III Chile's Macroeconomic Policy Framework

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Chile's macroeconomic policy framework[1]—with central bank policies focused on inflation targeting, in the context of a floating exchange rate, and fiscal policy following a structural balance target—is still relatively recent (see Box 3.1 for a sypnopsis). This section documents the essential points of this framework's design, highlighting aspects that may distinguish it from other countries' related practices as well as some recent refinements. Also discussed are the track record to date and various implementation issues that have turned out to be relevant in the last few years.

Inflation targeting in Chile had its beginnings around 1990. Price stability is one of the primary mandates in the central bank's 1989 charter.[2] From 1989 to 2000, the bank used one-year-ahead forecasts of end-year inflation to help anchor expectations, treating these forecasts essentially as short-run targets. During those years, the emphasis was on gradual disinflation, and a new, lower short-run inflation target was announced each year. The announced longer-run objective was convergence of inflation to a level similar to that of industrial countries. Indeed, inflation declined gradually, from close to 30 percent in 1990 to less than 3 percent in 1999, though it continued to exhibit some volatility.

Full-fledged inflation targeting emerged more recently. In September 1999, the central bank announced its intention to adopt, at the beginning of 2001, what is now known as the inflation-targeting framework. The essential elements of this framework in Chile include (1) a prespecified continuous inflation target band; (2) a preannounced "policy horizon"; and (3) timely communication of the central bank's inflation forecast, the rationale for its monetary policy decisions, and the reasons for any temporary deviations from the inflation target.

In this framework, the objective of monetary policy is to maintain inflation at a continuous target at the midpoint of the 2–4 percent target band,[3] by looking ahead to inflation over the policy horizon of one to two years (a widely accepted lag for the effects of monetary policy). The targeted variable is the easily verifiable consumer price index ("headline") inflation rate. The monetary policy stance is evaluated, and adjusted as necessary, at least once a month, in light of the central bank's updated inflation forecast.

The bank's operating target, or policy instrument, is the (nominal) overnight interest rate. In August 2001, the bank switched to a nominal interest rate target, ending its long-standing practice of targeting the interest rate on the Unidad de Fomento, Chile's inflation-indexed unit of account. Since then, the bank has been in the process of "nominalizing" its balance sheet as well, reducing its inflation-indexed liabilities, and extending the maturity range of its unindexed liabilities.

The central bank regularly forecasts both headline and core inflation; these forecasts are the basis for monetary policy actions.[4] The bank's inflation forecast relies on econometric models and judgment based on the output gap, the unemployment rate, the outlook for the world economy, commodity prices, and the stance of fiscal policy, the exchange rate, and firms' markups. Monetary aggregates have little weight in the forecasting models, since the bank has found these to have little predictive value for inflation (once other variables are accounted for).[5]

[1]This section focuses on monetary, exchange rate, and fiscal policies. The Chilean authorities have emphasized that these policies are part of a broader policy framework, which also includes international financial integration with an open capital account, modern financial regulation and supervision, and prudent management of liquidity in foreign currency.

[2]The central bank has been nominally independent since the passage of the 1980 constitution. The enactment of the central bank's organic law in 1989 granted full independence to the bank.

[3]Interestingly, by continuously guarding against persistent deviations from either bound, symmetric inflation targets such as Chile's have become an essential tool against deflation.

[4]The core measure excludes fuel and some food items.

[5]A recent bank study shows that in Chile M1A growth has had little predictive power over the inflation rate during the1986–2002 period, and that the predictive value of M1A is greatly diminished when additional explanatory variables, such as external inflation, are added to the forecasting model. A recent survey paper from the bank (see De Gregorio, 2003) also finds that in low-inflation economies where monetary policy enjoys credibility, periods of higher money supply growth have not resulted in higher inflation.

Box 3.1. Steps in the Development of Chile's Macroeconomic Policy Framework

September 1999	Central bank announces: • Continuous inflation target, to start in 2001. • Elimination of exchange rate band in favor of floating rate (retaining right to intervene in exceptional circumstances only).
March 2000	New government commits itself to a fiscal policy target: structural surplus of 1 percent of GDP to be maintained throughout the government's six-year term.
May 2000	Central bank issues first Monetary Policy Report—to be published regularly, every four months.
September 2000	Government publishes rationale and methodology for fiscal target. 2001 budget submission formulated to achieve fiscal target.
July 2001	Central bank declares exceptional circumstances and announces first instance of exchange market intervention under floating regime, specifying limits on duration and magnitude of intervention.
August 2001	Expert panel convened for first time to determine reference price of copper to be used in structural balance measure.
August 2002	Expert panel convened for first time to provide inputs to fiscal target's potential output estimate.
October 2002	New debt report clarifies public sector balance sheet and solvency.

The central bank's inflation forecast and its view of risks have been clearly articulated through a number of outlets, including the policy statements of the bank's board, minutes of the regular monthly policy meetings, and a sophisticated Monetary Policy Report issued three times a year. In addition, the bank has made public an overview of its forecasting models and intends to start publishing these on a regular basis.

Significantly, Chile's inflation target is not revised in response to unforeseen inflation developments; indeed, the target has remained unchanged since the adoption of the framework.

The track record under inflation targeting has been favorable:

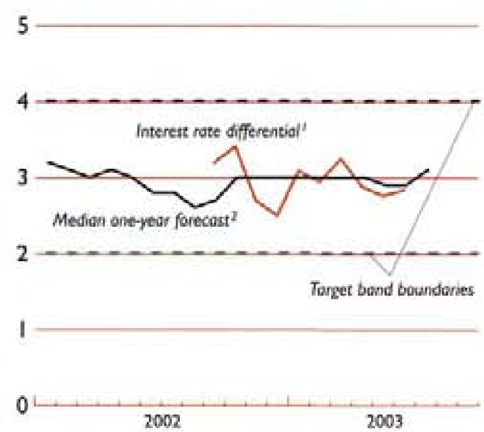
- Actual inflation has generally remained inside the target band (Figure 3.1). Both headline and core inflation rates, measured on a 12-month basis, have generally remained between 2 percent and 4 percent. Stays near the upper and lower boundaries have occurred, in association with temporary sharp movements in key relative prices. The two visits to the top of the band were linked to sharp increases in oil import prices. The visit to the bottom of the band has been associated with a period of "imported deflation."
- Indicators of inflation expectations have also been consistent with the inflation target (Figure 3.2). In the bank's monthly survey of 12-month-ahead inflation forecasts, the median forecast has been very close to 3 percent. Other expectations indicators, the differentials between interest rates on inflation-indexed and nominal debt at horizons of one to five years, also have stayed close to 3 percent.

The Floating Exchange Rate Regime

In September 1999, the central bank announced that it was discontinuing its long-standing exchange rate band, in favor of a floating exchange rate. More precisely, the bank stated its intention to forsake any intervention in the foreign exchange market under normal circumstances. Henceforth, intervention would occur only after the bank had identified exceptional circumstances, in which case the authorities would explain their rationale for intervening and publish data revealing the amount of intervention.

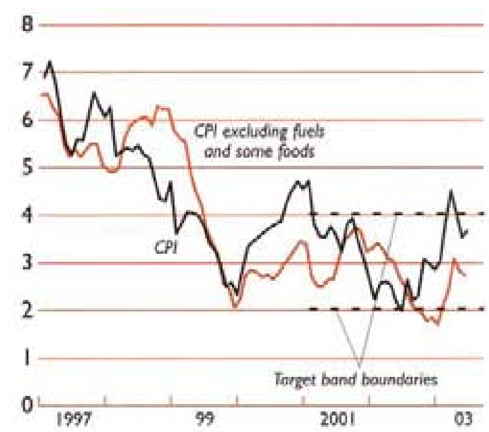
The authorities have clarified their concept of such exceptional circumstances. They consider that exceptional circumstances are situations in which a sudden shift in market participants' confidence, un-

Figure 3.1. Inflation Target and Forecast
(Annual percent change)



Source: Central Bank of Chile.
[1]Differential between nominal and inflation-indexed five-year public debt.
[2]Median forecast from survey conducted by the central bank.

Figure 3.2. Inflation
(Annual percent change)



Source: Chile, National Institute of Statistics.

related to long-term fundamentals, could result in sharp transitory shifts in the value of the peso, a steep reduction of the dollar value of peso-denominated Chilean assets leading to a loss of confidence, and expectations of further depreciation of the exchange rate. Such developments could potentially have significant negative real effects or result in a loss of control over monetary policy and interest rates.[6]

Since the free float was announced, the central bank has identified and declared two periods of exceptional circumstances: one beginning in July 2001 and the other in October 2002. In both instances, the peso had recently experienced significant depreciation pressures in the face of regional uncertainties (in 2001, related mainly to Argentina, and in 2002 to Brazil). In an effort to preempt excessive volatility without targeting a specific exchange rate, both interventions consisted of announcing predetermined caps on the sale of official reserves in the spot market and on net issuance of (medium-term) dollar-indexed bonds, over an announced period.

- During the first such intervention period, the authorities decided to step up issuance of paper indexed to the exchange rate for a period of up to six months, beginning July 2001. The sales cap on these instruments was set at US$3.5 billion, while the cap on the spot market intervention was set at US$2 billion. In the event, during the second half of 2001, the bank sold reserves of only about US$0.8 billion in the spot market, while it carried out net issuance of dollar-indexed bonds worth US$2.3 billion.
- In the second intervention episode, a similar "package" was again announced at the outset. This included identical caps of US$2 billion for the net issuance of dollar-indexed bonds and spot intervention for a maximum period of four months—from early October 2002 to early February 2003. In the event, the bank sold no reserves in the spot market but did raise the stock of its dollar-indexed debt by about US$1½ billion.

Thus intervention has consisted mainly of issuance of (medium-term) dollar-indexed debt. The authorities have explained that their preference to intervene in the exchange rate market via dollar debt issuance aims fundamentally at preserving the bank's liquidity position in foreign currency. Accordingly, the bank has avoided any short-term issues of such debt; maturities have ranged from two to five years.

The exchange rate interventions and the authorities' exchange rate management in general have been transparent. On the days when the bank intervened in the spot market, it announced that this had occurred.

[6]See also the explanation of intervention published in the bank's January 2003 Monetary Policy Report: http://www.bcentral.cl/esp/estpub/publicaciones/politicas/polit02.htm.

Every two weeks,[7] the bank has released not only its net international reserve position, but also a table decomposing its recent changes into several sources, of which one represents spot market intervention. As for intervention via issuance of dollar-indexed debt, the amount of such debt is published once a month as part of the IMF's standard template on reserves and foreign currency liquidity; the total is also published on a daily basis on the bank's web site.[8]

During both intervention episodes, the bank made clear that it had no target for the exchange rate. The pattern of intervention bears out this claim. The issuance of dollar-indexed debt did not respond to day-to-day exchange rate fluctuations; rather, it followed a preannounced schedule over the intervention period and within each month. As for spot market intervention, the days on which this occurred do not correspond to times of the greatest weakness of the peso.[9]

Fiscal Policy: Targeting the Government's Structural Balance

Soon after taking office in March 2000, Chile's new government committed itself to an ongoing target for the structural balance of the central government.[10] The government announced that it would measure its structural balance essentially by making two cyclical adjustments to its actual balance: one for the effect of the output gap, and the other for the effect of variations in copper export prices.[11]

In announcing that it would seek to hold this structural balance at a constant level over its six-year term, the government defined a medium-term fiscal policy path, or rule:

- The government thus gave up future discretion over the underlying fiscal stance. Henceforth, the level of government expenditure would be tied to the level of structural (i.e., cyclically adjusted) revenue. At the margin, any policy proposal that would change government expenditure or revenue would have to be associated with a plan for other, offsetting policy measures.
- By targeting the structural rather than actual balance, the government was able to commit itself to a precise target without having to suppress automatic stabilizers.
- In principle, holding the structural balance steady means a policy of full and immediate policy adjustment to permanent shocks, with zero policy adjustment to temporary shocks.

Although Chile's fiscal policy is sometimes said to be "countercyclical," this term is subject to misunderstanding; it may be better to say that the rule avoids procyclical policies and allows operation of automatic stabilizers. More precisely:

- The rule does not permit government expenditure to move at all countercyclically; for example, there is no room to temporarily raise government expenditure during an economic downturn. Nor is there room to cut tax rates.
- At the same time, the policy also does not permit procyclical policy reactions (i.e., expenditure would not be cut back with a view to compensating for lower tax collection in a recession).

The essence of the rule is thus the nonresponse of government expenditure (or tax rates) to temporary fluctuations in output and copper prices. What instead moves in synchronization with these cycles is the actual government *balance*. While fluctuation may be called countercyclical, the authorities have not emphasized the possible Keynesian-type effects of this policy in dampening recessions or tempering overheating.

Rather than a means to stabilize output, the authorities have emphasized several other objectives of their structural balance target. These include avoiding inefficiencies of erratic shifts in government expenditure, maintaining the solvency of the state, signaling medium-term policy intentions, and enhancing transparency and accountability of fiscal policy. They have also emphasized the consistency of this fiscal policy with the monetary and exchange rate policies of the central bank. In particular, fiscal discipline allows monetary policy to operate more effectively, and in the absence of an exchange rate target, monetary policy recently has been able to play an active countercyclical role (in the context of inflation targeting).

The policy of aiming at a specific, "point" target in every year is demanding—in particular, compared with practices elsewhere calling for balance over the business cycle or the medium term. Relatedly, the structural balance rule is also technically demanding, requiring that fluctuations in output (and copper prices) be identified, as they occur in real time, as ei-

[7] Since mid-2003, reserves data are now published weekly.

[8] See http://www.bcentral.cl/esp/estpub/publicaciones/financieraycambiaria/finacam01.htm.

[9] Notably, within the preannounced intervention periods, the bank refrained from intervening, as the peso slid in the days after September 11, 2001; in late October 2001, when the peso reached its weakest point for that year; and in early February 2003, as the peso approached a new record low.

[10] More detailed discussions of the rationale and methodology of the structural balance target can be found in Ministry of Finance (2001) and IMF (2001), Chapter II. Refinements made since those papers were prepared are discussed in this section.

[11] The government is sole owner of a copper company, CODELCO.

ther temporary or permanent. Implementation of the rule has to be based on necessarily uncertain estimates. The approach is therefore heavy on technique and centered on concepts that are abstract and unobservable (i.e., potential output and the underlying price of copper). In such a context, transparency and communication are likely to be especially important, and indeed the authorities have stepped up their efforts on these fronts since the rule was adopted.

Specific Aspects of the Chilean Fiscal Policy Framework

Before examining implications of these issues, and the Chilean approaches to dealing with them, it is useful to review some of the essential attributes of the Chilean fiscal policy framework:

- *No legal basis.* Among policy rules, Chile's framework is relatively informal. The target is a self-imposed commitment of the current government, without a legal basis of its own or any type of formal mechanism to enforce compliance. Instead, the legal basis for the fiscal stance in each year is the annual budget law, which does limit government expenditure; it is the government's policy to submit to congress each year a budget designed to be consistent with the structural balance target. Because the budget process rules in Chile largely favor the executive over the legislature, the latter is unlikely to be able to alter decisions made by the former in compliance with the structural balance rule.
- *A point target applies to each budget year.* There is no target band to allow year-to-year discretion (nor to suggest what is an acceptable or normal degree of deviation from the target). If the fiscal outturn deviates from the target, the policy target for the following year is not affected; that is, there is no commitment to offset past deviations.
- *The chosen target level is an annual surplus of 1 percent of GDP for the central government accounts.* The government has explained the need for a surplus in terms of several considerations: offsetting the quasi-fiscal losses of the central bank; as a precaution against several potentially important contingent liabilities; and to at least partly offset the effect on net worth of selling the state's copper resources.
- *Cyclical adjustment is relatively small, for a given output gap.* No allowance for cyclical effects is made on the expenditure side. The adjustment on the revenue side is limited by the approximately 20 percent share of government revenue in GDP (thus, as a rule of thumb, each 1 percent deviation of actual from potential output implies an estimated cyclical revenue effect of 0.2 percent of GDP).[12]
- *The total cyclical adjustment includes also a component related to copper price fluctuations.* In 2001 and 2002, years of relatively low copper prices, this adjustment was about 1 percent of GDP.[13]
- *The target applies to the entire government balance—including interest payments and capital expenditure.* Notably, a hypothetical increase in market interest rates faced by the government would require policy measures to raise the primary balance enough to offset the higher interest bill.
- *The structural balance is not derived directly from the official budget and statistical definition of the government balance.* Before cyclical adjustments are applied, the traditional government balance is adjusted in several ways to better capture changes in the government's net worth. However, the authorities are in the process of revamping the official statistics, following the new standard set out in the IMF's *Government Finance Statistics Manual 2001*, with a view to unification of their fiscal presentations.

The Chilean approach probably has its closest international parallel in Switzerland's fiscal framework, in that a specific point target level is established for each year, with a cyclical adjustment made on the revenue side only. As in Chile, the Swiss rule constrains all spending by the central government, not just its current expenditures. However, the Swiss approach differs in several ways, including in being constitutionally based and therefore more permanent in nature, in defining escape clauses from the rule, and in requiring that a shortfall from the target in one year be offset in subsequent years.[14]

Some Implementation Issues

In implementing the target, there is the practical challenge of distinguishing temporary from perma-

[12]In member countries of the Organization for Economic Cooperation and Development, for which estimates of structural budget balances are more familiar than in developing countries, estimates of cyclical effects are usually considerably higher, both because of the larger share of taxes in GDP and because adjustments are also made on the expenditure side.

[13]IMF (2002), Chapter III, examines the long-run properties of copper prices, with a particular application to the Chilean fiscal policy context.

[14]Strictly speaking, the Swiss approach also differs in that it involves an expenditure, rather than a deficit, target. However, the expenditure target is tied to cyclically adjusted revenue. See Danninger (2002) for a full analysis of the Swiss approach.

nent shocks as they occur in real time. Since cyclical effects cannot be observed, even ex post, they must be estimated. Contemporaneous estimates of output gaps are known to be especially subject to revision.[15]

Beginning with the 2002 budget, the Chilean authorities refined their fiscal policy framework by delegating to an expert panel the determination of copper price gap; starting with the 2003 budget, expert input was also used to estimate the output gap.

- A few months before each annual budget is prepared, a committee is convened to directly provide the copper "reference price." Minutes of this meeting are published, including each member's individual forecast. Each member is required to provide a forecast of the average copper price over the coming 10 years (rather than a notional long-run price or equilibrium price). The reference price is then determined as the average of these forecasts, after excluding highest and lowest values.

- To estimate potential output, an expert committee is also convened, though it does not directly provide an estimate of potential output. Rather, each member provides medium-term forecasts of the critical input variables (productivity, capital stock, and so on) for the authorities' algorithm for estimating potential output. This algorithm is based on a published methodology, and combines an estimated production function with the use of the Hodrick-Prescott filter to smooth the data. Within this framework, the committee also engages the authorities in methodological discussions. Minutes of this committee's meetings are made public.

This use of expert committees in measuring the structural balance is a significant step in assuring the transparency and credibility of the fiscal policy rule. While this procedure cannot eliminate uncertainty over the accuracy of the structural balance measure, perfect accuracy is not essential to the objectives of the policy.

In the last few years, a variety of shocks have made achieving the structural balance target in a given year more complicated than simply setting expenditure to increase in line with growth of potential output:

- *Structural revenue is not constant as a share of GDP*. On the positive side, the government occasionally benefits from one-time revenue windfalls; in some cases, the government has dealt with these by excluding such revenue from the measured structural balance. Another positive factor for the government has been the real exchange rate depreciation of the last few years, which raised (cyclically adjusted) copper receipts as a share of GDP.

- *Inflation surprises, in either direction.* For example, in 2002, lower-than-expected inflation led to a revenue shortfall.

- *Revisions to previous estimates of the level of potential output*. In preparing the 2003 budget, the government avoided this problem by adhering to its previous estimate of 2002 potential output as a base, applying to that figure the growth rate of potential output determined by the expert panel.

Relatedly, in two of the first three years of implementation of the structural balance rule the government announced around midyear that it would hold expenditure below budgeted levels in order to achieve the structural balance target.

Market Reaction and Public Ownership

Market confidence in the soundness of Chilean fiscal policy—as indicated by international bond spreads and credit ratings—has continued to be high. This confidence likely has been supported in part by the self-imposed constraint of the new structural balance rule, though also by a more general faith in Chilean institutions and political consensus in favor of fiscal policy discipline.

Outside of Chile, awareness and understanding of the structural balance target have gradually increased. As many other emerging market economies had to run procyclical fiscal policies during the recent downturn in the world economy, many commentators noted—generally with favor—that Chile was allowing automatic stabilizers to operate, in the controlled manner dictated by the structural balance rule. After the 2003 budget was submitted, a few analysts did issue critical reports, arguing that the levels of Chile's fiscal balance and fiscal data transparency did not justify the country's strong credit rating and low bond spreads. Although the criticism of the fiscal stance was soon rebutted by other analysts, the authorities stepped up their efforts to explain the structural balance rule, issued a new report on the debt and liquid public assets of the entire public sector, and began an enhanced schedule of fiscal data releases.

[15]Gallego and Johnson (2003) show confidence intervals for output gap estimates constructed with the Hodrick-Prescott filter. Looking at the G-7 countries, they find that confidence intervals are fairly wide in general and tend to flare out at the end of the sample.

The extent of ownership of the structural balance target is as yet difficult to judge. The government's commitment to its own structural balance target appears very strong, indeed as one of the flagship policies of the administration of President Lagos. Given the budget process rules in Chile, this ingredient alone practically assures the implementation of the rule over the final three years of the government's term. Outside the current administration, there seems to be a broad political consensus in favor of the principle of maintaining fiscal discipline; however, it is as yet unclear whether the particular mechanisms of the structural balance rule would be endorsed, in whole or in part, by future administrations. In terms of current political debate, it seems that the structural balance rule has shifted the focus away from the underlying fiscal stance (widely perceived to have deteriorated excessively in the late 1990s before recovering in 2000–01) and toward questions of the appropriate size of government.

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