforms should depend on trade openness factors, as well as on the soundness of the macroeconomic policies.

REFERENCES

- Aitken, B. J. and A. Harrison (1999), 'Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela', *American Economic Review*, **89**, 3, 605–18.
- Aitken, B. J., A. E. Harrison and R. E. Lipsey (1996), 'Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States', *Journal of International Economics*, **40**, 345–71.
- Aizenman, J., B. Pinto and A. Radziwill (2004), 'Sources for Financing Domestic Capital – Is Foreign Saving a Viable Option for Developing Countries?', manuscript.
- Aizenman, J. and I. Noy (2004), 'Endogenous Financial and Trade Openness: Efficiency and Political Economy Considerations', manuscript.
- Aizenman, J. and N. Marion (1993), 'Policy Uncertainty, Persistence and Growth', *Review of International Economics*, **1**, 2, 145–63.
- Aizenman, J. (1989), 'Country Risk, Incomplete Information and Taxes on International Borrowing', *The Economic Journal*, **99** (March), 147–61.
- Aizenman, J., K. Kletzer and B. Pinto (2005), 'Sargent-Wallace Meets Krugman-Flood-Garber, or: Why Sovereign Debt Swaps Don't Avert Macroeconomic Crises', *The Economic Journal*, **115**, 503, 343–67.
- Alesina, A. and G. Tabellini (1989), 'External Debt, Capital Flight, and Political Risk', *Journal of International Economics*, **27**, 3–4, 199–220.
- Arteta, C., B. Eichengreen and C. Wyplosz (2001), 'When Does Capital Account Liberalization Help More than It Hurts?', NBER Working Paper No. 8414.
- Beck, T., R. Levine and Y. N. Loayza (2000), 'Finance and the Sources of Growth', *Journal of Financial Economics*, **58**, 1–2, 261–300.
- Bekaert, G., C. Harvey and R. Lundblad (2001), 'Does Financial Liberalization Spur Growth?', NBER Working Paper 6724.
- Caballero, R. and A. Krishnamurthy (2001), 'International and Domestic Collateral Constraints in a Model of Emerging Market Crises', *Journal of Monetary Economics*, **48**, 3, 513–48.
- Caballero, R., K. Cowan and J. Kearns (2004), 'Fear of Sudden Stops: Lessons from Australia and Chile', NBER Working Paper No. 10519.
- Calvo, G. and R. Mishkin (2003), 'The Mirage of Exchange Rate Regimes for Emerging Market Countries', NBER Working Paper No. 9808.
- Carroll, C. and D. N. Weil (1994), 'Saving and Growth: A Reinterpretation', *Carnegie Rochester Conference Series*, **40**, 1, 133–92.
- Carroll, C., J. Overland and D. N. Weil (2000), 'Saving and Growth with Habit Formation', *American Economic Review*, **90**, 341–90.
- Céspedes, L., R. Chang and A. Velasco (2003), 'IS-LM-BP in the Pampas', *IMF Staff Papers*, **50**, 143–56.
- Chang, R. and A. Velasco (1999), 'Financial Crises in Emerging Markets', *FRBA*, **84**, 2 (Second Quarter), 4–17.
- Corbo, V. and K. Schmidt-Hebbel (1991), 'Public Policies and Saving in Developing Countries', *Journal of Development Economics*, **36** (July), 89–115.
- Corsetti, G., P. Pesenti and N. Roubini (1999), 'Paper Tigers?', *European Economic Review*, **43**, 7, 1211–36.
- Cukierman, A., S. Edwards and G. Tabellini (1992), 'Seigniorage and Political Instability', *American Economic Review*, **82**, 3, 537–55.

- Diamond, D. and P. Dybvig (1983), 'Bank Runs, Deposit Insurance, and Liquidity', *Journal of Political Economy*, **91**, 401–19.
- Diaz-Alejandro, C. (1985), 'Goodbye Financial Repression, Hello Financial Repression', *Journal of Development Economics*, **19**, 1, 1–24.
- Dillingier, W. and S. B. Webb (1999), 'Fiscal Management in Federal Democracies: Argentina and Brazil', World Bank Report (May).
- Dooley, M. (1988), 'Capital Flight: A Response to Differences in Financial Risks', *IMF Staff Papers* (September).
- Edwards, S. (1992), 'Trade Orientation, Distortions and Growth in Developing Countries', *Journal of Development Economics*, **39**, 1, 31–57.
- Edwards, S. (1995), *Crisis and Reform in Latin America* (A World Bank Book, Oxford).
- Edwards, S. (1996), 'Why are Latin American Saving Rates So Low? An International Comparative Analysis', *Journal of Development Economics*, **51**, 1, 5–44.
- Edwards, S. (2001), 'Capital Mobility and Economic Performance: Are Emerging Economies Different?', NBER Working Paper No. 8076 (January).
- Edwards, S. (2004), 'Capital Controls, Sudden Stops and Current Account Reversals', manuscript (NBER).
- Eichengreen, B., R. Hausmann and P. Ugo (2003), 'Currency Mismatches, Debt Intolerance and Original Sin: Why They Are Not the Same and Why it Matters', NBER Working Paper No. 10036.
- Feldstein, M. (1980), 'International Differences in Social Security and Saving', *Journal of Public Economics*, **14**, 2, 225–44.
- Frankel, J. and S. Wei (2004), 'Managing Macroeconomic Crises: Policy Lessons', Chapter 8 in J. Aizenman and B. Pinto (eds.), *Managing Economic Volatility and Crises: A Practitioner's Guide* (Cambridge University Press), forthcoming.
- Goldstein, M. and P. Turner (2003), 'Controlling Currency Mismatches in Emerging Market Economies: An Alternative to the Original Sin Hypothesis', manuscript (Institute of International Economics).
- Gourinchas, P. O. and O. Jeanne (2004), 'The Elusive Gains from International Financial Integration', IMF Working Paper No. 04/74.
- Hanson, G. (2001), 'Should Countries Promote Foreign Direct Investment?' G-24 Discussion Paper Series No. 9, United Nations, Geneva (February).
- Hausmann, R. and M. Gavin (1995), 'Overcoming Volatility', in *Economic and Social Progress Report in Latin America* (Inter-American Development Bank).
- Hausmann, R., L. Pritchett and D. Rodrik (2004), 'Growth Accelerations', NBER Working Paper No. 10566.
- Hellmann, T., K. Murdock and J. E. Stiglitz (2000), 'Liberalization, Moral Hazard in Banking and Prudential Regulation: Are Capital Requirements Enough?', *American Economic Review*, **90**, 1, 147–65.
- Kohn, M. and N. Marion (1992), 'The Implications of Knowledge-based Growth for the Optimality of Open Capital Markets', *Canadian Journal of Economics*, **25**, 4, 865–83.
- Krugman, P. (2000), 'Fire Sale FDI', Chapter 2 in S. Edwards (ed.), *Capital Flows and the Emerging Economies: Theory, Evidence, and Controversies*, NBER Conference Volume (University of Chicago Press).
- Lipsey, R. (2002), 'Home and Host Country Effects of FDI', NBER Working Paper No. 9293.
- Levine, R. (1997), 'Financial Development and Economic Growth: Views and Agenda', *Journal of Economic Literature*, **45** (June), 688–726.
- McKinnon, R. I. and H. Pill (1996), 'Credible Liberalizations and International Capital Flows: The Overborrowing Syndrome', in T. Ito and A. O. Krueger (eds.), *Financial Deregulation and Integration in East Asia*, NBER-East Asia Seminar on Economics, Vol. 5 (Chicago and London: University of Chicago Press), 7–42.
- Mody, A. and A.P. Murshid (2002), 'Growing Up with Capital Flows', IMF Working Papers No. 02/75 (Washington, DC: International Monetary Fund).
- Noland, M. (2004), 'South Korea's Experience with International Capital Flows', manuscript (NBER).

- Quinn, D. P. (2003), 'Capital Account Liberalization and Financial Globalization, 1890–1999: A Synoptic View', *International Journal of Finance and Economics*, **8**, 3, 189–204.
- Ramey, G. and V. Ramey (1995), 'Cross-country Evidence on the Link Between Volatility and Growth', *American Economic Review*, **85**, 5, 1138–51.
- Reinhart, C., K. Rogoff and M. Savastano (2003), 'Debt Intolerance', *Brookings Papers on Economic Activity*, **1**, 1–74.
- Rodrik, D. (1994), 'Getting Interventions Right: How South Korea and Taiwan Grew Rich', NBER Working Paper No. 4964.
- Rodrik, D. (1998), 'Who Needs Capital-account Convertibility?', in P. Kenen (ed.), *Should the IMF Pursue Capital Account Convertibility? Essays in International Finance* No. 207 (Princeton: Princeton University Press, May).
- Rodrik, D. (1999), 'Where Did All The Growth Go? External Shocks, Social Conflict, and Growth Collapses', *Journal of Economic Growth*, **4** (December), 358–412.
- Rogoff, K. (1985), 'The Optimal Degree of Commitment to an Intermediate Monetary Target', *Quarterly Journal of Economics*, **100** (November), 1169–89.
- Rogoff, K. (1999), 'International Institutions for Reducing Global Financial Instability', *Journal of Economic Perspectives*, **13**, 4, 21–42.
- Williamson, J. and M. Mahar (1998), 'A Survey of Financial Liberalization', *Princeton Essays in International Finance*, No. 211 (November).