KELLOGG INSTITUTE
THE HELEN KELLOGG INSTITUTE FOR INTERNATIONAL STUDIES

THE RISE AND FALL OF CAPITAL MARKETS IN THE SOUTHERN CONE

Joseph Ramos

Working Paper #81 - September 1986

Joseph Ramos is an economist (Ph.D., Columbia 1968) with 17 years of teaching and consulting experience in Latin America. He is currently with the United Nation's ECLA in Santiago, Chile. His work has generally been in macroeconomics (employment, stabilization and adjustment policies), though he also has a long-standing interest in Catholic social teaching. His latest publication was a book published by ECLA entitled Estabilización y liberalización económica en el Cono Sur (UN, 1984, Santiago). The book will appear soon in English, published by Johns Hopkins Press.

ABSTRACT

This paper analyzes the attempts in Argentina, Chile and Uruguay in the 1970s to solve the problem of slow growth by liberalizing the economic system. Neoconservative policymakers in these countries sought to abolish the interventionist paradigm which had prevailed since the Great Depression. They particularly criticized the previous policy of "financial repression" and argued that the capital market, the central mechanism for allocating financial resources, should not be determined by the discretional authority of the government but by the forces of supply and demand. Thus, an important part of their policy from the beginning was to create domestic capital markets and open them up to the outside world. The resulting financial systems were in a state of total collapse by the time the neoconservative experiences came to a close: Real interest rates remained high throughout the period without producing corresponding advantages and despite large capital inflows from abroad. The author agrees that the domestic capital markets were repressed and underdeveloped at the start. However, he argues that financial liberalization should not take place without first (1) stabilizing prices; (2) overcoming segmentation within the domestic capital market and between the domestic and international markets; (3) ensuring the operation of long term capital markets; (4) enforcing banking regulations; and (5) introducing alternative mechanisms to ensure that liberalizing interest rates will in fact increase national savings and investment rather than simply releasing consumption demand.

RESUMEN

Este trabajo analiza los esfuerzos en Argentina, Chile y Uruguay en los años setentas por resolver el problema del lento crecimiento mediante la liberalización del sistema económico. Las políticas neoconservadoras de estos países procuraron abolir el paradigma intervencionista que había prevalecido desde la Gran Depresión. Los equipos económicos particularmente criticaron la política anterior de "represión financiera" y argumentaron que el mercado del capital, el mecanismo central para asignar los recursos financieros, no debería ser determinado por la autoridad discrecional del gobierno, sino por las fuerzas de la oferta y la demanda. Así, una parte importante de su política, desde el principio, fue la de crear mercados nacionales de capital y abrirlos al mundo exterior. Cuando las experiencias neoconservadoras llegaron a su conclusión los sistemas financieros se encontraban en un estado de colapso total: las tasas de interés real permanecieron altas durante todo el período sin producir las ventajas correspondientes y a pesar de las grandes afluencias de capital del extranjero. El autor está de acuerdo en que los mercados nacionales de capital se encontraban reprimidos y subdesarrollados al principio. Sin embargo, argumenta que la liberalización financiera no debería tener lugar sin primero (1) estabilizar los precios; (2) superar la segmentación dentro del mercado nacional de capital y entre los mercados nacional e internacional; (3) asegurar la operación de mercados de capital a largo plazo; (4) hacer valer los reglamentos bancarios; (5) introducir mecanismos alternativos para asegurar que la liberalización de las tasas de interés de hecho incremente el ahorro y la inversión nacionales, en vez de simplemente liberar la demanda de consumo.

A. Introduction

Three economic problems contributed to the political upheavals and military coups which gave rise to neoconservative experiences in Argentina, Chile and Uruguay in the mid 1970s: 1) galloping inflation (triple digit); 2) severe balance of payments difficulties, and 3) slow growth. The first two problems, of a short term nature, were met with price stabilization and adjustment policies of a fairly orthodox, monetarist bent. The last was met by the widespread liberalization of the economic system, of which financial liberalization was but one part.

The radical liberalization and restructuring which the neoconservatives effected was their response to the strikingly poor economic performance of these countries in the postwar period. Since 1945, the per capita income of the Southern Cone countries grew by but 1 1/2 % per year, as compared to 3.4% for the rest of Latin America (see Table 1), so that by the mid '70s their share in the region's GNP had fallen from over 1/3 to less than 1/4. And even though Argentina still enjoyed the highest per capita income in Latin America, by the mid '70s, Chile had fallen from third to seventh place, and Uruguay from second to fifth. Such poor economic performance was attributed by neoconservatives to the exaggerated and increasingly discretional intervention of the State, an outgrowth of the Great Depression and governments' attempts to cope with it. The neoconservatives proposed, thus, to replace the interventionist paradigm which had prevailed since the Great Depression, restoring the market as the principal mechanism of resource allocation.

Since "financial repression" was one of the most characteristic elements of the interventionist period in the Southern Cone, it was among those most severely criticized by neoconservative policymakers from the start. For it was inconceivable to them that the central mechanism for determining the allocation of resources--the capital market--should

be controlled not by the forces of supply and demand, but by the discretional authority of the government. For this reason, the creation of a domestic capital market and its opening up to the outside world made up part of their package of basic structural reforms right from the very beginning. Ironically, the end of the three neoconservative experiences was accompanied, if not brought on, by the collapse of the very financial system they had created.

B. The Neoconservative Diagnosis

Ever since the Great Depression, the countries of the Southern Cone had established increasing controls over the financial system. Selective credits at preferential interest rates--often negative in real terms--were created to promote the development of sectors and activities considered to be of the highest priority. Exchange controls were placed on capital movements in order to avoid capital flight and to render possible the maintenance of a low rate of exchange and so cheapen the import of foodstuffs and intermediate inputs. Moreover, a goodly part of the banking system not only belonged to the state, but was administered in highly discretional form, so that credit was often assigned according to political rather than economic criteria.

In addition to its basic stance against intervention, neoconserv- atives criticized this domestic financial repression for the following reasons:[1]

1. Low, or even negative, rates of interest were thought to explain why savings were so low in Chile (17%) and Uruguay (10%), and why they depended so heavily on the public sector in Argentina (see Table 1). For such rates of interest provided little or no incentive for individuals to sacrifice current consumption.

2. Moreover, artifically low interest rates encouraged self-financing and discouraged financial intermediation. In this way, the market was segmented between

those who had access to artificially cheap credit and those who had no access, all of which led to a poor allocation of resources. The former were induced to initiate projects with low rates of return, overmechanize or build in unnecessary capacity, whereas the expansion of capital scarce activities with high rates of return was discouraged, forcing these activities to borrow at the overblown interest rates of informal credit channels or condemning them to expand only to the limits of their capacity for self financing. Such segmentation would indeed hurt capital scarce activities with good investment opportunities but, as the results will suggest, these were more likely to be small and medium size firms on the verge of modernizing rather than, as some thinkers[2] favorable to financial liberalization believed, large firms already using modern technology.

3. The volume and variety of financial assets were severely limited in the economy. The proportion of M_2 in Southern Cone GNP at the beginning of the neoconservative experiences (20%) was well below that in the industrialized countries (60%) or that in some fast developing underdeveloped countries (60% in Taiwan, 33% in South Korea and Mexico).[3] Moreover, the variety of financial instruments, especially for medium and long term debt, was quite limited.

The majority of economists was aware of these problems and concurred with the need to reduce the degree of financial repression. However, only the neoconservatives "à outrance" thought that the solution was to leave the financial system wholly and entirely in the hands of the market. Those from other schools of thought believed that some form of control was indispensable, for the financial market is not like any other market. They argued that financial acitivity is intrinsically fragile, subject to abrupt and discontinuous changes (vicious and virtuous circles): once critical levels of confidence (or lack of confidence) regarding the future ability to service one's debts are reached, these tend to feed back and reinforce themselves. The liquidity problems of firms, for example, can lead to generalized insolvency if not attended to in timely fashion by the economic

authorities. It was further pointed out that, given the relatively small size of the Southern Cone economies plus the fact that there tend to be important economies of scale in financial activities, it was altogether likely that if left to itself, the financial sector could quickly come to be controlled by a relatively few economic conglomerates with all the vices and defects that an oligopolistic allocation of credit entails.

As for capital inflows, neoconservatives were one in insisting on the merits of an extensive financial opening up to the outside world as one of the key mechanisms by which a less developed country could take full advantage of the international economy, by fully utilizing foreign savings potential to augment domestic savings and so speed up growth rates. Nevertheless, neoconservatives did differ among themselves as to the optimal sequence of liberalization in different markets. Some, such as McKinnon and Frenkel,[4] argued that first should come trade opening up and the creation of the domestic capital market, and only later and gradually, financial opening up. They feared that should the financial opening up come early, interest rates would tend to converge before the prices of goods. Thus, investment would increase, but it would be misallocated inasmuch as relative prices would still be distorted. Others, such as Mundell, believed that such a risk was worth taking, believing that the heavy inflow of capital would in any case offset the initial contractionary effects of the devaluation, thus helping avoid a recession and so generating confidence in the overall liberalization process.

C. The Policies of Trade and Financial Opening Up[5]

Domestic capital markets were created in each of the three countries as of the first or second year of its neoconservative experience (Chile 1975, Uruguay 1976 and Argentina 1977). Moreover, Uruguay chose to accompany this with a wide financial opening up to the outside world but a timid trade opening up, whereas Chile liberalized trade first and only gradually did it open up its capital account.

Chile's policy was conditioned by its very high inflation and, therefore, by its perceived need to assure control over the money supply. Moreover, the reluctance of the international banks to lend to Chile during the first years following the coup (for political as well as economic reasons) really made no other alternative possible. Argentina followed a middle road, controlling capital inflows during the first phase of its price stabilization program (1976-78) and increasingly opening itself up financially during the second phase (mid 1978 onwards), once its stabilization efforts centered on controlling the exchange rate.

The creation of a domestic capital market included the following principal measures: 1) freeing interest rates; 2) eliminating or dramatically reducing existing qualitative and quantitative controls over credit (e.g. by sector of activity, type of collateral, size of firm, use of credit); 3) reducing the barriers to entry for new banks, financial intermediaries and for foreign banks (especially in Argentina and Chile); 4) the progressive reduction of reserve requirements; and 5) in Chile, the return or auction to the private sector of the bulk of the banks which had been placed under state control under Allende.

Financial opening up to the outside world included: 1) authorization to open banking accounts within the country denominated in foreign currency; and 2) the progressive reduction of limits on the entry and outflow of capital, both as regards the

minimum time for such loans as well as limits on the amounts that could flow in. These limits were important in Argentina and Chile especially through 1978.

Argentina first prohibited the entry of foreign capital for periods of less than 180 days, and later (August 1977) raised it to 1 year and then to 2 years (November, 1977). Moreover, borrowers were obliged to deposit the equivalent of 10-20% of the foreign credit in domestic currency and at zero interest, all of which raised its effective cost to borrowers. These restrictions (which were only levied on private sector borrowing) were justified as measures necessary to maintain control over the growth of the money supply. However, once the price stabilization policy (in mid 1978) shifted from controlling the money supply to controlling the exchange rate, these restrictions were gradually eased. Indeed, to meet the heavy drain on reserves, even the inflow of very short term capital was permitted as of mid-1980.

Chile, on the other hand, maintained the prohibition on capital inflows for periods under 2 years almost to the end (mid 1982). For it feared that unrestricted financial liberalization would bring in so much capital--given the huge differentials between domestic and international interest rates--that the stabliization program could be jeopardized. In any case, Chile did tend to increase access in the course of time. At the beginning only non-financial enterprises could borrow; then banks were allowed to borrow up to certain limits; and finally those limits were substantially raised.

Even though the three countries established different sets of restrictions, capital inflows to the three did not differ all that much for, in the final analysis, such inflows depend not only on the demand for credit (what the country wants and allows), but on its supply (what international banks are willing to lend under the conditions). Similarly, one of the really effective restrictions was the limits imposed on external borrowing by the public sector. Argentina and Uruguay increased the public sector's foreign indebtedness

substantially right from the very beginning whereas Chile discouraged it almost to the very end.

D. The Principal Results of Financial Liberalization

The final objective of the policy of financial liberalization and opening up was to raise the level of domestic savings, increase investment and improve resource allocation. The key policy instrument for this on the domestic plane was the freeing of interest rates. This was expected to encourage savings, equalize interest rates for all users (as between formal and informal credit segments) and lower the costs of financial intermediation, increasing the volume and variety of financial instruments. The freer flow of international capital was expected further to raise investment and move domestic interest rates closer to international ones.

The effects of liberalization and opening up were dramatic, but more often than not because they proved to be so different from expected. No doubt some of the unsatisfactory results were due not to financial liberalization itself but to unfavorable external conditions. Yet, as I will spell out shortly, a large part of the failures can be attributed to the questionable decision to pursue financial liberalization along with, rather than after, a price stabilization policy (both in its initial tight money variant as in its later variant of fixing or pre-announcing the exchange rate devaluation).[6] This error, along with others committed in the process of financial liberalization, grew out of the neoconservatives' grossly simplified or mistaken assumptions about the workings of the economy. The principal results, in summary form, were as follows.

First, as expected and desired, thanks to economic liberalization, financial intermediation strongly increased its share in GNP, rising by at least two percentage points (see Table 2). More importantly, there was a remarkable increase in the proportion

of GNP held in the form of time and savings deposits and of credit to the private sector (see Table 3). These increased from threefold to over tenfold, as the case may be, between the onset of the neoconservative experience and the peak values achieved before the final crisis and demise of the neoconservative experiences set in.

Notwithstanding the wide variety of financial instruments generated by the liberalization of capital markets, the bulk of these were of very short term duration (30 days and less). High interest rates on such short term deposits, plus strong inflation and future uncertainty made it very difficult subsequently to generate longer run instruments which could be attractive to depositors as well as borrowers. Hence, the domestic capital market was never really anything other than a market in quasi money. It was only toward the end of the process in phase II that long term instruments were offered in significance, and even then such interest rates ranged between 12% and 18% real per year. But these never became any more than a small fraction of overall credit. And the market for long term bonds was virtually non existent.

Second, despite the remarkable increase in time and savings deposits, the proportion of GNP saved (that is, income not actually consumed)[7] was actually lower during the neoconservative period than in the years immediately preceding that experience in both Argentina and Chile (see Table 1 again). Only Uruguay shows significant improvement in this regard. In short, whereas financial savings proved to be highly sensitive to interest rates, real domestic savings proved to be far less so.

Third, foreign savings (foreign debt) grew sharply during the neoconservative period, partly as a response to highly favorable interest rates, but also partly due to the generalized expansion of international liquidity in the period. In any case by the end of 1983 the ratio of foreign debt to exports ranged from 3.3 to 1 in Uruguay and 3.8 to 1 in Chile to 4.9 to 1 in Argentina (see Table 4). This as compared to an average of less than 3 to 1 for the rest of the region. What is surprising is not so much that foreign debt grew so

strongly during the neoconservative period (20% per year)--after all it grew at a similar rate throughout the rest of Latin America--but that it grew so strongly when, at the beginning of the neoconservative experiences, the countries of the Southern Cone were already among the most indebted countries of the region, at least in relation to the level of exports.[8]

It is notable that though Chile had the least internationally opened up financial sector and though its public sector was deliberately restrained from borrowing from abroad, it was Chile and not Uruguay that received the heaviest inflows of foreign capital throughout the neoconservative period, not only in relation to GNP and exports, but in absolute terms (see Tables 4 and 5).[9]

Fourth, notwithstanding the sharp increase in capital inflows, and the noted increases in financial savings, investment as a proportion of GNP actually declined in the neoconservative period in Chile; and increased but marginally in Argentina; it increased significantly only in Uruguay (see Table 1). In fact, the three countries showed important signs of substitution of foreign for domestic savings in the years 1979-81 (see Table 2) which helps explain why investment did not increase markedly during the neoconservative period. The most striking case of such substitution is that of 1981 Chile. In that year external savings rose from 6% to 13% of GNP whereas domestic savings fell from 11 to 1%.

Fifth, as expected, upon their liberalization, interest rates rose from being systematically negative during the years of financial repression to generally positive (see Table 6). Indeed, borrowing rates proved to be unexpectedly and dangerously high for most of the neoconservative period: these averaged, in real terms, 41% per year in Chile (1975-1981), 17% per year in Argentina (1977-1980) and 15% per year in Uruguay (1977-1982) for the period ranging from financial liberalization up to the maxi-devaluations.[10] While no one can specify exactly what the equilibrium interest rate is, to

judge from other countries' experiences or even LIBOR (which never exceeded 6% in real terms during the neoconservative period, and averaged much less), it is hard to believe that this could be much above, say 10% per year real.

The spread between domestic borrowing and deposit rates averaged at least 13% per year in the 3 countries for the period in question (see Table 7). The cost of reserve requirements explains a small part of this differential, especially in the early years of high inflation in which it was important to control monetary growth and during which the Central Bank paid no interest on such reserves.[11] However, the remainder of this unusually high spread, well above the historic one, which ranged between 3 and 5%, seems to constitute a "quasi rent". Such a "quasi rent" would be a sign of insufficient competition in this activity.[12] The almost systematic reduction of this spread in the course of time, even during 1981-1982 when the risk of a major financial crisis was quite high, certainly suggests that it was the increased number of financial intermediaries and the ensuing competition that brought it down.[13]

Moreover, domestic interest rates failed to converge to international ones, as had been expected and hoped for, not even during the period in which the exchange rate was being devalued in programmed and pre-announced fashion, and this notwithstanding the heavy inflow of capital. On the contrary, domestic interest rates, both deposit and borrowing rates, proved to be well above LIBOR plus the rate of devaluation. This spread varied from a minimum of 10-20 percentage points per year in Uruguay to 20-30 in Chile and a maximum of 30-40 percentage points in Argentina (see Table 7, spreads (2) and (3)). Except for exchange risk, this differential made it quite attractive for foreigners to bring capital into these countries and for nationals to borrrow in foreign currency (see Table 6 again, especially the 3 final columns). These spreads were large, even in the period where the exchange rate was being devalued far more slowly than the difference between domestic and international inflation, a reason for which one might

have expected that real domestic interest rates be lower than international ones, or even negative, at least so long as a maxi-devaluation was not feared.[14]

Sixth, financial liberalization was accompanied by a more permissive regulatory environment, both in terms of practices formally permitted, and, more importantly, in terms of condoning practices which though circumventing the spirit of the regulation adhered to its letter (e.g. triangular lending operations, often times through firms created for that purpose, whose principal equity was the shares of its parent firms but because they were a "different" firm could borrow on that basis and then relend to their parent firms, thereby circumventing bank regulations on lending limits to any single firm; or restrictions on ownership of banks by any single stockholder, yet which allowed effective control of a bank to fall into the hands of the same economic conglomerate through the ownership of other persons or firms related to or belonging to the same group). Since, in practice, both the public at large as well as the managers of financial intermediaries viewed bankruptcy as impermissible by the government, there was a built in bias for banks to throw to the wind regulatory and common sense limits to the concentration of risk, and circumvent these, engaging in excessively risk-taking lending operations, especially to firms belonging to the same conglomerate as the bank, with unduly leveraged ratios of bank debt to equity. This would be fine in upswings, but would leave banks holding the bag in downswings (and, in fact, the government, if rather than letting depositors take the full loss, it bailed out the banks, guaranteeing deposits and thus "socializing" the debt).

Seventh, asset prices (our data are in this case limited to Argentina and Chile) moved quite erratically (see Graph 1). The index of stock market prices (expressed in real terms) in Argentina varied by a factor of 1 to 4 (and then back again) in the period between financial liberalization and the maxi-devaluations (mid '77 to the end of '80); and the same index rose by more than 1 to 10 in Chile only to lose half of its value in the same reference period (mid '75 to mid '82). Urban real estate seems to have shown similar swings though

far less extreme. Thus enormous wealth gains and losses were made during this period. Somewhat paradoxically, to the extent that the prices of shares and of urban real estate be good indicators of asset values, financial liberalization (higher real interest rates) was accompanied by increases, not decreases in asset values; the subsequent sharp declines were associated not so much with higher interest rates as with the growing gap between "paper" wealth and the even dimmer prospects of income growth, a prelude, to be sure, of the sharp recessions these countries were about to suffer and the domestic financial crisis which preceded these recessions.

E. Three Policy Issues

Many questions emerge on viewing the results of economic liberalization. I should like to address three, the answers to which, I think can shed much light on the financial crisis that finally ensued:

1. Why were domestic interest rates so high, and for so long, and well above international rates despite such high capital inflows?
2. Why didn't domestic savings and investment rise significantly (except for Uruguay) despite the unusually high interest rates, and despite the very strong increase in time and savings deposits?
3. Why did asset prices rise so much, rather than falling when interest rates rose, as we would normally expect?

I. The Causes of High Interest Rates

The perception of a high exchange risk explains part of the differential between domestic and international interest rates in 1980 in Argentina, in 1981 in Chile and in 1982 in Uruguay. Nevertheless, the differential had been high in the preceeding years when the exchange risk was virtually non-existent and in which capital flows were quite heavy. The differential between LIBOR adjusted by devaluation and domestic lending rates (spread 3) was never less than 30 percentage points in Argentina between 1978 and 1979; nor less than 23 in Uruguay in 1979-1980; and what is particularly perplexing is that it reached 29 percentage points in Chile in 1980, the year after the exchange rate was fixed and in the middle of a boom. In other words, exchange risk is undoubtedly a factor contributing to this differential, but it is far from being the sole or most important one.

The degree in which the capital accounts were opened up is also likely to have influenced this interest rate differential. This may well explain why Uruguay had the lowest such differential. But even then several problems remain which suggest that the relation is not all that simple. For one thing, despite the greater ease with which capital could flow into Uruguay, capital flows to it were comparable to those received by Chile which had more restrictions (see Table 4). For another, the differential moved contrary to the direction of financial opening up, both in Uruguay, where financial liberalization was quite extensive right from the very beginning of its inception, and in Chile, where the process was more gradual. The ratio of credit and M_2 in GNP rose sharply in both countries as expected but, instead of declining, the differential between domestic and international rates (spreads 2 and 3) rose in Uruguay between 1977 and 1980, as it did in Chile between 1979 and 1981. And while this differential did fall in Argentina, it never fell below 10 percentage points.

Thus apart from exchange risk and the degree of financial liberalization, other factors seem to have been at work to explain high domestic interest rates and their lack of convergence toward international rates. Undoubtedly, the restrictive monetary policy common to the price stabilization policies initially pursued in all three countries was one such factor, which would help explain high interest rates in the early years of these experiences. Yet, since these interest rates continued to remain high in real terms, even in periods of very heavy capital inflows and when stabilization policy moved from controlling the money supply to controlling the exchange rate, it is reasonable to look for additional explanations on the side of the demand for credit. Among the principal factors which increased this demand above normal levels in different moments during the neoconservative experience were:

1. The unexpected appearance of opportunities for exceptional capital gains, something which will naturally raise the real demand for credit. This is what happened in Argentina in 1977, when as part of one more attempt at price stabilization, a 4 month price freeze was announced. This encouraged firms to demand credit to buy inputs and stockpile output in order to sell it later at the higher prices expected once the price freeze was lifted. The most notable case is that of Chile in 1975, when in the midst of a severe depression the government announced its program to auction off a large number of banks and enterprises which had come into its hands during the Allende government.

2. The rise in the real value of assets. Under normal conditions the rise in such values is closely related to the rate of economic growth which is soon expected. Nevertheless, during various years after financial liberalization the sharp upward revaluation of stocks and real estate far exceeded what could be justified by any reasonable expectation of likely economic growth, indicative of a speculative euphoria (a point to which I shall soon return). In any case whatever the reason the real market value

of assets did grow substantially for several years, at least in Argentina and Chile. To the extent this happens, the demand for credit can rise, because of a wealth effect.

3. Changes in the ways in which public enterprise deficits were financed. In the past, these had been largely "financed" via the direct creation of money by the Central Bank; from now on, they were financed by borrowing in the domestic capital market. Chile used this mechanism quite extensively, especially at the beginning, whereas Argentina and Uruguay borrowed heavily from external sources to cover public sector needs throughout the entire process.

4. The opening up of trade and the elimination of administrative controls on the allocation of credit. As a result of these measures, the demand for consumer credit expanded immensely, especially that for consumer durables, for the relative price of these had fallen considerably within these countries because of lower tariffs.

5. The belief that high real rates of interest were transitory and that they would soon fall to reasonable (equilibrium levels), say 5-10% per year. This proved to be all the more important because much short term credit was being utilized to finance operations of a longer term nature, thereby supposing the automatic renovation of credit.

6. The above are all factors which explain a demand for credit which originated in expectations (correct or not) of higher future income. One would suppose that the demand for credit would fall should expectations be reversed. Nevertheless, it is important to point out that the demand for credit can also go up in the short run, not to take advantage of possible gains in income but to avoid or postpone possible losses in wealth brought on by unexpected reversals in key economic indicators: for example, to avoid i) the hurried sale of excess inventories accumulated because of the unexpected decline in sales; or ii) the forced sale of assets during periods of recession and consequently at depressed values. It will, thus, be quite tempting to postpone such capital losses if the recession is considered to be transitory and it is thought that sales

and/or the value of assets will soon recover their expected values (Argentina between the end of 1977 and the end of 1978, and Chile In 1974-1975). The temptation will naturally be irresistible should the sale of assets--because it is a generalized situation affecting many firms (as was the case after the maxi-devaluations of 1981-82)--have to be done at such low prices that the firm's bankruptcy is implied. For the path to bankruptcy need be neither smooth nor gradual nor indeed is it always evident just when it need take place. And when sudden and widespread (as in 1981-1982) it is apt to induce the acquiescence of bank creditors, for their own solvency is at stake (a point to which I shall return).[15]

This introduces an important asymetry and upward bias In the demand for credit. For to the extent that potential capital losers demand more credit, and not less, in order to avoid or put off losses, the increased demand for credit of would-be capital gainers, is not compensated by a decrease in the demand for credit of prospective capital losers. Indeed, rather than cancelling each other out, these effects combine and reinforce each other, and the overall effect is all the stronger, the greater the fluctuations in the perceived value of capital assets. Precisely one of the central features which characterized the neoconservative experiences was the sharp changes in the relative price structure: of prices with respect to wages; of agricultural prices with respect to manufactures; of the price of tradables with respect to that of non-tradables; all of which necessarily gave rise to important capital gains and losses.[16] To the extent that capital losses in particular were perceived as transitory--excusably, for to perceive them as permanent might well imply recognizing insolvency, all the more so since key macroeconomic variables fluctuated substantially and never approximated equilibrium --an important asymmetry was introduced in the demand for credit, wealth transfers leading both potential capital gainers and losers to demand more credit, consequently moving real interest rates well above equilibrium levels.

In much the same vein, the failure of domestic interest rates to converge to international ones was due to the fact that the demand for credit grew far greater than the amount the international market was willing to finance. This latter market is rationed by quantity as well as price: while certainly an interest rate differential can attract capital inflows,[17] it will do so in practice as long as the exchange risk is low. So long as the demand for foreign credit increased in step with the capacity to service such debt, that is to say, exports, reserves and similar indicators, exchange risk was likely to be perceived as low. However, once the increased demand for credit was due not to factors which were related to the increased capacity to service such debt, but rather, as occurred during the end of phase II, was due to a deterioration in the capacity to service such debt (because of the lag in the exchange rate, the international recession and growing interest payments), the supply of foreign credits was sharply cut back. As might be expected, capital inflows then became rather insensitive to interest rate differentials but quite sensitive to exchange risk. Domestic interest rates were thus pulled upwards, worsening the recession in each country, and ultimately precipitating an acute financial crisis, all of which would force a maxi-devaluation.

For this reason, domestic and international interest rates failed to converge, not to say failed to equalize. To be sure, had it been possible to maintain this exchange policy indefinitely, such interest rate convergence would eventually have taken place. But the point is that the longer the pre-announced exchange rate policy was maintained the more it became overvalued, and so the less credible did its continuance become. For it was hard to believe that the government would be willing to persevere in its exchange policy however sharp an economic contraction it required. No such guarantee could be given, short of actually closing the Central Bank, counting on an <u>indefinite</u> supply of foreign exchange, and thus "dollarizing" the economy as in Panama.

2. The Causes of High Financial Savings and Low Real Savings and Investment[18]

Financial liberalization was expected to raise interest rates and induce greater savings and investment. Interest rates rose indeed, as did time and savings deposits. Yet except for Uruguay, "ex post" national savings (i.e. income less consumption) did not increase, nor did investment. Why didn't the increase in financial savings translate itself into increased effective national savings and investment?

Precisely because interest rates were not free but controlled, "financial repression" in the Southern Cone required administrative forms of allocating that credit. It would seem, especially with the benefit of hindsight, that credit was heavily biased in favor of fixed capital and public works infrastructure at the expense of consumer credit, private sector infrastructure (i.e. commercial construction), and housing. Whether such an allocation maximizes welfare or not--implying that the social discount rate was less than the free market rate of interest--is an open question. The fact remains that financial liberalization both freed interest rates and eliminated controls on credit use. Thus the "repressed" demand for credit--especially for consumer durables but also for private commercial infrastructure--would manifest itself upon "financal liberalization". Hence, the increase in financial savings did not necessarily yield an increase in effective, ex-post savings and investment but rather helped finance consumer credit. This was all the stronger, in a country such as Chile where--by policy, and unlike Argentina and Uruguay--the government purposely reduced public sector infractructure investment, so as not to crowd out private investment. In retrospect it now seems clear that this reduction in public investment gave rise only to a partially offsetting of the increase in private investment (be it in infrastructure or machinery). For these reasons, overall savings and investment in Chile were actually much lower during the neoconservative period, and in Argentina virtually similar, to pre-financial liberalization days, notwithstanding the sharp increase in

financial savings. Effective (expost) national savings thus proved rather insensitive to the rate of interest in this period, at least in Argentina and Chile.

Rather, it seems to have responded: i) positively to growth in national income and especially to the ups and downs in national disposable income deriving from fluctuations in the terms of trade; ii) positively to the increase in the availability of domestic credit for consumer durables as well as to the relatively low cost of dollar denominated credit (at least up to 1981) for imports; iii) inversely to the decline in the relative price of durable goods, especially imported ones (due to the overvalued exchange rate of phase II stabilization and the reduction in tariffs); and iv) inversely to the apparently greater market value of most fixed assets, which led economic agents to believe (mistakenly) that their permanent income was higher, and so think that they could well afford to spend more on consumption.

Thus, whatever the long term effects of higher interest rates may be, of and by themselves, on domestic savings, the evidence of the Southern Cone is certainly mixed. In Uruguay, real savings and investment rose. In Argentina and Chile, on the other hand, consumption was induced (possibly because it had been heretofore so repressed). In any case, it should be clear that as important as the impact of financial liberalization on interest rates is, so too is the dismantling of credit controls it entails. To the extent that these were biased in favor of investment, the impact of liberalization could be to increase financial savings yet reduce real savings (and investment).

For much the same reason, the increase in "foreign savings" (debt) associated with increased financial opening up to the outside world need not have resulted in like increases in investment. Some debt indeed was used to increase foreign exchange reserves (at least up to the period preceding the maxi devaluations). Some substituted domestic savings with foreign savings, as earlier noted, especially in the years 1980-81, giving rise to massive increases in consumer imports. Much went to satisfy a heretofore

"pent up" demand for the import of military hardware (less valued by civilian governments concerned with fostering productive investment). Finally, much augmented private savings and investment overseas, as foreign debt, was "socialized" whereas foreign exchange was "privatized". The end result is that notwithstanding unprecedented levels of foreign savings in the neoconservative period--to wit, foreign savings rose with respect to the pre-neoconservative period approximately the equivalent of 1% of GNP in Uruguay, 2% in Argentina and 3% in Chile in these years[19]--overall investment rose by less than that amount in Argentina (1 1/2% vs. 2%), and fell in Chile. Only Uruguay showed a marked increase in investment in the period.

3. The Behavior of Asset Prices

I have already commented on the extraordinary volatility of asset prices during the period of financial liberalization; not just that they varied far more than any other variable--for that is not unusual--but that they varied by as much as they did: 4 to 1 in Argentina, and over 10 to 1 in Chile. The puzzle is all the more enigmatic given the noted tendency of interest rates to rise sharply and remain high during the period of financial liberalization. In short, how can one account for such extraordinary increases in the prices of stocks (in real terms) precisely in a period characterized by unusually high interest rates?

For most economic theories prepare us for precisely the reverse result, that stock prices vary inversely with real interest rates. For higher interest rates discount at ever greater percentages future income streams, consequently lowering their present value. This is, of course, true of the more traditional hypotheses regarding the relationship between interest rates, money supply and stock prices: namely that increased money supply in time t will lead to higher stock prices in t+1, firstly because money supply increases lower interest rates, and so, raises the present value of future earnings;

secondly, because increased money supply may increase aggregate demand, and so real earnings, when there is idle capacity; and thirdly, because in the short term, excess money holdings may be transferred more rapidly into stocks (raising their demand) than into goods or bonds. Any one, and all 3 together, point to a positive relationship between money supply increases in previous time periods and stock price increases in the same and following time periods, and an inverse relationship between interest rate behavior and stock prices in the same or following time periods.[20]

This traditional approach has been successfully challenged by the most modern formulation of stock market behavior, the efficient capital market hypothesis[21], which argues that the price of a stock already incorporates all past and current information concerning the best estimate of future values of its determinants (including the interest rate). Hence, it cannot vary systematically today as a response to past variations in money supply or interest rates. Nevertheless, even the efficient capital market hypothesis would suggest that, since financial liberalization can be expected to raise interest rates, stock market prices should fall as liberalization is announced or to the extent it be expected. This conclusion could be avoided, if one believed, as did those who argued on behalf of financial liberalization, that freeing interest rates would not only raise real interest rates, but raise the quantity and quality of investment, leading to far greater growth. In fact, in retrospect such far greater growth did not take place. Yet that may only show that buyers of stock erred in expecting economic growth to be so much higher. But their expectation of higher growth led them to raise the demand (and so the price) for stocks, notwithstanding their expectation that interest rates would also rise. Once their expectations of strong growth were dashed, stock prices would tumble down. This explanation fits the general swing in stock prices, though it can hardly explain the magnitude of these swings. For example, lending rates rose from 39% per year (real) in 1976, to 55% per year in 1977 in Chile. Such a rise in interest rates implied discounting

earnings of future years so heavily that earnings as of the 3rd year and beyond would have a present value of less than 9%! Obviously, then, for stock prices to rise in 1977, enormous growth would have to have been expected for the years 1977, 1978, and 1979. Chile's growth did accelerate quite strongly in this period, from just under 2% per capita to about 7% per capita in those 3 years. But when one discounts such growth by 55% in the 1st year, 80% in the 2nd, and 90% in the 3rd, it is obvious that no reasonable expectation of accelerated growth could compensate the increased interest rates. And yet Chilean stock prices rose 76% in real terms between the 4th quarter of 1976 and the 4th quarter of 1977.

Thus, such wide swings in stock prices need have reflected both very favorable expectations as to stronger economic growth, and the belief that interest rates were transitorily high but would soon fall and settle down to much lower rates.[22] Only in some such way could one rationalize the quadrupling in real stock prices between the 1st quarter of 1978 and the 1st quarter of 1980 in Argentina or the sixteenfold increase in Chile between the 3rd quarter of 1975 and the 4th quarter of 1980. Optimistic assessments as to future increased economic growth and declines in interest rates so as to lead to such enormous increases in real stock values can only be characterized as generalized euphoria; in short, the upswing of a speculative bubble.

Such a bubble and crash has been ably demonstrated by Meller and Solimano for Chile.[23] I will use that same formal definition; namely a bubble can be defined as a situation where the price of shares between 2 periods (adjusted by dividends) grows faster than the interest rate, and continues to so exceed it, for several succeeding periods, only to be followed by repeated periods of growth in the price of shares slower than the interest rate. Such behavior could be characterized as a speculative bubble followed by a crash, inasmuch as in an efficient market the growth in the price of shares (adjusted by dividends) should equal the interest rate. Thus any growth persistently and

systematically beyond that explicable by real economic forces (i.e. the interest rate) would be symptomatic of the formation of a speculative bubble, an interpretation which would be corroborated were it to be followed by a crash (where stock prices grew far less than the interest rate).

Using this concept, a bubble clearly developed in Chile between the 3rd quarter of 1979 and the end of 1980 (see Graph 1A), when the return to stock purchases far exceeded the interest rate for 5 successive quarters, stock prices (the boom) more than doubling in real terms in that brief spell, after which they declined for the next 12 successive quarters (the crash), to 1/3 their peak value. Similarly, in Argentina (see Graph 1B), stock prices grew in real terms well above interest rates for 8 successive quarters from the beginning of 1978 through the beginning of 1980, (during which stock prices grew 4 times in real terms), to be followed by a decline in the next 9 successive quarters (where they fell to 1/6 of their peak value), before they began a recovery.

Another way to present the above phenomenon is to note that, in neither of the 2 countries, during the period of financial liberalization, was the level of stock prices (in real terms) correlated with the interest rate. Indeed, what correlation there was (especially in the case of Chile) seems to have been with M_1 (in real terms) and M_2 (in real terms); positively with the former, as if the excess supply of money was spent far more on stocks (thus raising their prices) than on goods, thus raising stock prices in real terms, and negatively with M_2 (real), as if short term time deposits were good substitutes for stocks.[24] But in neither country was the level of interest rates correlated (negatively) with the level of stock prices, as might have been expected. Nor was there any significant correlation, even in the short run, between quarterly percentage changes in stock prices and variations in the interest rate; and the sign is positive (contrary to the inverse relation that might have been expected).

There are, however, two interesting results (for Chile) related to interest rate variations. Interest rate increases in period t-1 are followed by a rise in stock prices in period t; moreover, stock prices in period t rise when interest rates fall in period t+1.[25] This suggests that interest rates did not affect the level of stock prices in the long run. But in the short run, economic agents behaved as if they thought they did: raising stock prices in time t because they thought interest rates would fall in time t (since they had risen in time t-1), and also raising stock prices in time t if interest rates were expected to fall in time t+1, for they believed that if interest rates had risen in t-1, they would fall in time t of t+1.

Thus stock market behavior bore no correlation to interest rates in the long run--as it formed a speculative bubble--but in the short run, at least in Chile, variations about this level occurred related to what economic agents thought short run interest behavior would be. In any case, a bubble did form in stock prices in both Argentina and Chile. Since stock prices reflect the market value of fixed capital, a non-tradable, all firms and asset holders generally thought themselves far wealthier in real terms (and especially in terms of tradables, given the lag in the exchange rate). Since the value of their assets seemed to rise far more than the value of their foreign debt (at the fixed exchange rate) they thought themselves well off, and so capable of paying high domestic interest rates and/or spending more on consumption (because of their presumed wealth gains). Thus the bubble in asset values led to further divergences from equilibrium in the credit and exchange markets.

F. Consequences: The Bubble Bursts and the Financial Crisis Ensues[26]

For all these reasons, the demand for credit remained strong and domestic interest rates high during the neoconservative experiences (at least up to the maxi-devaluations). But how can an economy function if its productive sectors are paying real interest rates of the order of 20% per year or more? For it is really quite difficult to imagine that there exist a wide set of investment opportunities that allow paying such interest rates, for a prolonged length of time if, in fact, average growth rates are as modest as they were throughout most of the neoconservative period.

Part of the explanation no doubt lies in the fact that not all borrowing took place at domestic rates; much was in dollars at international rates. Thus, at least so long as the lag in the exchange rate persisted, those firms which borrowed abroad paid negative real rates of interest on those loans (see once again Table 6), a situation which obviously could continue only so long as the strong inflow of foreign capital persisted. Once this slowed sharply, as it did just before the maxi-devaluations, the cost of foreign borrowing would prove quite costly. Nevertheless, at least for some time, the inflow of foreign capital at negative real rates of interest for the domestic borrower would permit him to pay high domestic interest rates for those loans contracted within the country.

The bulk of long term credit was thus in foreign currency, for this was at reasonable interest rates, though variable, and of course, it always carried an exchange risk. The fact that the bulk of long term credit was in foreign currency, whereas the bulk of domestic credit was of short term duration largely explains why it was virtually impossible for any but a small part of dollar denominated debt to be transferred into domestic currency debt toward the end of phase II when the risk of a major devaluation loomed large.

In practice, access to foreign credit was neither uniform nor generalized. Rather this proved to be a wholesaler's market, largely limited to big firms or those belonging to the same owners as the banks. Thus, such economic conglomerates would find it much more attractive to buy up assets (from those with less access to foreign or domestic credit) than invest, a fact which tended to raise the value of existing assets all the more. Moreover, the fact that such conglomerates were able to devise mechanisms to invest without significantly drawing on their own limited financial resources, but on that of the community as a whole (through the banking system), gave them great leverage (high debt/capital ratios) which accelerates booms (bubbles) but also accentuates declines (when the bubble bursts).

Indeed, as earlier noted, because of the implicit guarantee against bankruptcy that at least the major banks were thought to have (i.e. that the government would bail them out rather than allow a run on the financial system) and the fact that oftentimes these banks were controlled by parent firms desirous of credit, the banking system itself acquiesced in allowing highly leveraged, pyramidal and triangular lending operations. If all went well (as during upswings) heavy profits would accrue to the most leveraged firms. If not, firms' and banks' losses would be limited to their relatively low equity; the bulk of the loss would of necessity be incurred by depositors or, if, as expected and as largely turned out, deposits were guaranteed by governments to avoid a financial run, most of the loss would be absorbed by the public at large.

The generalized increase in the value of assets, a result both of exuberant expectations as well as of the massive inflow of foreign capital and the formation of economic conglomerates, implied huge capital gains (at least on paper) for all firms, so that they thought themselves capable of paying such exorbitant interest rates. For indeed, about the only thing that did grow at rates at all similar to those of interest rates were asset

values, as we observed, at least for a goodly part of the period from financial liberalization up to the maxi-devaluations of 1981-82.

Thus, the domestic financial bubble--with its upward revaluation of assets together with high interest rates--could continue to maintain itself only if fed with an ever increasing supply of foreign credit attracted, to a large extent, by the highly favorable interest rate differential, itself the result of the lagging exchange rate policy such flows themseves made possible. Thus the financial bubble rested on a growing influx of foreign capital and the corresponding lag in the exchange rate which it made possible, neither of which was sustainable in the long run. The lagged exchange rate could not be maintained indefinitely, because the Southern Cone's production of tradeables was becoming increasingly less competitive. Nor could capital be expected to continue to come in at such high rates, for capital inflows ultimately depend on effective increases in a country's capacity to service such a debt (that is to say, on increased reserves, improved terms of trade, etc.). And this capacity was simply not growing proportionately.

Thus, the financial "bubble" could not continue to expand indefinitely, for there was an ever increasing distance between the fast growing or overblown value (on paper) of assets and the much more modest growth of output and income. Once the growth in the value of assets slowed and the inflows of capital decelerated, high interest rates did the rest. It was toward the end of Phase II, then, that the bubble burst and the process reversed itself: asset prices plummetted, and capital inflows came to a virtual halt. The demand for credit became clearly destabilizing: the higher interest rates rose, the greater financial costs became, and so the greater the demand for credit. The only alternative to demanding more credit was liquidating assets. Yet, under the then prevailing conditions, that was tantamount to declaring bankruptcy, for the capital losses would be enormous even if buyers could be found for assets. The obvious reluctance of firms to incur such capital losses led them to demand credit in the hope that somehow something would turn

up. At this stage, they really had nothing to lose, and much to gain, by postponing such a liquidation of assets. Thus, asset market disequilibrium (an unwillingness to sell at a significant loss) was thrust on the financial market for its resolution, increasing the demand for credit and driving up interest rates even further, the burden of adjustment thus falling on credit markets and the interest rate.

In effect, firms perceived the payment of high interest rates to cover current financial costs as a more attractive alternative than simply taking huge capital losses now. Given such short term horizons it was small wonder that they were willing to "pay" inordinately high interest rates: these averaged 26% (Argentina), 40% (Uruguay), and 58% (Chile) in real terms in the year preceding the maxi-devaluations in each. For analogous reasons, the banks (their creditors) tended to go along with firms and renew such credits. For were the banks to refuse to renew credit and try to make good on the guarantees, they knew that these were now worth but a fraction of the overblown values at which the banks had assessed them when credits had first been provided.

In other cases, many of the debtor firms belonged to the same economic conglomerate as the bank itself. In this way, be it for one or the other reason, the banks tended to go along and postpone the forcible liquidation of assets, maintaining credit lines but at ever higher rates of interest. The consequence of this, naturally enough, was that the solvency of the banks and the financial system as a whole came to be completely jeopardized, for it was overwhelmingly dependent on the financial state of firms whose situation was precarious at best.

But towards the end of phase II (1981-82), when the domestic financial crisis exploded and the contractionary effects of the international recession and the overvalued exchange rates were apparent to all, capital flows fell sharply: 39% in Argentina in 1980; 75% in Chile in 1982; and over 100% in Uruguay in 1982.

It is difficult to exaggerate the adverse impact which such a shift in net capital flows implied. Indeed, once interest and other factor payments are deducted from net capital flows, instead of receiving resources from the rest of the world, the three Southern Cone countries became net exporters of resources in the year they were finally forced to devalue (see Graph 3). The net transfer of resources was negative and of the order of 20 percent of exports in all three countries, after having been strongly positive the year before. Indeed, it was because of such strong capital flows that aggregate demand could be maintained during phase II despite the generally poor terms of trade and the lag in the exchange rate.

Put differently, the shift in net resources transferred in the year of the devaluation was the equivalent of a deterioration in the terms of trade of 25 percent in Argentina, 50 percent in Uruguay, and 80 percent in Chile (see Graph 3 again). In other words, this meant, for example, that instead of Chile's being able to import 50 percent more than the amount given by its export earnings, as in 1981 because of the positive effect of the net transfer of resources, in 1982 because the net transfer of resources was negative, Chile had financing available which allowed it to import but 73 percent of the value of its export earnings. Hence, capital flows were abruptly reduced precisely when they were most necessary (the end of phase II and the beginning of phase III), while they were exaggerated (most of phase II) when they were far from indispensable. Thus, rather than helping smooth the business cycle, capital flows accentuated it, proving to be highly pro-cyclical.

This financial "run" on the part of foreign banks severely aggravated the contractionary effects of the overvalued exchange rate, of the international recession (on export volumes, and terms of trade and interest rates) and of the domestic financial crisis. Moreover, once capital flows were cut back there was no longer any confidence in the sustainability of the exchange policy, for resources (reserves) had finally been depleted

to finance it. Hence, there was no longer any other practical alternative but to abandon the policy of gradual and pre-announced devaluations, which had led to the overvalued exchange rate, and devalue massively.

Given the magnitude of the disequilibria, and the brief time frame in which external accounts had now to be brought into line, adjustment could only be of the worst type--solely of a contractive sort (output reducing) rather than of an expansive sort (output switching). Consequently in the 2 or 3 years which followed, GNP fell some 10% in each of the three countries (as opposed to a reduction of the order of 4% in the rest of the region) and unemployment sharply increased. Moreover, given the severity of the domestic financial crisis, the Central Banks of the three countries were finally obliged to step in and intervene directly or indirectly to support the domestic banking system, renegotiate or write off much of firms' domestic debts, as well as to renegotiate foreign debt, both that without, as well as that with, public sector guarantees.

Finally, notwithstanding the fact that the inflow of foreign capital was sharply curtailed in these years, the level of foreign debt was still extraordinarily high by the end of 1983. The ratio of foreign debt to the value of all exports of goods and services varied from a low of 3.2 in Uruguay to a high of 4.9 in Argentina. This, of course, compared quite unfavorably with the average of 2.6 for the rest of the region. To be sure, the Southern Cone countries had also been amongst the most highly indebted countries of Latin America when the neoconservative experiences began. What is truly remarkable is that they should not have slowed down their indebtedness in the course of eight to ten years of considerably strong export growth and seeming allegiance to the principles of strict financial discipline. That they should still stand out amongst the most indebted countries of the region in 1983 certainly does not speak well of the economic liberalization policies which they pursued, and, in particular, of their policy of financial liberalization. This latter seems to have heightened rather than reduced their dependence on foreign savings and

consequently made them all the more vulnerable to swings in the international economy. For now they had to be prepared to offset unexpected movements in capital accounts as well as in their terms of trade. Financial liberalization only as the level of debt approach more modest proportions might have given them more degrees of freedom with which to cope with the external disequilibrium they faced in later years. Instead, rapid financial liberalization, in the face of an already unduly high level of debt and in the presence of major domestic disequilibria, as evidenced by abnormally high interest rates, added a further and critical element which would serve to accentuate rather than attenuate unexpected movements in their external accounts. Consequently, rather than adding degrees of freedom, they lost degrees of freedom. Adjustment was thus largely forced upon them (maxi-devaluation plus severe recession) rather than being a policy which they deliberately chose. The overindebtedness of phase II thus eventually led to the capital "flight" and overadjustment of phase III.

G. Conclusions, Theoretical Implications and Policy Lessons

I. There is no doubt that at the beginning of the neoconservative experiences, the domestic capital market was quite repressed and underdeveloped. Nevertheless, the profound changes which financial liberalization and opening up brought about did not translate themselves, despite intentions, into systematically higher savings nor clearly improved resource allocation. Indeed, the three experiences came to a close with their financial systems in a shambles.

2. The principal failing seems to have been in the persistently high real rate of interest throughout almost all of the neoconservative period, a rate of interest which far exceeded the rate of growth of output or any reasonable rate of return on productive assets. Real interest rates of the order of 2-3% per month, as was the case in all three

countries during a good part of the neoconservative period, cannot be paid systematically without jeopardizing the solvency of firms and ultimately of the financial system itself. The bursting of the financial bubble was, thus, inevitable. Unlike "normal, well behaved" markets where divergences from equilibirum automatically set in motion forces to restore said equilibrium, deviations from equilibrium in financial markets may lead to even further divergences, if certain minimum thresholds of confidence in the ability to service such debt are not met. Once such confidence is lost, incentives are set in motion which may lead to creditors demanding more credit to postpone insolvency and to banks acquiescing for fear of having to take losses which may exceed their own reserves. In such conditions, divergences from equilibrium (high interest rates) may lead to behavior which further accentuates such divergences (raises interest rates further). The system comes to rest then, only once the "bubble" bursts, and a major financial crisis erupts, as was the case in the Southern Cone.

3. The real significance of high interest rates, even in the early stages, was incorrectly interpreted by the authorities. Rather than see it as a sign that something serious was amiss in the workings of the economy--that it was a sign of a possibly major disequilibrium--they tended to rationalize high interest rates away, considering that inasmuch as it was the rate that equalized the supply and demand for credit, it was by definition the equilibrium rate. This, of course, was a major theoretical error: a confusion of the market clearing rate of interest with the equilibrium rate of interest. For the equilibrium rate of interest is that which equalizes supply and demand when <u>all other markets</u> (asset, foreign exchange, labor and good markets) are also in equilibrium. If these other markets are not in equilibrium, the rate of interest which then clears the credit market is not the equilibrium rate of interest; rather it is the rate required to absorb the disequilibrium of other markets. Such was the case during the bulk of the neoconservative period. The high rate of interest was a reflection of disequilibria in other

markets: at different points of time, it was a problem of the market for foreign exchange (due to the overvaluation of the exchange rate and the expectations of devaluation); or of the market for goods (inflated prices) or of assets (the bubble). As a result, a good part of the disequilibria in these markets was thrust on the credit market for its resolution, inasmuch as this is a relatively fast, price-adjusting sector.[27] This analysis thus confirms the views of those who insisted all along that such unusually high real interest rates were indicative of a basic disequilibrium in the economy, and rejects the views of those who argued in somewhat "panglossian" fashion that if the market so dictates, then these rates are the correct ones. It was, thus, a grave policy error to have liberalized financial markets so rapidly, and to such an extent, precisely at a time when, because of the stabilization policy, important disequilibria still remained to be resolved in other critical sectors of the economy.

4. Domestic and international interest rates failed to converge, much less equalize, because credit markets have important peculiarities. Credit cannot be efficiently rationed solely by price (rate of interest) because credit is a future commitment. Hence, the higher its price, the lesser is the credibility in the debtor's capacity to meet this commitment. Thus, in practice, credit must be rationed both by quantity as well as price, which means that capital inflows will be sensitive not only to interest rate differentials, but to the amount demanded. Inasmuch as all of these other markets were transferring their disequilibria onto the credit market for resolution, the amount of credit, and so the capital inflows required in order to equalize domestic and international interest rates, was enormous, far in excess of what would have been demanded were these other markets to have been in equilibrium. It is not strange, then, that international banks were not willing to lend that amount (much as they did lend) thus preventing the "law of one price" from fully operating in the financial market. Indeed it is now quite clear ex post, with the benefit

of hindsight, that more foreign capital came in than was in fact prudent from a long run perspective.

5. The fact that credit, especially foreign credit, was rationed by quantity and not just by price, gave an additional advantage to those firms which belonged to economic conglomerates, or were themselves large, or were dedicated to exports, for they had much better access to this rationed, but cheaper, foreign credit. Those firms with accesss to international capital markets (or related to banks with such access) had the privilege of bringing in capital to the country at negative real rates of interest (in terms of domestic currency) for a long period of time and then relending it, in domestic currency, for short periods of time and at high real rates of interest, or using it to buy assets at good prices (to the extent that other asset holders only had access to credit at high interest rates), obtaining in this way substantial profits.[28]

Such privileged access for some was not due to legal discrimination but was a reflection of reality as such. Capital markets were (and still are) segmented. International capital markets are largely "wholesale markets" with access naturally restricted in practice to the principal firms and banks of a country (or to firms linked to such banks or to the export sector). Thus, most small and medium sized firms, or those in the production of non-tradables (such as construction) or those whose production is geared primarily for the domestic market, found themselves restricted largely to the domestic credit market to satisfy their needs (be it in domestic or foreign currency) but paying high interest and/or intermediation charges.

In short, much as liberalization stimulated financial intermediation, the capital market remained largely segmented and underdeveloped, especially insofar as long term credit is concerned. For this reason, too, did it prove so difficult to raise savings and improve resource allocation. It should have been foreseen that, because of the inevitable rationing of credit, access to foreign credit would have been differentially available to the

different firms. This would have provided additional justification for introducing some measure of direct intervention in this market to control the rationing of credit and to redress this type of segmentation.

To be sure, to borrow in dollars was to run the risk of an unexpected devaluation, a risk which was to prove all too real in phase III when each was forced to realize a maxi-devaluation. Nevertheless, inasmuch as this risk was seen as rather remote in the beginning of phase II (and it was), the incentive to borrow abroad was enormous, almost irresistible. So that by the time the accumulated overvaluation had become unsustainable and the exchange risk was high, the accumulated stock of foreign debt was quite large. Hence, the impact of the very much needed maxi-devaluations on debtors in foreign currency was devastating, much of the gains of previous years having been wiped out.

6. The new capital market was almost exclusively limited to short run instruments. It would have been wiser in retrospect to have inverted the order, first generating long run instruments (indexed) for various years duration and with good interest rates, and paying low interest rates to depositors for short run money. For it could have been foreseen that, were the market to be left to itself and given such a large need for credit and an environment of uncertainty and strong inflation, the market would naturally tend to create short run instruments and at high interest rates. Once such short run instruments had established themselves, it would be very difficult for long run ones to emerge, especially bonds, for these require stability and predictability, in other words, that other markets be at or close to equilibrium, which, of course, they were not.

7. There were important differences among the three countries as far as the legal controls and limits on the entry and exit of capital are concerned, as well as in the timing and sequence of financial liberalization relative to trade opening up. Yet such differences do not seem to have been of decisive importance in explaining differences in the rate of capital inflows (strongest in Chile despite its greater controls), nor in explaining the failure

of interest rate convergence to take place (it failed to materialize by and large in all three countries). More important were the factors that I have pointed out, related to the stabilization policy and to the demand for credit.

Also overlooked by most policymakers was the fact that "financial repression" not only kept interest rates artificially low but, by rationing credit, necessarily repressed the demand for certain types of credit (generally that for consumption). It was thus a serious oversimplification of neoconservative theorists to focus exclusively on the favorable effects financial liberalization might have on effective savings and investment (via higher interest rates) and neglect the unfavorable effect it could have on these by releasing the pent up demand for consumption.[29]

8. None of this is to deny that financial repression has its costs, and that a move towards financial liberalization was in order. In retrospect, however, it seems clear that:

(a) Financial liberalization should not take place until after price stabilization has been achieved or is well underway. The simultaneous pursuit of both, jeopardizes the success of each, all the more so given the financial sector's sensitivity to disequilibria in other sectors, and its proneness to bubbles.

(b) Given the clear segmentation between international and domestic capital markets, and the further segmentation within the domestic capital market, financial liberalization should be pursued only as such segmentation is overcome or neutralized. Otherwise, the government must itself intermediate funds between the international and domestic markets, so as to control its flow, its cost, and determine who shall have access. Until segmentation be eliminated, some form of credit allocation need be made, especially to assure adequate access to activities or sectors insufficiently treated (small and medium size firms vs. large firms, agricultural and construction vs. mining and manufacturing).

(c) Efforts should be made to assure the formation and operation of long term capital markets before financial liberalization takes place, otherwise one risks moving most capital to the short term and distorting savings and investment behavior.

(d) Given the economies of scale in finance and the temptations to form economic groups based on banks, and the subsequent leverage and distortions that may ensue, banking regulations need be framed so as to limit bank-industry ownership links, to assure a wide distribution of ownership and control of banks, and to limit the amount of loans to any one single economic group or sector, especially if it be related to the bank itself.

(e) Upon liberalizing interest rates, efforts must be made to ensure that alternative mechanisms (e.g. excise taxes) are designed so as not to favor inadvertently pent up consumption demand, and so facilitate the achievement of the desired aim of raising ex-post national savings and investment.

Table 1A

SOUTHERN CONE: ANNUAL GROWTH RATE OF PER CAPITA GROSS DOMESTIC PRODUCT

Country	Historical Rate		Neoconservative Period		Phase I		Phase II		Phase III a/	
Argentina	1950-1975:	1.7	1976-1983:	-1.3	1976-1978:	-0.9	1979-1980:	2.4	1981-1983:	-4.3
Chile	1950-1973:	1.5	1974-1983:	-0.6	1974-1976:	-4.7	1977-1981:	6.2	1982-1983:	-9.1
Uruguay	1950-1974:	0.6	1975-1983:	1.2	1975-1978:	3.6	1979-1980:	5.3	1981-1983:	-4.8
Latin America (Excludes Southern Cone)	1950-1974:	3.4	1975-1983:	1.0	1975-1978:	2.9	1979-1980:	3.8	1981-1983:	-2.7

Table 1B

SHARE OF NATIONAL SAVINGS IN GROSS NATIONAL PRODUCT

Argentina	1966-1975:	19.9	1976-1983:	18.9	1976-1978:	23.7	1979-1980:	20.5	1981-1983:	15.0
Chile	1964-1973:	17.0	1974-1983:	12.2	1974-1976:	16.4	1977-1981:	12.0	1982-1983:	3.8
Uruguay	1965-1974:	10.4	1975-1983:	13.2	1975-1978:	12.4	1979-1980:	16.0	1981-1983:	13.1

Table 1C

SHARE OF INVESTMENT IN GROSS NATIONAL PRODUCT

Argentina	1966-1975:	20.0	1976-1983:	20.6	1976-1978:	22.2	1979-1980:	22.9	1981-1983:	17.4
Chile	1964-1973:	19.7	1974-1983:	17.3	1974-1976:	17.8	1977-1980:	19.7	1982-1983:	10.4
Uruguay	1965-1974:	10.2	1975-1983:	15.8	1975-1978:	14.5	1979-1980:	20.6	1981-1983:	14.

Source: ECLA, on the basis of Official Data and Central Bank of Chile.

a/ Year 1983: preliminary figures.

Table 2

SOUTHERN CONE: SAVINGS COEFFICIENTS a/

	Argentina					Chile				Uruguay			
	GDS/GNP	GNS/GNP	FS/GNP	GNP fin/GNP		GDS/GNP	GNS/GNP	FS/GNP	GNP fin/GNP	GDS/GNP	GNS/GNP	FS/GNP	GNP fin/GNP
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1970	22.0	21.5	0.5	4.3		23.4	21.6	1.7	11.5	11.4	9.6	1.8	5.8
1971	25.5	24.3	1.2	4.3		20.8	17.8	2.9	11.1	11.2	8.9	2.3	5.9
1972	25.2	24.6	0.6	4.2		15.2	10.4	4.8	10.7	9.6	11.1	-1.5	6.0
1973	22.7	24.6	-1.9	4.1		14.3	9.5	4.8	10.1	9.1	9.6	-0.5	6.0
1974	22.4	22.7	-0.3	3.9		25.8	25.3	0.5	12.0	9.1	5.7	3.4	5.7
1975	22.1	19.4	2.7	4.3		14.0	8.5	5.6	13.8	10.9	6.5	4.4	5.5
1976	23.6	24.9	-1.3	3.9		13.6	15.4	-1.9	13.8	12.7	11.0	1.7	5.3
1977	26.2	23.9	2.3	4.3		14.4	10.7	3.7	13.4	14.8	11.6	3.2	5.2
1978	24.3	27.5	-3.2		8.0	16.5	11.6	4.8	13.7	16.0	13.8	2.2	9.5
1979	25.7	24.9	0.8		8.0	19.6	13.7	5.9	14.4	18.7	13.7	5.0	...
1980	26.6	22.9	4.4		9.0	23.9	17.9	6.0	15.2	20.1	14.5	5.6	...
1981	22.5	18.0	4.5		9.1	23.9	11.3	12.6	15.9	16.8	13.5	3.3	...
1982	19.0	16.4	2.6		8.5	9.6	1.0	8.6	17.8	15.5	13.5	2.0	...
1983b/	16.2	13.5	2.7		7.6	11.2	6.5	4.7	16.5	10.5	10.0	0.5	...

Source: ECLA, on the basis of official figures. Chile, Banco Central de Chile, Indicadores económicos y sociales, 1960-1982.

Note: GNP = Gross National Product.
GDS = Gross Domestic Savings.
GNS = Gross National Savings = GDS-FS.
FS = Foreign Savings.
GNP fin = Gross National Product generated by financial institutions, insurance, real estate and indirect services to firms.

a/: Coefficients are calculated on the basis of the following information:
cols. (1) and (4) = figures of the country in national currency;
cols. (3) and (5) = in dollars
col. (2) = col. (1) - col. (3).
For the foreign savings, the figures used are the deficit in the current account and product in dollars of 1970, converted in current dollar by means of the implicit deflator of the Gross National Product of the United States.

b/: Preliminary figures.

Table 3

SOUTHERN CONE: MONETARY SYSTEM INDICATORS AND CREDIT TO THE PRIVATE SECTOR

	Argentina						Chile						Uruguay					
	Credit to the Private Sector		Credit / GNP	M1 / GNP	Quasi Money / GNP	M2 / GNP	Credit to the Private Sector		Credit / GNP	M1 / GNP	Quasi Money / GNP	M2 / GNP	Credit to the Private Sector		Credit / GNP	M1 / GNP	Quasi Money / GNP	M2 / GNP
	Nominal	Real					Nominal	Real					Nominal	Real				
	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)
1970	2.0	24.1	22.7	17.0	13.6	30.7	0.01	1.94	7.1	10.2	7.1	17.3	83	1,150	13.6	14.4	6.9	21.2
1971	2.9	25.9	21.8	15.0	11.3	26.3	0.01	2.80	7.9	12.8	4.2	17.0	123	1,353	16.7	18.3	8.4	26.8
1972	4.5	25.3	20.5	15.0	9.5	24.5	0.02	2.86	8.5	13.7	3.8	17.5	253	1,602	20.4	16.0	9.5	25.5
1973	7.4	25.8	20.3	18.4	11.2	29.6	0.09	2.37	7.0	10.6	2.3	12.9	414	1,331	16.3	14.1	7.2	21.3
1974	11.8	33.3	24.5	23.7	13.1	36.7	0.58	2.71	5.9	5.3	1.1	6.4	841	1,525	18.3	12.7	7.3	20.0
1975	29.9	29.9	20.5	23.4	5.4	28.9	3.07	3.07	8.3	4.5	2.6	7.1	1,596	1,596	19.1	11.5	9.6	21.1
1976	121.1	22.3	15.1	16.9	7.2	24.1	13.11	4.20	10.2	3.9	3.7	7.6	2,706	1,797	20.8	12.3	14.4	26.7
1977	433.4	28.9	20.8	16.2	15.3	31.5	49.65	8.29	17.3	4.5	6.0	10.5	4,919	2,064	24.7	11.1	20.0	31.1
1978	1,218.0	29.5	23.7	15.3	18.6	33.9	114.43	13.65	23.5	4.8	7.7	12.5	8,678	2,519	28.4	13.0	25.3	38.3
1979	4,002.3	37.3	28.8	13.3	22.6	36.0	200.90	17.96	26.0	4.9	9.7	14.6	19,109	3,325	34.7	12.3	27.0	39.3
1980	8,344.9	38.7	29.6	12.8	21.2	34.0	379.25	25.09	35.2	5.5	10.7	16.2	34,332	3,654	36.5	10.6	29.1	39.8
1981	22,197.0	50.4	40.7	11.3	22.8	34.1	546.29	30.20	44.5	5.0	14.6	19.6	48,267	3,833	38.2	8.4	35.2	43.6
1982	68,928.0	59.2	43.2	10.2	18.6	28.8	879.30	44.21	71.6	6.6	25.3	31.9	95,255	6,355	74.2	9.2	64.3	73.5
1983a/	290,522.0	56.2	33.2	8.6	17.7	26.3	956.06	37.79	63.4	6.8	20.5	27.3	111,380	4,980	59.6	7.0	40.5	47.5

Source: ECLA, on the basis of the International Monetary Fund, International Financial Statistics, 1982 Yearbook and Volumen 37, No. 8, August 1984. Credit to the private sector of the monetary system, line 32 D; money, line 34; quasi money, line 35. Banco Central de Chile, Indicadores Económicos y Sociales, 1960-1982.

Note: Nominal Credit, Chile = billions of current pesos;
Argentina and Uruguay = millions of current pesos.
Real Credit, pesos of 1975.
GNP = Gross National Product.
M_1 = Bills and coins in circulation plus demand deposits.
M_2 = Quasi Money + M_1.
Quasi Money = Time and savings deposits.

a/: Preliminary figures.

Table 4

GLOBAL EXTERNAL DEBT OF ARGENTINA, CHILE AND URUGUAY
(In Billions of Dollars)

	Argentina						Chile						Uruguay					
	Private	Public	Total	NET a/	D/GNP b/	D/EXP b/	Private	Public	Total	NET a/	D/GNP b/	D/EXP b/	Private	Public	Total	NET a/	D/GNP b/	D/EXP b/
1970	1.8	2.1	3.9	3.1	13.1	1.85	0.6	2.2	2.8	2.4	30.9	2.24	0.19	0.33	0.52	0.43	16.9	1.79
1971	2.0	2.5	4.5	4.1	13.9	2.14	0.5	2.3	2.8	2.6	27.0	2.48	0.22	0.39	0.61	0.52	19.4	2.44
1972	2.7	3.1	5.8	5.2	16.8	2.52	0.4	2.6	3.0	2.9	28.2	3.05	0.23	0.54	0.77	0.68	23.9	2.19
1973	2.8	3.4	6.2	4.8	16.5	1.68	0.7	2.9	3.6	3.5	33.8	2.46	0.18	0.54	0.72	0.64	20.5	1.76
1974	3.4	4.6	8.0	6.6	18.4	1.74	0.8	3.6	4.4	4.3	37.7	1.89	0.22	0.74	0.96	0.98	24.3	1.92
1975	3.9	4.0	7.9	7.3	16.8	2.26	1.1	3.6	4.7	4.8	42.3	2.56	0.17	0.86	1.03	1.10	22.8	1.87
1976	3.1	5.2	8.3	6.5	16.8	1.80	1.0	3.5	4.5	4.4	37.2	1.86	0.17	0.96	1.13	1.02	22.8	1.62
1977	3.6	6.0	9.7	5.6	17.4	1.47	1.3	3.9	5.2	4.8	36.9	2.00	0.29	1.03	1.32	0.98	24.7	1.63
1978	4.1	8.4	12.5	6.5	21.6	1.67	2.0	4.7	6.7	5.4	40.9	2.28	0.33	0.91	1.24	0.63	20.1	1.36
1979	9.1	10.0	19.0	8.5	28.3	2.07	2.4	5.1	8.5	5.9	44.1	1.84	0.67	1.01	1.68	0.99	22.9	1.41
1980	12.7	14.5	27.2	19.5	36.5	2.75	6.0	5.1	11.1	6.5	49.0	1.86	0.97	1.16	2.13	1.32	25.6	1.40
1981	15.6	20.0	35.7	31.8	46.6	3.31	10.1	5.5	15.6	11.0	59.7	3.10	1.66	1.47	3.13	2.29	34.7	1.83
1982	15.0	28.6	43.6	40.5	58.0	4.84	12.0	5.2	17.2	14.5	72.0	3.70	1.55	2.71	4.26	3.92	49.0	2.77
1983c/	...	...	45.5	42.1	56.0	4.85	10.5	7.0	17.5	15.5	71.0	3.79	1.31	3.20	4.51	4.11	53.0	3.26

Source: Argentina: Banco Central, Memoria anual.
Chile: 1970 - 1976, Banco Central, Deuda externa 1981, Santiago, julio 1982; 1977 - 1981. ODEPLAN, Informe Económico 1982, Santiago, mayo 1983 and 1982 and 1983: Informe del Ministro de Hacienda, 2 julio 1984.
Uruguay: Banco Central, Indicadores de la actividad economica y financiera.

Note: Figures for GNP, available in 1970 dollars, were converted to current dollars using the implicit deflator of the Gross National Product of the United States.
D = Total Global Debt;
GNP = Gross National Product;
EXP = Exports of Goods and Services.

a/: Global external debt minus net international reserves.

b/: Percentages.

c/: Preliminary figures.

Table 5

SOUTHERN CONE: SOME INDICATORS OF CAPITAL INFLOWS a/

	Argentina				Chile				Uruguay			
	K	K/X	LTK/X	CTK/X	K	K/X	LTK/X	CTK/X	K	K/X	LTK/X	CTK/X
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1973	147	4.0	-0.2	0.6	387	26.5	-0.1	12.8	9	2.2	-4.9	5.4
1974	-42	-0.9	-1.3	-1.4	211	9.1	0.9	-4.0	96	19.2	1.2	21.0
1975	205	5.9	-1.2	10.7	211	11.5	-4.1	7.7	136	24.7	3.1	5.6
1976	261	5.7	-1.7	-7.7	200	8.3	1.2	2.8	156	22.4	5.7	11.8
1977	556	8.4	8.1	1.7	737	28.3	7.7	21.4	351	43.4	1.7	25.1
1978	302	4.0	28.1	-16.6	1,857	63.1	39.6	15.3	262	28.7	-0.8	-5.9
1979	4,760	51.9	29.1	14.6	2,261	48.9	30.5	-10.2	453	37.9	1.8	7.9
1980	2,176	22.0	31.1	-20.4	3,344	56.0	38.0	16.8	811	53.1	0.9	20.4
1981	1,520	14.0	63.9	-76.0	5,008	90.9	69.7	20.1	494	29.5	2.8	19.1
1982	1,809	20.1	5.8	-18.9	1,096	21.8	24.5	-11.8	-182	-25.9	4.5	33.3
1983b/	1,570	16.2	...	...	693	15.1	1.3	-5.4	111	8.0	...	...

Source: ECLA, on the basis of information of the International Monetary Fund, Balance of Payments.

Note: K = Balance in the capital account of the balance of payments.
LTK = Long term private capital.
CTK = Short term private capital.
X = Exports of Goods and Services.

a/: Column (1) in millions of dollars, columns (2), (3) and (4) percentages.

b/: Preliminary figures.

Table 6

INTEREST RATES

	Lending Rate			Deposit Rate		Domestic Debtor		Foreign Creditor
	Nominal	Real a/	Real b/	Nominal	Real a/	$i_r(1)$	$i_r(2)$	$i_r(3)$
Argentina								
1971	17.73	-15.4	-20.55	12.98	-18.78	-4.2	-10.1	-9.6
1972	25.58	-23.5	-28.64	19.60	-27.14	-35.8	-40.1	19.6
1973	22.54	-14.8	-6.29	19.27	-17.04	-24.0	-16.5	19.3
1974	22.67	-12.4	-9.89	16.73	-16.66	-20.8	-18.5	16.7
1975	40.89	-67.6	-68.57	20.28	-72.36	199.5	190.7	-90.1
1976	70.02	-62.0	-65.04	56.02	-65.14	6.3	-2.1	-65.4
1977c/	79.18	-23.3	-22.12	60.50	-31.30	135.9	139.6	-69.1
1977d/	236.35	15.9	26.70	171.89	-6.34	-14.5	-6.5	16.1
1978	172.35	0.9	11.92	130.41	-14.61	-32.3	-25.0	37.2
1979	134.58	-2.2	2.58	117.14	-9.43	-24.7	-21.1	34.6
1980	98.26	5.7	25.91	79.41	-4.38	-25.0	-10.6	45.7
1981	175.90	19.3	-1.50	152.80	9.30	83.2	51.2	-30.5
1982	213.50	11.4	-13.50	148.75	-19.70	145.4	84.8	-62.9
1983e/	...	...	...	272.56	-30.19	-1.4	2.9	-22.2
Chile								
1975c/	331.70	-40.8	-45.70	303.50	-44.9	-31.1	-35.0	132.2
1975d/	498.30	127.1	84.00	234.50	25.2	11.4	-0.8	96.8
1976	250.70	17.7	39.40	197.90	0.0	-27.4	-14.0	45.4
1977	156.30	39.1	55.30	93.70	5.2	-7.6	3.1	20.7
1978	85.30	35.1	33.40	62.80	18.7	-4.0	-5.0	34.1
1979	62.00	16.6	2.30	45.00	4.4	-7.4	-18.7	26.2
1980	46.90	12.0	14.70	37.40	4.7	-12.8	-10.7	37.4
1981	51.90	38.7	58.10	40.80	28.6	6.4	21.2	40.8
1982	63.10	35.1	16.80	47.80	22.5	77.0	53.1	-21.5
1983e/	42.70	15.9	14.00	27.90	3.9	6.3	4.5	7.3
Uruguay								
1977	65.70	5.3	14.40	38.30	-12.1	-8.8	-1.0	2.2
1978	73.90	19.1	9.00	47.20	0.8	-2.9	-11.2	12.9
1979	65.50	-9.6	-6.50	43.40	-21.7	-26.6	-24.1	19.5
1980	66.60	16.7	29.50	50.10	5.1	-5.2	5.3	26.8
1981	60.40	23.9	39.60	46.10	12.8	4.2	17.3	26.3
1982	61.50	34.0	21.00	53.30	27.2	174.1	147.4	-30.0
1983e/	94.40	28.3	11.90	70.10	12.3	-7.2	-19.1	32.8

Source: Central Bank of Argentina, Chile and Uruguay. International Monetary Fund, International Financial Statistics.

$$i_r(1) = \left[\frac{(1 + \text{Libor})\ (1 + \text{Nominal Devaluation})}{(1 + \text{Consumer Price Variations})}\right] - 1;$$

$$i_r(2) = \left[\frac{(1 + \text{Libor})\ (1 + \text{Nominal Devaluation})}{(1 + \text{Wholesale Price Variations})}\right] - 1;$$

$$i_r(3) = \left[\frac{(1 + \text{Nominal Deposit Rate})}{(1 + \text{Nominal Devaluation})}\right] - 1$$

Note: Variations are from December to December.

a/: Deflated by Consumer Price Index.

b/: Deflated by Wholesale Price Index.

c/: Before the liberalization of interest rates (1st semester).

d/: After the liberalization of interest rates (2nd semester).

e/: Preliminary figures.

Table 7

INTEREST RATE DIFFERENTIALS (SPREADS)

	Argentina Spread			Chile Spread				Uruguay Spread		
	(1)	(2)	(3)	(1)	(1#)	(2)	(3)	(1)	(2)	(3)
1971	4.2	-15.2	-11.6							
1972	5.0	13.4	19.1							
1973	2.7	9.2	12.2							
1974	5.1	5.2	10.5							
1975	17.1	-90.8	-89.2	7.0a/		117.0	132.2			
1975				78.9b/	44	83.9	228.9			
1976	9.0	-67.2	-64.3	17.8	16	37.7	62.1			
1977	11.6a/	-70.9	-67.5	32.3	28	13.9	50.6	19.8	-3.6	15.5
1977	23.7b/	9.5	35.5							
1978	18.2	26.2	49.2	13.8	13	23.3	40.4	18.1	3.8	22.7
1979	8.0	20.2	29.9	11.7	9	12.7	25.9	15.4	6.7	23.2
1980	10.5	27.4	40.8	6.9	6	20.1	28.5	11.0	10.9	23.0
1981	9.1	-40.3	-34.9	7.9		20.8	30.4	9.8	8.4	19.0
1982	26.0	-67.3	-58.8	10.7		-30.8	-23.7	5.1	-56.3	-54.0
1983c/	...	-85.2	...	11.6		-18.0	9.0	14.3	-5.6	38.2

Source: Table VIII-1: For spread (1#), R. Ffrench-Davis and J. P. Arellano, "Apertura Financiera Externa, La experiencia chilena en 1973-1980", in Estudios CIEPLAN No. 5, July 1981.

Note: Spread (1) = Differences between loan rate and deposit rate.
Spread (1#) = Includes the cost of legal reserve requirements.
Spread (2) = Difference between interest in US$ received by the foreign creditor that lends in the internal market and LIBOR rate; that is:

$$\left[\frac{(1 + \text{Deposit Rate}) \,/\, (1 + \text{Variation in R})}{(1 + \text{LIBOR})}\right] - 1;$$

Spread (3) = Difference between the interest paid by the domestic debtor who borrows in the internal market and the interest paid if he borrows in foreign markets; that is:

$$\left[\frac{(1 + \text{Lending Rate})}{(1 + \text{LIBOR})\,(1 + \text{Variation in R})}\right] - 1$$

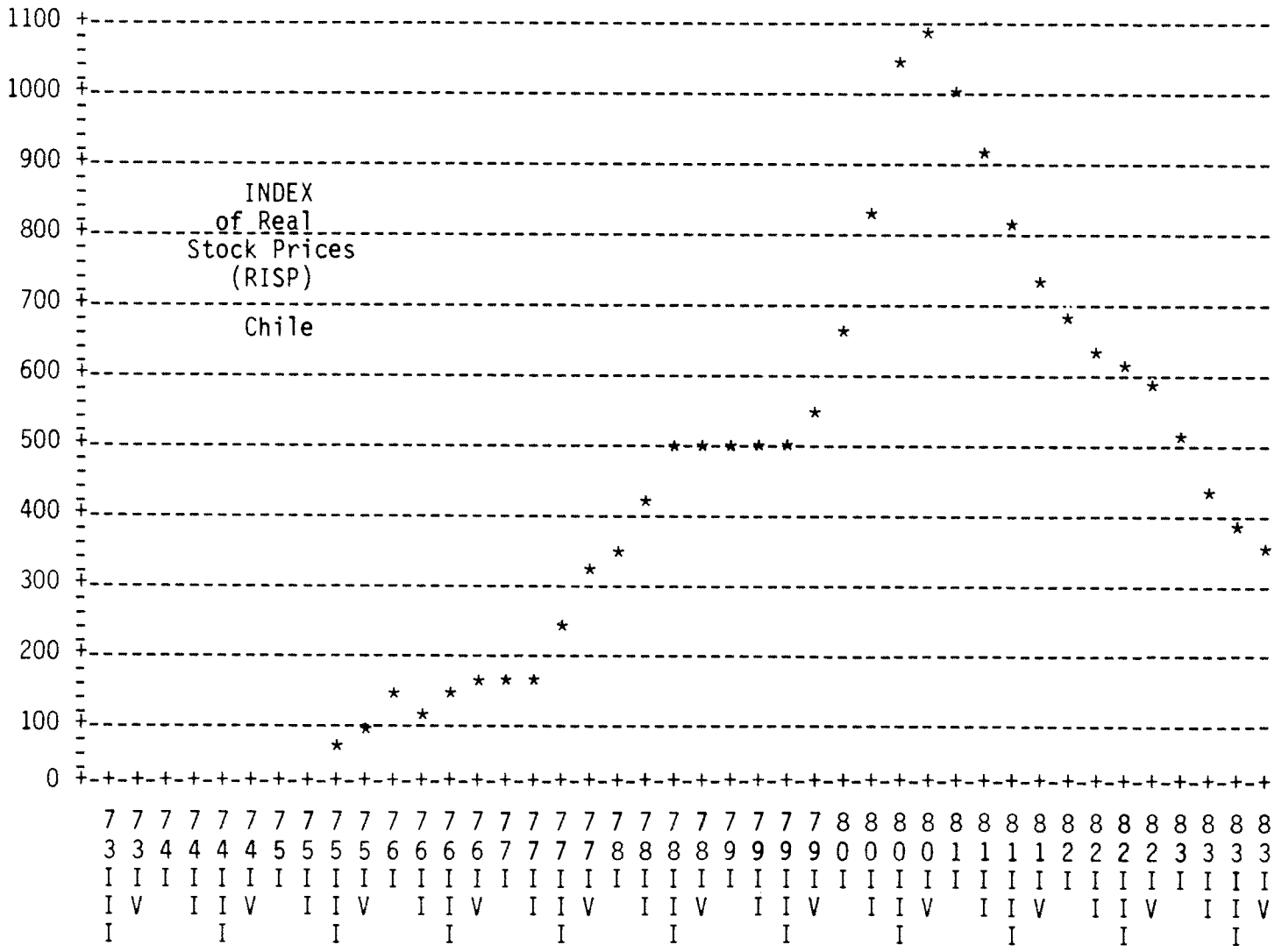
a/: January - June.

b/: July - December.

c/: Preliminary figures.

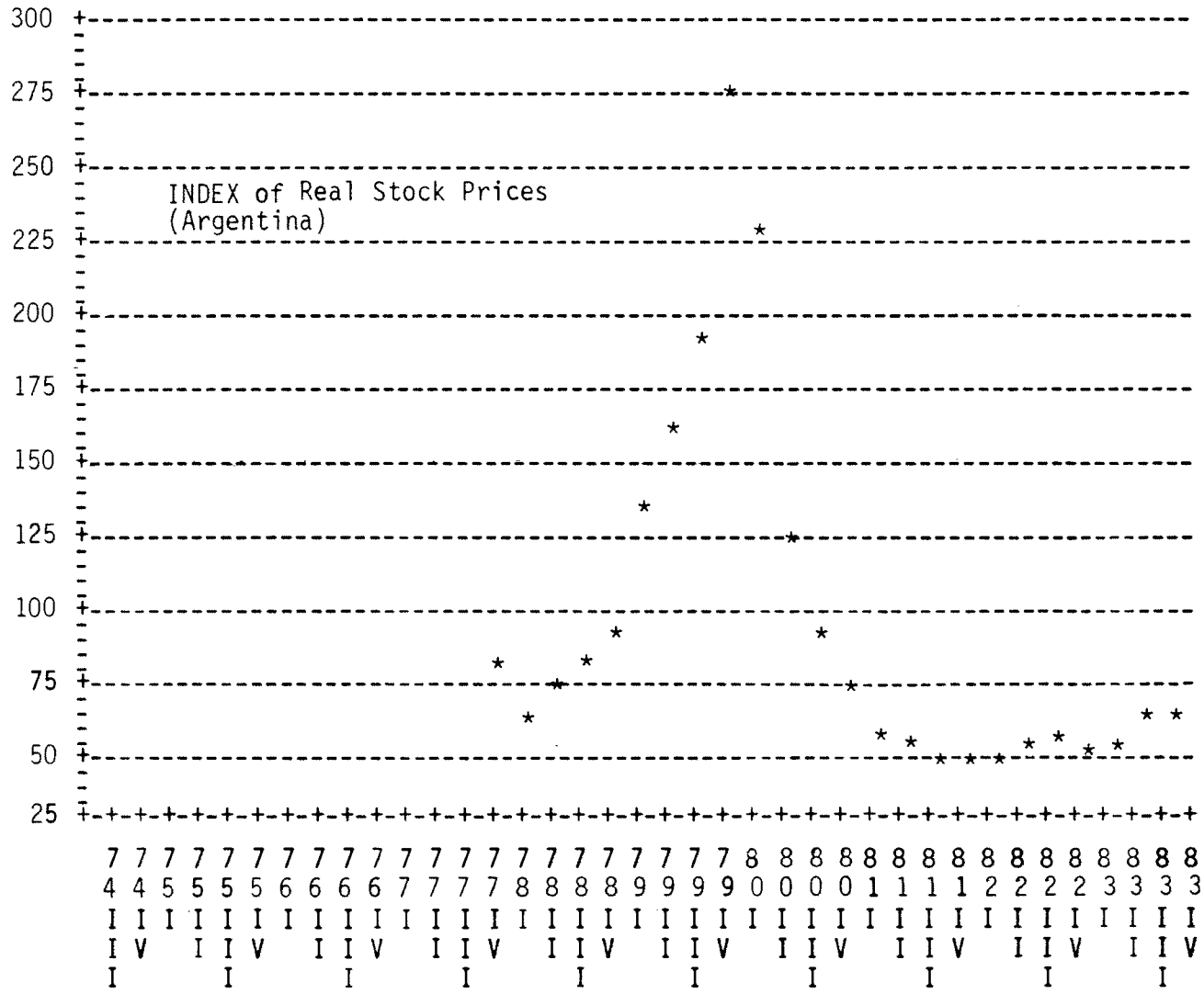
Graph 1A (Chile)

PLOT OF RISP *QUARTERS SYMBOL USED IS *



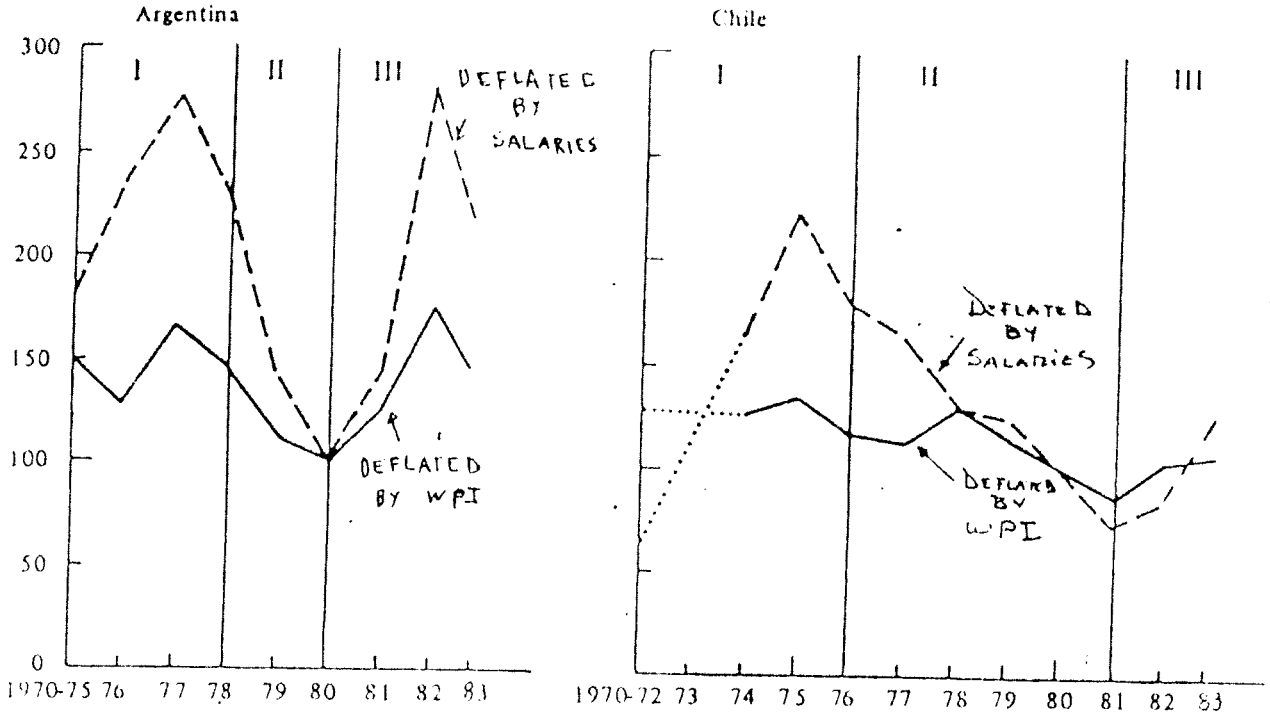
Graph 1B (Argentina)

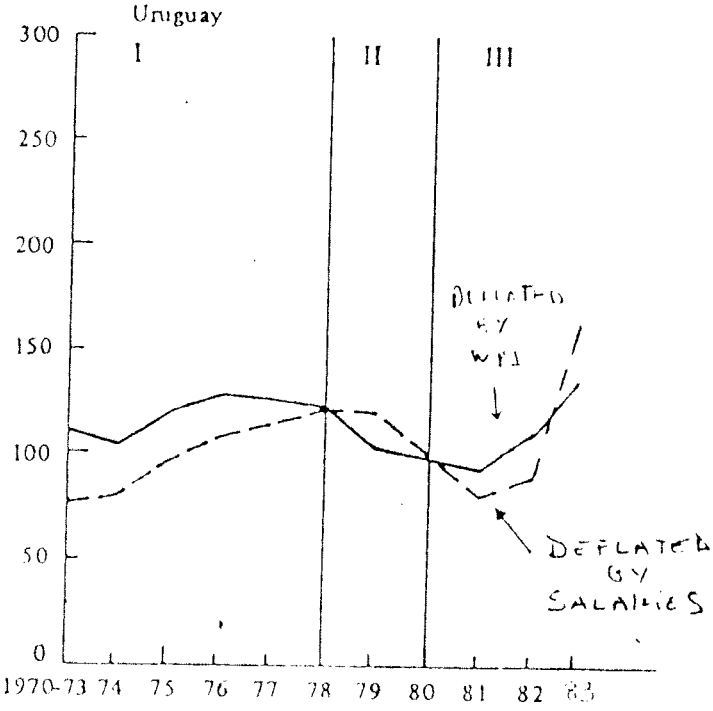
QUARTERLY FINANCIAL-MARKET DATA FOR ARGENTINA, 1974-1983
CALCULATED FROM SIX-MONTH MOVING AVERAGES
PLOT OF RISP *QUARTERS SYMBOL USED IS *



GRAPH 2

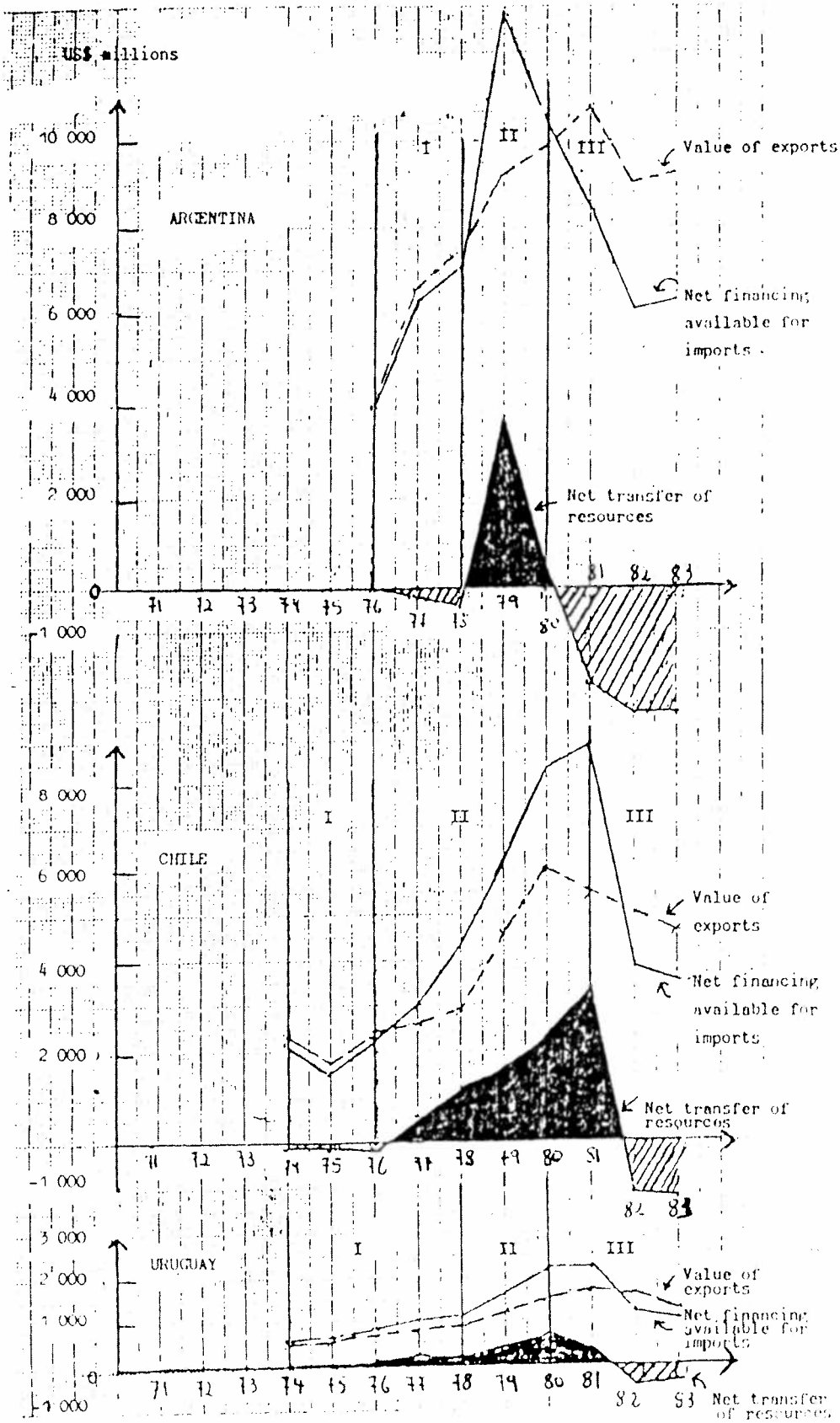
REAL EFFECTIVE EXCHANGE RATE





GRAPH 3

48 EXPORTS, NET TRANSFER OF RESOURCES AND FINANCING AVAILABLE FOR IMPORTS(NET)



END NOTES

[1] Probably the most notable exponent of this position is R. McKinnon. See his writings, Money & Capital in Economic Development (Brookings, 1973) and "Represion financiera y el problema de la liberalización dentro de los países menos desarrolados", in Cuadernos de Economía No. 47, April 1979.

[2] See for example, V. Galbis "Financial Intermediation and Economic Growth in Less Developed Countries: A Theoretical Approach" in Journal of Development Studies, January 1977.

[3] See R. McKinnon, "Represión financiera y el problema de la liberalización..." op.cit.

[4] See Chapter II of McKinnon's book, Money and Development, op.cit., and J. Frenkel, "The Order of Economic Liberalization: Lessons from Chile and Argentina," in K. Brunner and A. Meltzer (eds.), Economic Policy in a Changing World (forthcoming).

[5] For an extensive and detailed treatment of the process of financial liberalization in Argentina, Chile, and Uruguay, see R. Frenkel, "El desarrollo reciente del mercado de capitales en Argentina", in Desarrollo Económico No. 78, July-September 1980; J. Sourrouille y J. Lucangeli, Política económica y proceso de desarrollo: La experiencia Argentina entre 1976 y 1981 (CEPAL, 1983); R. Ffrench-Davis y J.P. Arellano, "Apertura financiera externa: La experiencia chilena en 1973-1980," in Estudios CIEPLAN, No. 5 July 1981; and I. Wonsewer y D. Saráchaga, La apertura financiera (Montevideo, mimeo).

[6] Each of the neoconservative experiences can be usefully divided into two phases, in accordance with focus of its price stabilization policy. In the first years, the attempts to bring down inflation centered on the pursuit of restrictive monetary, fiscal and wage policies. Because these policies proved too slow and costly, in a second phase (beginning in 1976 in Chile and 1978 in Argentina and Uruguay) price stabilization policy focused on controlling the exchange rate, letting monetary policy adjust passively, thus hoping to pressure down domestic inflation to the rate of international inflation plus the pre-announced rate of devaluation via "the law of one price". This second phase, inspired by the monetary approach to the balance of payments, would be especially decisive for capital inflows. For, so long as there was confidence in the maintenance of the pre-announced exchange policy, capital could be especially sensitive to interest rate differentials. And it is in fact in this second phase when capital inflows are especially strong. The third phase is that after the maxi devaluation and the abandonment of most of the neoconservative policies.

[7] Inasmuch as interest payments abroad strongly increased during the neoconservative period, a better indicator of the domestic savings effort (or its restriction in consumption) would be national savings plus factor payments to the outside world, all expressed as a proportion of gross domestic income (this latter being GNP adjusted by the effect of variations in the terms of trade on national income). The domestic savings effort, so measured, as a proportion of gross domestic income is: in Argentina slightly higher (1 1/2 percentage points) in the neoconservative period than in the preceding 10 years; in Chile, it falls 3 percentage points in the same reference period; and in Uruguay it rises 3 percentage points.

[8] Moreover, it is to be noted that because interest rates during the first half of the '70s tended to be fixed and low, whereas in the second half of the '70s loans were made at higher and variable interest, servicing costs in 1983 were higher even for similar debt to export ratios as in 1975.

[9] This may have been so i) because of its greater spread for the foreign investor, at least in relation to Uruguay (which still fails to explain why the spread did not fall); or ii) because of its better growth prospects (in relation to Argentina).

[10] Borrowing rates are the nominal rates of interest deflated by the wholesale price index, for this latter is in all likelihood the most appropriate deflator for the debtor. Should these be deflated by the consumer price index, average real rates of interest remain unchanged in Chile, but fall from 17% to 5% per year in Argentina and from 15% to 14% in Uruguay. Interest paid depositors was also high during the period averaging 12% per year in Chile, 1% per year in Uruguay and -7% per year in Argentina (negative, but far less so than in the past). Deposit rates naturally are deflated by the consumer price index--the more pertinent deflator for depositors.

[11] This is suggested by an analysis of the Chilean case (see Table 7) in which the cost of maintaining such non-interest-bearing reserves is estimated and in which, nevertheless, the average spread for the period remains close to 15%. For a fuller treatment of this point see H. Cortes and L. Sjaastad, "El enfoque monetario de la balanza de pagos y las tasas de interés real en Chile", Estudios de Economia No. II primer semestre 1978 and J. P. Arellano, "De la liberalización a la intervención. El mercado de capitales en Chile 1974-83" in Colección Estudios CIEPLAN No. 74, Dec. 1983.

[12] See in this regard P. Spiller and E. Favaro, "An Economic Test of Interaction among Oligopolistic Firms: the Uruguayan Banking Sector" (Central Bank of Uruguay, June, 1982, mimeo). Though there were 21 private banks, one state bank and many non-bank intermediaries, the authors argue that the legal barriers to further entry of new banks encouraged oligopolistic behavior on the part of the existing financial system. It is striking, however, that spreads were similarly high in Argentina and Chile and behaved in much the same way, despite the absence of such barriers in the latter. This suggests that in practice it took a good deal of time for the pressure of competition to make itself felt.

[13] Also important in explaining such high spreads may have been the fact that most operations were for 30 days, a fact which needs have raised fixed costs. Yet this should have been largely compensated by the much greater number of operations than in the past, all the more so since the periodic renovation of most short run credits was effected almost automatically (and it was so understood that it would be) requiring little additional analysis.

[14] In the absence of exchange risk and with no controls on capital flows, the nominal domestic interest rate should equal (or converge towards) the nominal international rate of interest plus the expected devaluation: $i_D = i_I + R_e$. To the extent the expected devaluation R_e is equal to the announced and executed devaluation (R), $i_D = i_I + R$. The exchange rate comes to lag behind inflation and be overvalued when $R < P_D - P_I$. Therefore, when there is a lag in the exchange rate, $i_D < i_I + (P_D - P_I)$ or $(i_D - P_D) < (i_I - P_I)$. In other words, with an (expected) lag in the exchange rate, the real domestic interest rate should be less than the real international rate of interest. And if the expected lag in the exchange rate were greater than the real international rate of interest, real domestic interest should be negative (or close to it, for there are country risk and additional intermediation costs to be added in). Since LIBOR (6% per year real) in this period was

less than the expected lag in the exchange rate, substantially negative real domestic interest rates should have been observed for some of the period in question.

15 For theoretical treatments of some of the issues herein involved see T. Ho and A. Saunders, "A Catastrophe Model of Bank Failure," Journal of Finance, Dec. 1980; J. Bullow and J. Shoven, "The Bankruptcy Decision," The Bell Journal of Economics (Autumn 1978) and F. Perez and A. Moreno, "Teoría financiera, contratos y políticas económicas", Estudios Públicos, No. 14, Fall 1984.

16 I owe this insight concerning the association of assymetry in the demand for credit and the degree of relative price (and so, wealth) changes to Carlos Massad.

17 Capital inflows are not simply and solely dependent on the differential in real interest rates between the domestic and international capital markets. In this period significant amounts of capital came in because the expected rate of return in dollars of direct investment was also high (at least so long as the exchange policy was expected to continue). This was the case of much capital brought in from overseas by nationals, not for investment in the domestic capital market, but to make direct investments in the economy.

18 An excellent treatment of just this issue is J. P. Arellano, "De la liberalización..." op.cit.

19 The increased share of foreign savings in GNP was estimated comparing the average net-increase in the annual flow of debt before and during the neoconservative periods as a percent of GNP.

20 See, among others, for such "traditional" formulations B. Sprinkel, Money and Stock Prices (Richard Irwin, 1964); K. Homa and D. Jaffee, "The Supply of Money and Common Stock Prices," Journal of Finance, Dec. 1971; and M. Hamburger and L. Kochin, "Money and Stock Prices: The Channels of Influence," Journal of Finance, May 1972.

21 See in this connection, E. Fama, "Efficient Capital Markets: A Review of Theory and Empirical Work," Journal of Finance, May 1970, and J. Pesando "The Supply of Money and Common Stock Prices: Further Observations on the Econometric Evidence," Journal of Finance (June 1974), and C. Contador "Política Monetaria, Inflação e Mercado de Ações no Brasil-uma Sintese de Conclusões" Revista Brasileira de Economia, March 1974.

22 Of course, other factors were at work feeding such price speculation: the formation of economic conglomerates, of mutual funds, etc.

23 See P. Meller and A. Solimano, "El mercado de capitales chileno: laissez-faire, inestabilidad financiera y burbujas especulativas" (mimeo, Jan. 1984) for an econometric test of the formation of a bubble (the speculative boom) and its subsequent bursting (the crash).

24 In Chile a multiple regression (corrected for 2nd order autocorrelation) between a real index of stock prices (RISP) and real M_1 (M_1 P) and real M_2 (M_2 P) and the real interest rate iR yielded:

$$RISP_t = \underset{(-6.9)}{-436} + \underset{(9.4)}{19}\ M_1 P - \underset{(-3.2)}{2}\ M_2 P + \underset{(0.9)}{11}\ iR$$

with an adjusted R^2 of 88%. The same regressions for Argentina had far weaker explanatory power (less than 5%) and the interest rate was likewise not significant. The

best result was achieved with $RISP_t = f(M_1 P)_{t+1}$ but again iR was not correlated and had the wrong sign. The data are 6 month moving averages for each quarter. Incidentally, since the stock price index and M_1 P and M_2 P are correlated in the same time period these results could be fitted into the efficient capital markets model as framed by Richard Cooper, where stock market prices lead money (since money supply for the same time period would, in effect, be an expected value). See his "Efficient Capital Markets and the Quantity Theory of Money," The Journal of Finance (June 1974).

25 The quarterly percentage variation in RISP (VRISP) regressed on the quarterly percentage variation in real M_1 ($V M_1 P$), real M_2 ($V M_2 P$) and in the absolute change in iR (V iR) and, corrected for autocorrelation, showed no significant correlation with interest rate variations in time t. But in Chile $VRISP_t$ was negatively correlated with $V iR_{t+1}$ (with 90% confidence) and positively correlated with $V iR_{t-1}$ (with 99% confidence). In Argentina $(VRISP)_t$ was correlated with $V M_2 P$ (with 89% confidence), lending some additional weight to the hypothesis of Richard Cooper that stock market price variations may actually lead money supply changes. See his "Efficient Capital Markets..." op. cit.

26 For a detailed treatment of the financial crisis in the Southern Cone and alternative ways of dealing with it, see among others, E. Barandiarán, "Nuestra crisis financiera" (Estudios Públicos No. 12, Spring 1983; Carlos Díaz-Alejandro, "Goodbye Financial Repression, Hello Financial Crash," (New Haven, April 1983, mimeo); and R. Fernández, "La crisis financiera argentina: 1980-1982" (CEMA, Buenos Aires, October 1982). A somewhat more upbeat interpretation of the prelude to the crisis in Chile can be found in D. Mathieson, "Estimating Models of Financial Market Behavior During Periods of Extensive Structural Reform: The Experience of Chile" in IMF Staff Papers (June 1983).

27 Of course, how best to overcome such disequilibria is another question. Intervene in the money market, the goods market or the asset market? Expand the quantity of money, validate the prevailing level of prices, and thus avoid a recession, or control interest rates directly? Prohibit the renewal of credits without adequate guarantees or put an end to loans to firms in the same conglomerate as the bank and thereby speed the liquidation of assets? These issues, though important, go beyond the purposes of this study.

28 This was especially the case where financial opening up was more limited (Chile). See, R. Zahler, "Repercusiones monetarias y reales de la apertura financiera al exterior: el caso chileno, 1975-1978" in CEPAL Review No. 10, April 1980, where he estimates that such segmentation implied a transfer of the order of US $1 billion to those firms that enjoyed privileged access to foreign credits.

29 Though a case can be made that consumer durables are a form of savings, and certainly may improve welfare, the point is that the hoped for increase in productive investment was thereby squelched.