Managing foreign debt and liquidity risks in Chile

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Introduction

Post-crisis developments in emerging markets support the view that future economic progress will go together with increasing global integration, both in trade and financial markets. This places a serious responsibility on all participants in the international capital markets to design policies that allow emerging economies to integrate smoothly with the rest of the world and increase the efficiency of world capital markets. Thus, the topic of this meeting is very timely and relevant as it points to policies that should be promoted to achieve greater economic and financial integration, but without the abrupt disruptions of recent years.

Since the crises in Mexico in 1994 and in Asia in 1997, many initiatives have been launched to achieve a safer or more resilient international financial system. These proposals are not aimed at having a crisis-proof system, which is impossible. To be useful, nevertheless, these initiatives should address properly identified imperfections (otherwise the medicine may be worse than the disease) and not just be well intended general proposals.

Rather than evaluating these initiatives, the purpose of this paper is to review the Chilean experience in risk management during the 1990s. Even though Chile does not have a fully-fledged policy scheme explicitly targeted to managing liquidity and debt risks, most of the elements of such a policy have been in place, starting from a sound external solvency position, which has been an underlying objective of economic policy throughout these years. Related to this explicit objective, several policy initiatives have had significant effects on debt and liquidity risks, in particular:

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- prudential regulation of the capital account
- accumulation of international reserves
- fiscal surplus and stabilisation funds for primary products
- strict banking regulation
- capital market development

One common purpose of all these policies is to preserve external solvency and financial stability, confronting the risks associated with the increased volume and volatility of capital flows. This approach addresses the risks both of abundance and of shortage of external financing.

Prudential regulation of the capital account

Prudential regulation of the capital account considers that in some cases, due to market failures or imperfections (sometimes policy-induced), market-related controls may help to reduce certain risks such as excessive reliance on rolling over short-term debt. The purpose of this prudential regulation is to change the composition of capital inflows and give monetary policy more flexibility to pursue inflation or current account targets. In this respect, Chile has applied two types of policies. First, there is a requirement for most forms of foreign investment to remain in Chile for a minimum period of one year. Second, there is a reserve requirement that places a wedge between domestic and foreign interest rates, and provides a disincentive to short-term capital.

The requirement of a minimum period of one year for foreign capital is a legacy of the debt crisis of the early 1980s, which led to the imposition of this and many other restrictions on capital movements (mainly outflows). Indeed, in the past this requirement was even more stringent – three and 10 years depending on the type of inflow. In the 1990s this limitation was reduced gradually as part of the capital account liberalisation policy. In fact, the country has been on a gradual liberalisation trend with respect to both capital inflows and outflows since the early 1990s – and this movement has been the dominating force behind all capital account regulatory changes.

But in the episodes of large capital inflows this restriction was considered a way to moderate inflows, at least temporarily, rather than affect outflows. However, as the economy becomes more integrated, the efficiency costs of restricting capital flows will tend to exceed the associated benefits, especially when it comes to outflows. In fact, past experience shows that capital flight typically takes place before the authorities realise (or acknowledge) that there is a problem, imposing severe costs on the economy.

Regarding the reserve requirement, it has the form of a fractional non-remunerated deposit with the central bank and affects most forms of external financing, including foreign credit and foreign currency deposits, but it has excluded productive equity investment like FDI and primary ADRs. The deposit has to be kept for a year irrespective of the maturity of the foreign inflow. The rate of the deposit was set at 20% in 1991 and increased to 30% in 1993, but it was reduced to zero in September 1998, mainly because of the higher premium of foreign financing towards emerging economies.

The objectives of this policy were, first, to favour equity over debt and long- rather than short-term financing; and second, to increase the effectiveness of monetary policy. The policy allowed a tight monetary policy without causing a large capital account surplus and contained the appreciation of the real exchange rate. It also sought to limit the volatility of flows – and the costs associated with it – by taxing hot money more heavily.

A frequently asked question is whether this unremunerated reserve requirement (URR) has been effective in achieving its objectives. It is worth emphasising that this is one instrument in a broader set of macro (and micro) economic policies. However, in spite of its controversial nature, this prudential control induced a significant change in the composition of capital inflows. Indeed, direct and longer-term portfolio investment grew in importance relative to foreign debt. There was also a change in the composition of foreign borrowing, where medium- and long-term debt increased its share in the total. There is also preliminary evidence, although rather weak, that the reserve requirement reduced the inflows, and, consequently, the excess appreciation and the volatility of the real exchange rate. In this assessment one should bear in mind that capital inflow averaged 7% of GDP in 1990–97 and peaked at around 10% of GDP in 1997. It is also important to note that due to legal limitations the regulation could not be imposed on all flows, thus leaving loopholes that reduced its effectiveness.

Regarding the convenience of using instruments like the Chilean reserve requirement, the following policy lessons are worth stressing:

- The URR at the margin attained the benefits listed above, but this was a temporary effect since market players were very active in uncovering loopholes and designing methods to bypass the regulations.
- These benefits were possible because the central bank was very active in trying to maintain its effectiveness by closing loopholes and constantly increasing the URR coverage. Also, the high enforcement capacity of the central bank and the low degree of corruption achieved this, but nothing guarantees that it will work elsewhere. In other words, it is not certain that a similar type of instrument could work as effectively in other countries.
- The URR is not a costless policy instrument; it leads to higher interest rates, which in turn may lower growth and investment.
- On balance, it was possibly worth using it, but there may be more efficient (less costly) instruments for achieving the same goal (a distribution of liabilities tilted to the long term).

Ongoing work in this area examines the experience of other countries in using different forms of capital controls, and in liberalising different components of the capital account. This inquiry relates to the more general notion that countries should encourage equity rather than debt flows, and long- rather than short-term flows. Additional research and a careful analysis of alternative policy options are needed at this stage to establish stronger conclusions for best practices in this regard.

International reserves

One pillar of the liquidity management policy in Chile is the large stock of international reserves held by the central bank, which today stands at about 22% of GDP, 42% of total foreign debt and over 12 months of imports. It is important to note that international reserves have stood at high levels during the entire decade and not only in recent months as a result of the slowdown in economic activity.

Holding a large stock of reserves has been considered a key element of the policies aimed at enhancing the resilience of the economy, and proved to be correct as Chile passed through the financial turmoil of the past two years relatively unscathed. Indeed, in order to achieve this result, the central bank spent about 17% of the initial stock of reserves (about US$ 3 billion in total) between end-1997 and the third quarter of 1999. Possibly a smoother transition could have been achieved had the Central Bank spent an even larger share of reserves, although doing so would have meant weakening the fundamentals. Obviously, this course of action appears feasible after many of the risks present at the time faded away, but it was considered too risky during a period of high uncertainty and volatility in international capital markets.

The "large" stock of reserves was accumulated as a result of the efforts to sterilise the large inflows of capital received during the 1990s. This policy was, in turn, aimed at avoiding the overheating caused by the surge in inflows. However, despite proving to be an important buffer against the shocks arising from the Asian, Russian and Brazilian crises in past years, it was an expensive strategy. Rough estimates – based on restrictive assumptions – suggest that the cost of holding a large stock of reserves during the 1990s was about half of a percentage point of GDP per year.[1] But at the time this strategy was designed there were no alternatives, and the costs of the new ones, like the IMF's contingent credit line, have yet to be calculated. Furthermore, despite not having a reliable methodology to estimate the costs of a financial crisis, based on our own experience and that of other Latin American countries during the 1980s, we believe that this cost is worth paying.

The need to hold a large stock of reserves decreases as we move towards a more integrated economy and the private sector plays a more active role in assessing foreign exchange and other risks. The latter is currently the case after having adopted a floating exchange rate system. In this context liquidity management has to be redesigned with greater emphasis on prudential regulation, setting adequate standards, and increasing accountability and transparency.

[1] This estimate corresponds to the pre-crisis period. Considering the subsequent depreciation of the peso, the cost may be lower.

Chile: external sector 1990–99

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Balance of payments (as a percentage of GDP)										
Current account	–1.6	–0.3	–2.3	–5.7	–3.1	–2.1	–5.1	–4.9	–5.7	–0.1
Capital account	1.8	–0.8	1.4	5.8	4.2	1.9	6.1	5.5	7.3	–0.2
Balance of payments	7.8	3.6	6.0	1.3	6.3	1.6	1.7	4.2	–2.8	–1.0
External debt (as a percentage of GDP)										
Short-term	14.2	9.5	11.1	10.9	10.7	7.9	6.5	4.7	5.4	5.8
Medium- and long-term	43.3	37.7	32.4	32.2	31.5	25.4	27.0	30.5	38.0	44.6
Total debt	57.5	47.2	43.6	43.1	42.2	33.3	33.5	35.2	43.4	50.4
Debt/exports (%)	208.1	183.0	182.3	208.6	185.1	135.6	149.2	160.2	213.7	217.8
International reserves										
Reserves/GDP (%)	17.6	19.2	21.5	21.9	26.4	22.7	22.6	23.5	21.9	21.8
Reserves/M2 (%)	77.2	82.6	82.5	77.8	91.7	77.0	65.8	63.7	52.8	46.7
Fiscal policy (as a percentage of GDP)										
Fiscal surplus	0.8	1.5	2.3	2.0	1.7	2.6	2.3	2.0	0.4	–1.5
Public debt	38.9	30.5	23.0	20.3	17.9	11.5	7.5	6.7	7.8	8.6
Residents' investment abroad (stock, as a percentage of GDP)										
Banks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.0
Pension funds	0.0	0.0	0.0	0.2	0.4	0.1	0.2	0.4	2.2	6.8
Other	0.6	0.8	1.5	2.3	3.6	3.8	4.9	7.2	11.3	19.1
Total	0.6	0.8	1.5	2.5	4.0	3.9	5.1	7.6	14.9	29.9

Fiscal policy and central government

An important response to the increase in net capital inflows in the early 1990s was a policy mix that included a steady fiscal surplus, along with greater exchange rate flexibility, a relatively tight monetary policy and (heavy) sterilisation. All of these components were aimed at maintaining the price stabilisation programme and keeping the current account deficit within a sustainable range, so the economy as a whole would become more resilient to shocks.

For the central government this meant a continuous reduction of its external debt, which was the only explicit debt policy.[2] The average fiscal surplus between 1990 and 1999 was 1.4% of GDP, while the external debt of the central government decreased from 39% to 8% of GDP in the same period. Furthermore, accumulated surpluses of the central government and international reserves of the Central Bank were used to advance the payment of external debt during 1995–96. After these prepayments were made, almost all public debt outstanding was with the multilateral financial institutions.

This policy of prepaying public debt was re-examined after the financial crises in emerging markets during 1997 and 1998. Thus, although the public sector did not need new financial resources, the Chilean government placed US$ 500 million of international bonds in 1999. The rationale underpinning this placement was that an economy like Chile, which has an active participation in international financial markets, needed some presence in international bond markets in order to improve the information and the monitoring capacity of international financial institutions. In fact, before this sovereign debt was issued there was no reliable measure of country risk because all other Chilean bonds were corporate, and Chilean debt was treated similarly to other countries' debt. Preliminary observation of spreads after this placement showed a positive externality in country risk premium for the private sector.

In addition to the rather simple policies on debt and liquidity described above, the central government maintains two stabilisation funds for primary products, namely oil and copper. The function of these

[2] Indeed, the external debt manager position, created after the early 1980s crisis, was eliminated in 1991.

funds is to compensate for terms-of-trade shocks, which, in turn, have important effects on both the current account and government budget. Although these funds were not designed for liquidity management purposes, they may be considered substitutes for other instruments, like the issue of liabilities with contingency clauses (ie copper bonds for Chile or oil bonds in the case of Mexico).

Banking sector

The banking crisis of the early 1980s left a clear message for strategies of financial liberalisation. The main lesson of this episode was that capital account opening has to be accompanied by – and preferably preceded by – an overhaul of the country's capacity to supervise, regulate and manage financial institutions. This sequencing allows the domestic financial system to cope properly with the complexities that go with risk management and free capital movements.

After the crisis, new ideas about prudential regulation and supervision were incorporated into the financial system. The new approach imposed more stringent disclosure requirements on banks, explicitly limited the coverage of deposit insurance to small depositors, and established clear procedures for the closure and liquidation of insolvent institutions. At the same time, the government agency increased its supervisory capacity.

During the 1990s this approach was harmonised with new developments in the banking industry and in international regulatory standards. Important in this respect is the incorporation of the guidelines of the Basel Committee. Also, the Central Bank and the Superintendency of Banks started to implement guidelines to improve the monitoring of diverse sources of risks as banks began embarking on more sophisticated activities.[3]

These new guidelines incorporate standards for interest rate, currency and liquidity mismatches for the banking sector,[4] all of them

[3] Among these are derivatives (forwards, swaps) and cross-border lending.

[4] Some of these regulatory changes coincided with the Asian crisis, but they were not a reaction to it. The main impact caused by the Asian crisis was a delay in the implementation of some measures.

measured against core capital (tier 1). The liquidity risk is measured by comparing residual maturing flows from assets and liabilities at two distinct terms, 30 and 90 days. The liquidity gap for each currency (domestic and foreign) cannot be greater than core capital at the 30-day range. Alternatively, the maximum gap allowed for the 90-day range, for all currencies added, cannot be greater than twice core capital.

Regarding interest rate risk, the measure separates payments of assets and liabilities within time bands (considering both fixed and variable rate contracts), which subsequently are weighted by a factor that captures the volatility of interest rates as well as the duration of each payment. Total interest rate exposure, including derivatives, must not be greater than 8% of core capital.

Currency mismatch is measured by adding the absolute value of each currency gap. The norm allows a maximum mismatch equal to 20% of core capital. In this calculation, the gaps in currencies of countries for which external debt is in the AAA category are weighted less than those in other currencies, due to the lower volatility of these currencies against the Chilean peso.

A special treatment in the foreign currency mismatch norm is applied to those banks (mainly foreign) whose capital base is subject to the foreign investment statute. In this case, since capital can be maintained in foreign currency, in addition to the above-mentioned norm an incremental currency gap is permitted that cannot be greater than core capital. This waiver is also extended to retained earnings derived from the capital invested and legal reserves maintained in foreign currency. Aside from the treatment just mentioned given to foreign capital, there are no particular regulations that could favour the position of foreign vis-à-vis domestic banks.[5]

Regarding minimum requirements of holdings of foreign liquid assets, demand deposits in foreign currency are subject to a reserve requirement of 19%. Time deposits, savings accounts and other long-term obligations in foreign currency are subject to a 13.6% reserve requirement.

[5] Also, the banking law in Chile makes no distinction between foreign branches and subsidiaries since banks operate on a solo basis. For example, branches receive the benefits of local regulations concerning deposit insurance just like domestic banks, they are required to have their own capital and therefore are not allowed to consolidate capital with their holding company.

These guidelines are part of an effort to strengthen the banking system. Having well capitalised banks, accompanied by strong management and supervision, reduces the chances of crisis. In this regard, the Central Bank closely monitors the banking sector and performs sensitivity analyses with regard to sudden changes in the exchange rate, the interest rate, and sudden withdrawals of funds. This is done at the level of each bank and for the system as a whole. However, the exercise is aimed at assessing the potential problems with regard to domestic liquidity (as opposed to external liquidity).

Capital market development

For a small and increasingly open economy like Chile, financial integration represents a source of opportunities in terms of risk sharing and also the possibility of financing new investment projects. However, it conveys significant risks in terms of contagion and bandwagon effects, among others. The strategy adopted by the Chilean authorities in order to manage these risks consists of building cushions and strengthening the economy's resilience to shocks but without phasing out the process of financial integration.

Chilean allocation of resources is highly specialised. Exports remain highly dependent on commodities, mainly copper. As a consequence, the development of the domestic capital market is an important device for reducing risk exposure. In particular, policies have been aimed at increasing the fraction of Chilean assets invested abroad. Thus, the portfolio of Chilean assets will be less concentrated in domestic risk, increasing the resilience of the whole economy.

After having implemented a major pension reform in the early 1980s, which replaced the old pay-as-you-go system with a privately administered capitalisation system, during the 1990s the authorities sought to increase the share of assets held abroad by Chilean institutional investors – pension funds and insurance companies. In addition, the authorities lessened restrictions on capital outflows – outward direct investment and others – in order to induce greater investment abroad by the manufacturing and banking sectors.

For instance, for pension funds the maximum holding of foreign assets permitted in early 1992 was 1.5% of their total portfolio. Later that year, however, this limit was increased to 3%, and in 1995 it was raised twice, to 6% and 9%. In 1997 the limit was put up to 12%, and by end-1999 stood at 16% (comprising fixed and variable income securities). Similarly, mutual funds currently face no restriction on their holdings of foreign assets.

Despite lessening the restrictions on investing abroad, macroeconomic management during the 1990s, namely, a combination of relatively high domestic interest rates and limited variability of the nominal exchange rate, made foreign investment less attractive, holding up the outflow of domestic capital. Thus, until late 1997 Chilean institutional investors held most of their portfolios in domestic assets, outward direct investment being the only significant outflow of capital (and mainly driven by privatisation and other reform processes taking place in neighbouring countries). However, change in external conditions in 1997 (the greater scarcity of foreign funds in emerging markets), and the necessary correction in relative prices (the expected depreciation of the peso), led to a portfolio shift in 1998, increasing the share that foreign assets represented in domestic portfolios. Moreover, the experience of the past year shows that domestic institutional investors have changed the composition of their portfolios consistently with the expected movements in the real exchange rate, a desirable result that will help to foster the development of long-term hedging instruments and deepen the foreign exchange market. Given the new international conditions and institutional arrangements for the exchange rate system, we expect a significant and permanent increase in the share of domestic wealth invested abroad.

But that is not all. In order to foster the development of domestic capital markets several measures have been taken, some of them aimed at deepening markets, while others are intended to increase transparency and enhance due diligence and accountability. For instance, mortgage securitisation, separate trading of bond coupons, and the issue of zero coupon bonds were recently authorised. Also, private rating agencies are long established for risk classification of debt instruments (mainly instruments in which pension funds are allowed to invest). Many of these firms are partners with well-known international rating agencies. This development, although initially thought to support the development of the pension fund industry, proved to be useful years later when domestic firms started issuing debt abroad. The expertise developed in

the early stages of the rating industry's development plus the strategic alliances with international agencies helped the Chilean corporate sector when it began tapping the international capital markets in the early 1990s.

But the list of remaining tasks to increase the resilience of the economy is still long. Among the priorities is the issue of long-term debt denominated in domestic currency in the international capital markets, so that the exchange rate risk can be shared with foreign investors. Similarly, in order to reduce the risk of contagion and bandwagon effects, more timely and effective signals are needed to allow foreign investors to differentiate Chile from other emerging economies. A small step in this direction was taken in recent months by issuing a small amount of sovereign bonds in international capital markets, but a more complete set of signals will be needed in the future, especially as the fiscal accounts return to surplus.

Conclusions

The Chilean experience of the 1990s shows that greater stability is achieved if adverse effects of shocks are spread across several markets and variables. In emerging economies with structural rigidities, imperfect institutions and incomplete markets, it would be a mistake to leave the whole weight of the adjustment to fall on one particular variable (or market). Hence, the need to build buffers across the entire economic system and to strengthen the economy's fundamentals. For this purpose a stable macroeconomic environment and a sound regulatory and supervisory framework are at the heart of a risk management policy. The former implies building cushions at the macro and micro level that allow the economy to increase its resilience to shocks (ie a large stock of reserves, high capital base for banks, etc). The latter implies putting in place clear and transparent rules and building appropriate institutions.

In this regard, it is important to emphasise that well capitalised banks, accompanied by strong management and supervision, reduce the likelihood of crises. Similar positive effects arise from sustaining a strong fiscal position. But that may not be enough. At the margin and when accompanied by consistent policies, some types of prudential controls may help to avoid certain risks such as excessive reliance on rolling over short-term debt. Similarly, flexible exchange rates work better when other conditions are in place, such as deep financial markets offering adequate hedging mechanisms, continuous price stability and low indexation.

In sum, the process of financial integration needs to be carefully managed to avoid the excesses caused by not having in place adequate institutions. However, the lack of adequate institutions should not be used as an excuse to slow this process. Rather, it should lead to acceleration of the institutional building that is necessary to achieve a full but safe integration.