Exchange Rate Management in a World of Volatile Capital Flows: Chile in the 1990s

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Introduction

- I. The Chilean experience with international capital flows (IKF) and the exchange rate regime.

- II. International financial integration and exchange rate management.

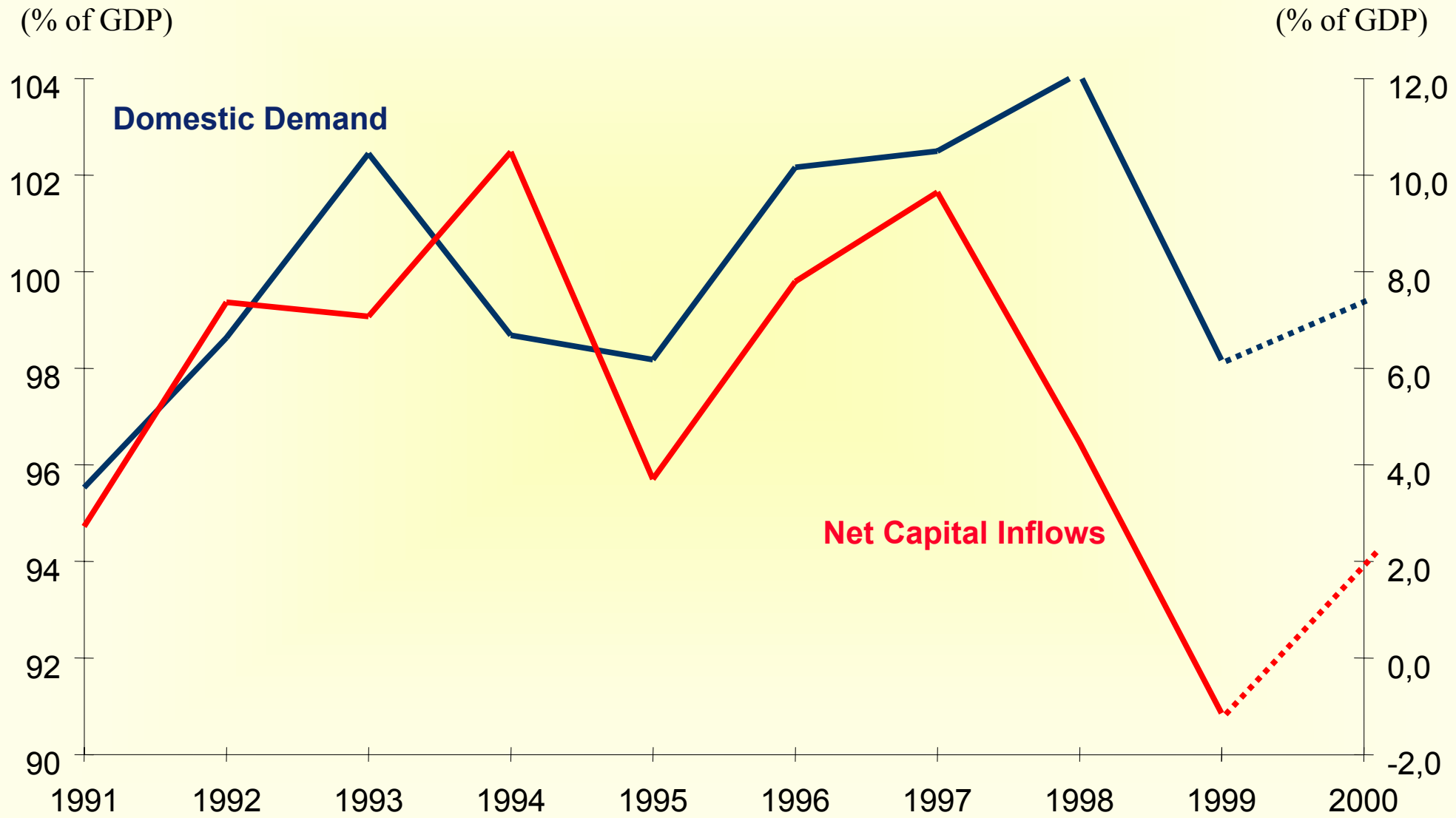
- III. Surges in IKF, Real exchange rate (RER) misalignments and Macroeconomic policy.

- IV. Concluding remarks.

I. Chile: The Scenario of 1991 - 1997

- Massive net capital inflows averaging 7.3% of GDP resulted in an expansion of real private expenditure averaging 10%, and added to pressures on the real exchange rate. The peso appreciated at a real annual average rate of 4%.
- Nominal appreciation was limited by an exchange rate band, but the rate stayed close to the lower (+ appreciated) bound, resulting in a large accumulation of international reserves. Sterilized intervention generates significant losses for the Central Bank due to the risks of a large open foreign asset position.
- Changing macro conditions and intervention costs forced several revisions of the band parameters.

I . Chile: Net Capital Flows and Domestic Demand



I. The Unremunerated Reserve Requirement (URR).

- To limit inflows, the Central Bank established an unremunerated reserve requirement (URR). But it was not comprehensive, leaving room for circumvention, which weakened its effectiveness. Exchange restrictions were phased out gradually, unifying the market at a single exchange rate and allowing for capital outflows.
- It is generally recognized that the URR had effect on the composition of external financing, but few accept its effect on the size of the IKF and on the exchange rate. We have evidence that the URR implemented in Chile did affect the size of the IKF and the arbitrage condition, although the effectiveness of the URR eroded over time.
- The differential between the expected rate of return of domestic and external assets responded to the financial cost of the URR. Similarly, the expected rate of real depreciation of the CLP was reduced by the URR. These indicate an effect of the URR on the RER level.

I. Effects of the URR on Expected Real Depreciation

1985:1-1999:4

	Spread (1)	$E[\hat{TCR}]$ (2)
Constant	1.72	1.03
	(1.06)	(1.22)
URR	1.12**	-0.97*
	(0.60)	(0.55)
Dif		-0.34
		(0.37)
R^2	0.04	0.04
F	3.44	2.13
DW	1.51	1.57

** Significance at 95%

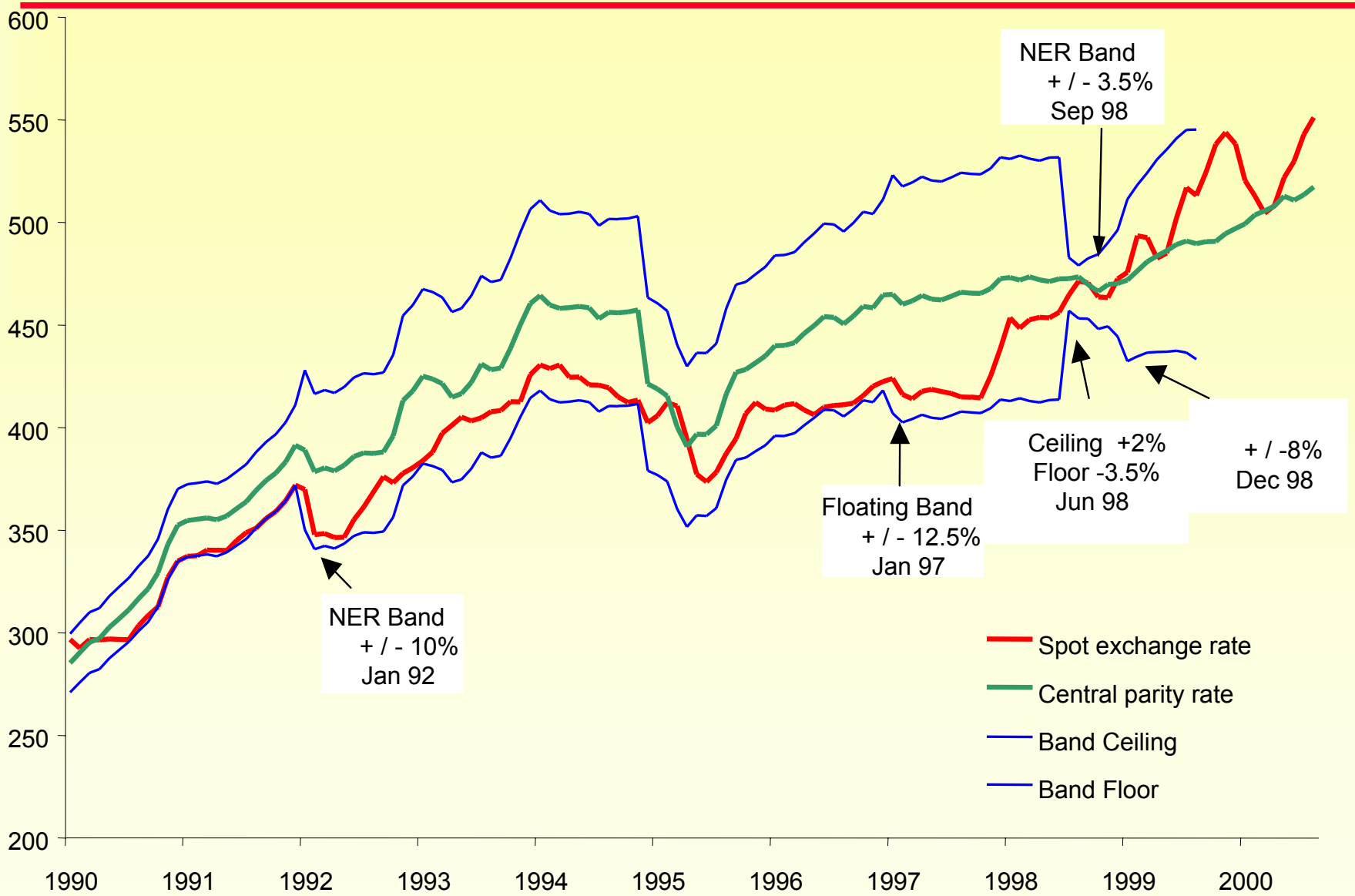
* Significance at 92%

I. Chile: The Scenario of 1999 - 2000

- IK inflow pressures have disappeared. Exchange market intervention was used to moderate the effect of outflows on the exchange rate, however the amount of NIR sales were only a fraction of the purchases during the previous phase.
- The exchange rate has been allowed to float freely while remaining restrictions to international capital flows have been lifted and the monetary policy interest rate is directed at targeting inflation within a 2%-4% band.
- Financial regulations have favored volatility adaptation, preparing economic agents for exchange rate and capital flow volatility:
  - Limiting the exposure to currency risk and interest risk of financial institutions in a global and flexible manner.
  - Considering the currency risk of bank clients when estimating credit or counterpart risk.
  - Facilitating the development of the foreign exchange forward

Nominal Exchange Rate (NER)

(Chilean pesos per US dollar)



I. The Crawling Exchange Rate Band

- Ability to apply independent monetary policy is weakened when the economy is integrated into world capital markets.
- To deal with a semi-fixed exchange rate regime (ER on the band's floor) and highly mobile capital was the main conflict for monetary policy during the 90s.
- The equilibrium exchange rate may vary over time. However, it is difficult to identify permanent and transitory changes.
- These conflicts were reflected in the CB's operating losses, due to interventions in the exchange-rate market: 0.5% of GDP annually. In fact, U$15 billion reserves were accumulated, which is equal to 11 months of total imports or 20% of GDP.

II. International Financial Integration

- International financial integration and liberalization of the capital account is a desirable goal for a developing country. It increases efficiency in consumption smoothing and financial market liquidity; favors risk diversification and policy discipline.

- However, liberalization should proceed gradually over time, and only after minimum conditions have been met; premature opening could result in important costs.

II. International Financial Integration

Conditions for successful International Financial Integration:

- Sound Macro and external position
  - robust indicators of international solvency and liquidity, including a sustainable current account deficit.
  - fiscal balance, a credible monetary authority and low inflation with real interest rate at internationally relevant levels.
- Healthy financial system, with appropriate prudential regulations.
  - Limiting exchange and interest rate exposures of financial institutions.
  - Limits of credit risk should be widened to consider the foreign currency exposure of bank debtors.
  - Favoring the institutional development and liquidity of local financial markets, bonds, foreign exchange spot and forward.

II. Financial Integration and the Exchange rate

- The "impossible trinity" problem becomes more relevant for the definition of the monetary & exchange policy as IKF restrictions are lifted. A floating currency allows for an independent monetary policy under volatile capital flows.
- Fixed or pegged exchange rate regimes require giving up monetary independence and are prone to speculative attacks. Only fixed exchange regimes perceived as irreversible can avoid confronting the costs of the subjective probability of a change in regime.
- An independent monetary policy is preferable to the extent that the macro shocks that affect the domestic economy are not relevant at the international level, provided that domestic institutional development gives credibility to monetary policy.

III. Surges in Capital flows and the Current Account

- Financial markets can be distorted by incomplete information, so external financing may not always be optimal.

- Informational problems and a shortsightedness may result in excessive risk taking that weakens the financial system.

- Surges in IKF may result in real exchange rate misalignments that create macroeconomic instability and increase the vulnerability to crisis contagion.

III. Surges in Capital Flows and the RER

- Surges in IKF imply significant deviations from sustainable external financing.
  - "Endogenous IKF surges"arise from inconsistencies in domestic economic policies that lead to a higher domestic interest rate that attracts IKF. The right policy mix allows avoiding this.
  - "Exogenous IKF surges" arise from changes in the supply of external financing, leading to a reduction in the domestic interest rate. They cannot be avoided, only absorbed via real appreciation or compensated through other policies.
  - Empirical results indicate that the IKF surge in Chile 1990-1997 had a mainly exogenous character, M&LT flows were negatively correlated to the domestic interest rate.

III. Exchange Rate Misalignments

- Exchange rate flexibility helps to absorb external shocks, but extreme values may represent real exchange rate misalignments and macroeconomic instability:
  - A floating currency is not a guarantee against RER misalignments. The high frequency volatility of the floating rate may be compensated in financial markets and is not harmful, but prolonged deviations or misalignments result in resource misallocation and macroeconomic instability.
  - An excessively depreciated rate could build up inflationary pressures and develop non competitive tradable activities that become rent seekers in the next phase.
  - An excessively appreciated real exchange rate could result in high private expenditure, a large and unsustainable current account deficit, and destroy competitive tradable activities.

III. Exchange Rate Misalignments and Intervention

- Central Bank intervention should be directed at modifying the arbitrage condition.
  - With financial integration, sterilized intervention is not effective in correcting misalignments, it only reduces exchange rate volatility of high frequency.
  - Sterilized intervention is costly, and even if successful in controlling the nominal exchange rate, it is not effective in controlling the real exchange rate.
  - Non sterilized intervention or changes in the interest rate can be used to affect the exchange rate. But monetary policy is not always available to attend exchange rate considerations.

III. Macroeconomic Targets and the Exchange Rate

- The inflation target can be actively followed under a floating rate regime, but a given exchange rate is not a guarantee for fulfilling the inflation target or for stabilizing the RER.
- Targeting the RER is inconvenient, the equilibrium RER shifts due to changes in productivity, in the trend terms of trade, or in resource endowments.
- Targeting a sustainable current account deficit over the medium-term seems to be more adequate for ensuring external sector equilibrium.
- The inflation target may be pursued using interest rate policy. But two targets leave us short of one instrument.

III. Instruments and the External Objective

In the case that the inflation and current account deficit targets cannot be simultaneously delivered by monetary policy, the following instruments may be considered:

- *Fiscal Policy*. Counter-cyclical fiscal policy with medium-term budgets with a stable structural fiscal balance helps to stabilize the current account. Pro cyclical consumption taxes may also be considered.
- *Regulation of IKF*. Directed at limiting their effect on the RER. Broad based price incentives of the URR form may be considered.
- *Transparency*. Prospective reports on external vulnerability may provide a clear risk evaluation to foreign investors, avoiding information problems that originate surges in IKF.

IV. Concluding Remarks

- The Chilean economy faced massive IK inflows, that despite intervention and the exchange rate band, resulted in real appreciation and a widening of the current account deficit.
- To moderate IK inflows, the Central Bank established price based disincentives (URR), which made a significant contribution, but had a declining effectiveness.
- In the last years, inflow pressures have eased and the exchange rate was allowed to float while remaining restrictions to IKF were removed.
- Advances in international financial integration should be gradual and implemented only to the extent that macro and financial conditions are met.

IV. Concluding Remarks

- The choice between independent monetary policy and control of the exchange rate becomes more pressing with international financial integration.
- Surges in capital flows may result in exchange rate misalignments and macroeconomic instability. The Central Bank intervention against them should be directed at modifying the arbitrage condition.
- More than the real exchange rate, a sustainable current account deficit should be targeted
- A flexible fiscal policy, price based capital flow regulations and information transparency are instruments that can be used to complement monetary policy for meeting the external objective.

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