



# Globalization and Monetary Policy in Chile

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# Outline

1. Monetary policy conduct by the Central Bank of Chile
2. Chile's international integration and implications for monetary policy
3. Monetary policy response to shocks in Chile's highly integrated economy
4. Conclusions

# 1. Monetary Policy Conduct by the Central Bank of Chile

# Monetary Policy at the CBCh

- Chile's current macroeconomic and monetary policy (MP) framework is the result of gradual evolution:
  - ✓ MP was subordinated to fiscal policy for many decades until mid-1970s when the fiscal accounts were put in order
  - ✓ MP lacked nominal anchor in 1975-1978
  - ✓ MP was subordinated to fixed exchange-rate anchor in 1979-82
  - ✓ MP was subordinated to resolution of banking crisis in 1982-1988
  - ✓ MP was constrained by crawling exchange-rate band in 1984-1999
  - ✓ The Central Bank of Chile (CBCh) adopted inflation targeting (IT) in 1991 and upgraded to full-fledged IT in 1999-2000

# Monetary Policy at the CBCh

- CBCh's MP is part of Chile's overall macroeconomic framework, based on “stool of three strong legs”:
  - ✓ Autonomous Central Bank that utilizes a full-fledged IT, with a floating exchange rate regime
  - ✓ Low level of net Public Debt/GDP ratio with a fiscal policy rule anchored to 1%-of-GDP structural fiscal surplus
  - ✓ Strong financial system with appropriate regulation and supervision

# Public Debt

(% of GDP)



Consolidated of Central Government and Central Bank

(p) Preliminary figures

# Fiscal Balance

(% of GDP)



(e) estimated

# Monetary Policy at the CBCh

- MP is aimed at achieving CBCh's main policy objective: annual headline inflation of 3% over 12-24 month horizon
  - ✓ 3% is mid-point of 2-4% IT range
- MP also contributes to output stabilization in the short term, but this aim is subordinated to attaining the IT
- CBCh has good track record in attaining inflation targets, reflected by Chile's 1991-2004 inflation performance and relative to other IT countries

# Inflation targets and inflation rates, 1990-2005



# Monetary Policy at the CBCh

- Chile's MP is at frontier of IT central banks in the world:
  - ✓ strong capability of analysis and research
  - ✓ forward-looking orientation
  - ✓ transparency
  - ✓ accountability
- However the CBCh, as other central banks that utilize IT, faces the normal uncertainty in forecasting inflation for a 12-24 month horizon

# Monetary Policy at the CBCh

- CBCh is ranked high among central banks in the world, regarding quality of its inflation report and downloads of its research papers.

## 2. International Integration and Implications for Monetary Policy

# International Integration and MP

- Globalization has a trade and a financial dimension
- On the trade side, Chile began opening up its highly restrictive foreign trade regime in the mid 1970s
- Trade liberalization has continued to date, as a result of unilateral tariff reductions and adoption of numerous trade agreements
- As of 2004, Chile's weighted average nominal tariff is 2.0%, and 65.6% of total trade is done with countries with trade agreements

# Average import duties and total trade, 1940-2004



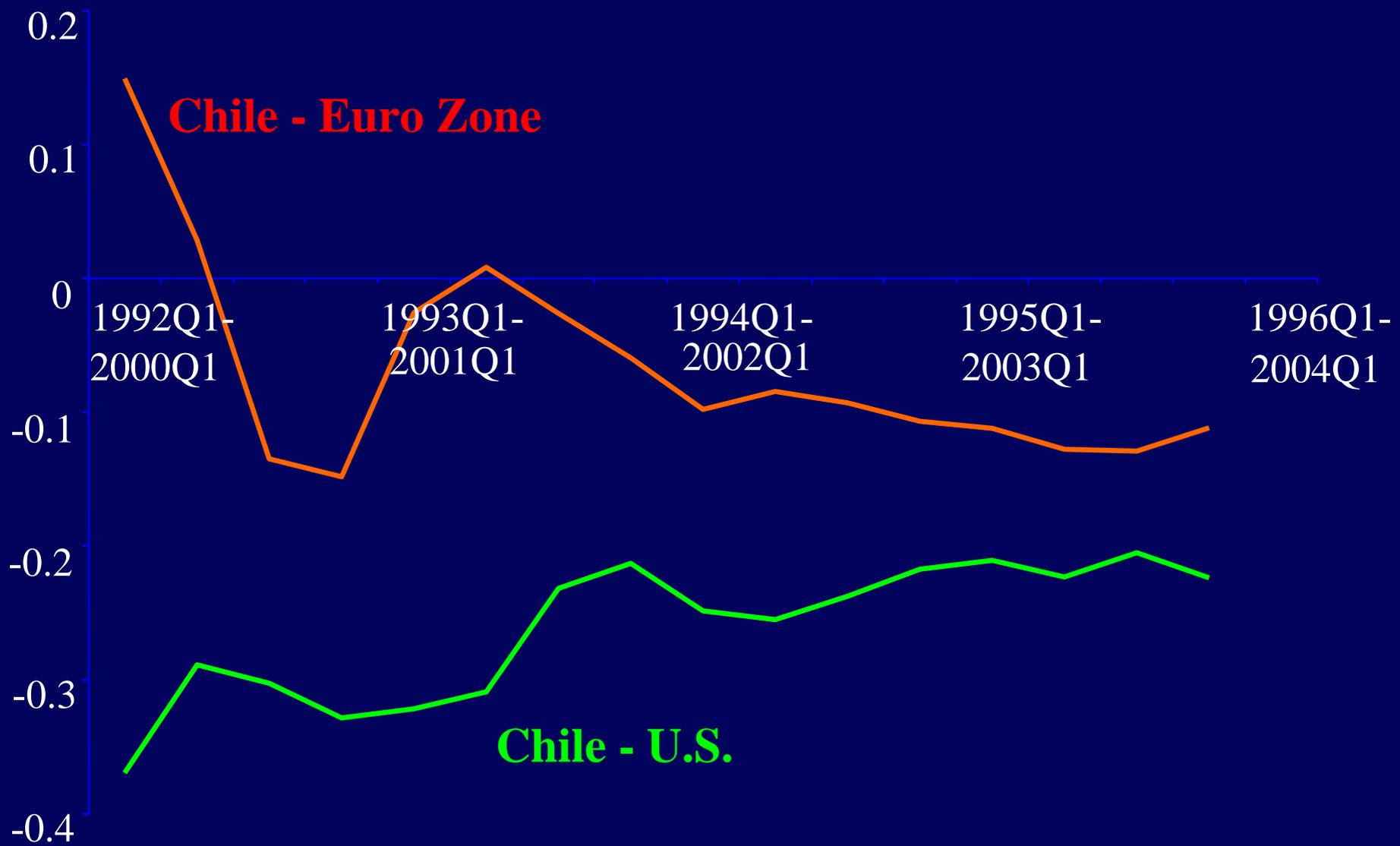
# International Integration and MP

- Chile's financial integration has been more gradual than trade integration
- Significant restrictions on capital flows were in place during the last decades, including unremunerated reserve requirements (URR) on capital inflows during 1991-98
- CBCh removed all remaining capital-account restrictions in 2001
  - ✓ Now Chile is fully integrated into world financial markets

# International Integration and MP

- Since Chile is highly integrated into international financial markets, how dependent is its monetary policy on policy decisions by industrial countries' central banks?
  - ✓ One significant element for assessing this question is considering correlations of domestic and foreign business cycles
- Chile exhibits a negative cyclical GDP correlation with both the U.S. and the Euro Zone. Hence Chile's business cycle is driven by strong idiosyncratic shocks

# Cyclical GDP correlations between Chile and the U.S. and the Euro Zone



# International Integration and MP

- Another dimension of monetary policy interdependence is the relation between domestic and foreign interest rates
- Correlation between Chile's monetary policy stance and that of the U.S. has increased over time, as a result of two structural features:
  - ✓ Chile's reduction in inflation rate and volatility, reflected in similar declines in level and volatility of interest rates
  - ✓ Chile's recent full financial integration has increased interest-rate arbitrage with international interest rates

# Monetary policy rates in Chile and U.S., 1986-2003



# International Integration and MP

- However, correlation of monetary policy rates in Chile and the U.S. is still low, at 0.41 during 1999-2004
- There is low correlation between fundamental shocks that affect the Chilean economy -ranging from copper prices to regional turmoil, earthquakes to gas import disruptions- and those affecting the U.S.
- Hence, Chile's MP does not follow passively the U.S.
  - ✓ Strong credibility of IT and a flexible exchange rate enhance independence of Chile's MP
- Although Chile is exposed to changes in foreign interest rates, this is only one of many shocks that the country faces and to which the CBCh responds.

# 3. Monetary Policy Response to Shocks in Chile's Highly Integrated Economy

# Monetary Policy response to shocks in Chile

- In analyzing MP response the usual distinction has to be made between different types of shocks:
  - ✓ Demand and supply shocks
  - ✓ Real and financial shocks
  - ✓ Low-persistence and high-persistence shocks
- Furthermore, shocks do not come alone
  - ✓ For example, the recent hike in oil prices (an adverse terms-of-trade shock for Chile) is a consequence of higher world growth and therefore should be considered jointly with a positive demand shock to Chile's export volumes and prices

# Monetary policy response to shocks in Chile

- We assess possible joint response of Chile's economy and the CBCh's to two separate shocks: (1) a supply shock (an oil price hike), and (2) a demand shock (higher aggregate spending), with varying degrees of shock persistence: temporary (1 quarter) and persistent (a half-life of 5 quarters)
- Subsequent simulations are based on the core macroeconomic model of the CBCh, which is used to organize our thoughts
  - ✓ Results reported here should not be interpreted as commitment to future policy actions, which are based on much broader set of information, projections and, most important, Board criteria
- Yet the model runs illustrate well some of the main issues that the CBCh considers in its policy assessment

# Oil price shock

- Consider a 30% rise in international oil prices
  - ✓ An oil price rise is a supply shock and thus has opposite effects on Chile's inflation and output levels
- CBCh response will depend on:
  - ✓ Relative weights attached to inflation deviations and output deviations in the CBCh's reaction function
  - ✓ Size of oil-price effects on output and inflation
  - ✓ Projected persistence of the shock
  - ✓ Credibility of monetary policy.

# Oil price shock

## ■ Output declines because:

- (i) firms raise prices to maintain markups,
- (ii) consumers reduce spending in response to lower income

## ■ Inflation rises because:

- (i) price increases by firms,
- (ii) direct impact of higher prices of oil derivatives on the CPI,
- (iii) delayed indirect effects due to backward CPI indexation

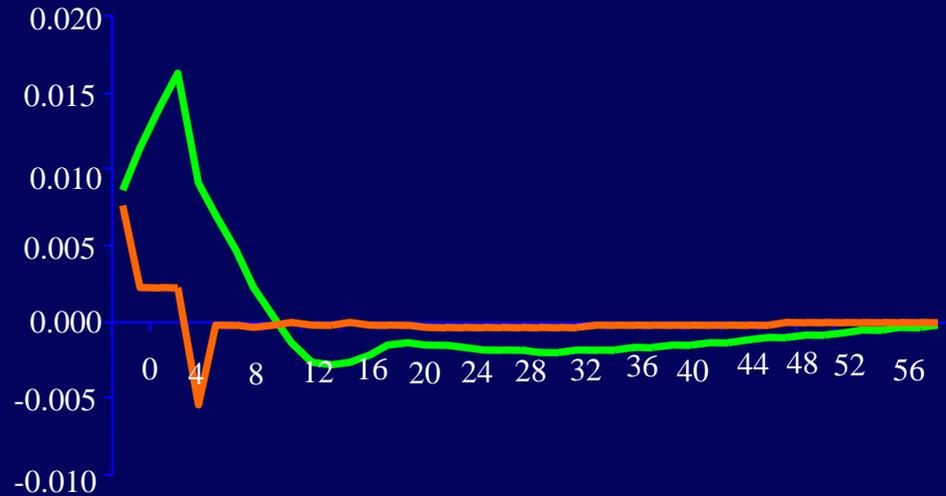
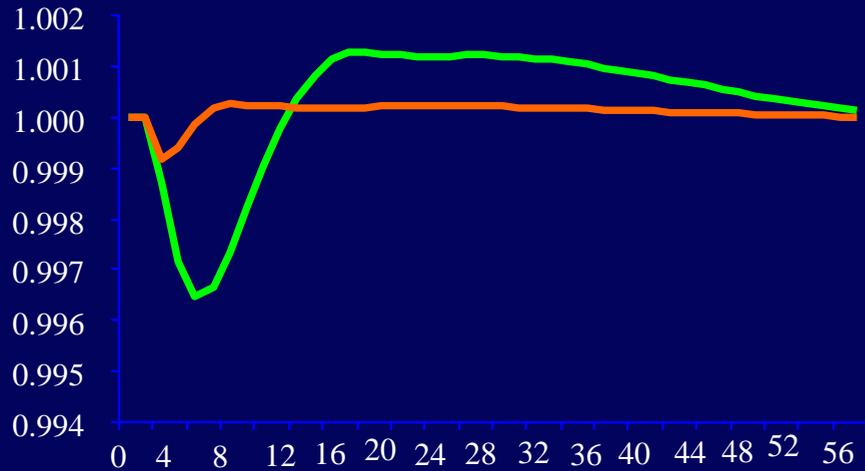
## ■ If the shock is temporary, current inflation rises for one quarter but inflation returns to 3% during the 5-8 quarter policy horizon. Output declines only slightly

- ✓ Hence the CBCh does not change policy rate

# Oil price shock

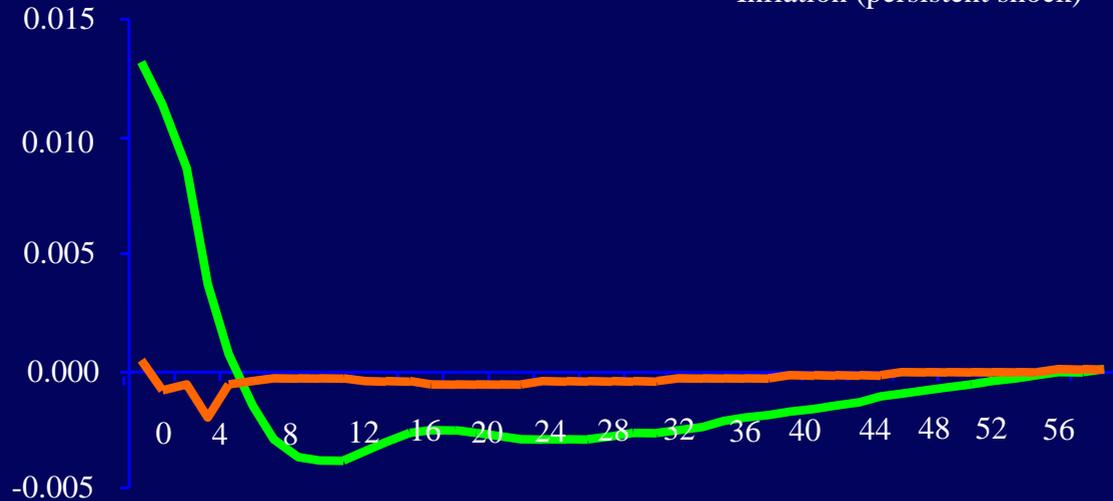
- However, if the shock is highly persistent, expected inflation at quarters 5-8 is still high
  - ✓ If this effect dominates the output effect, CBCh responds to the shock by raising domestic interest rates, as is the case in this simulation
- The rise in domestic interest rates lowers inflation and output declines further.

# Dynamic response to oil price shock



— GDP (persistent shock) — GDP (temporary shock)

— Inflation (persistent shock) — Inflation (temporary shock)



— Monetary policy rate (persistent shock)

— Monetary policy rate (temporary shock)

# 4. Conclusions

# Conclusions

- (1) CBCh's strong and coherent macroeconomic framework and a good track record in attaining inflation rates close to target levels has strengthened private-sector credibility in the Bank's conduct of monetary policy, enhancing policy effectiveness
- (2) Chile's strong integration into world financial markets increases arbitrage between domestic and foreign interest rates, potentially raising the correlation between domestic and foreign interest rates

# Conclusions

- (3) But shocks that affect Chile are not highly correlated with shocks that hit the U.S. or the world economy
  - ✓ Hence, the Central Bank of Chile does not follow passively monetary policy elsewhere but is geared to attaining the CBCh's policy objective, foremost the 3% inflation target over the 12-24 month policy horizon
  
- (4) The art and science of prudent monetary policy is continuously tested by a wide variety of idiosyncratic shocks that hit Chile and require careful policy response.

