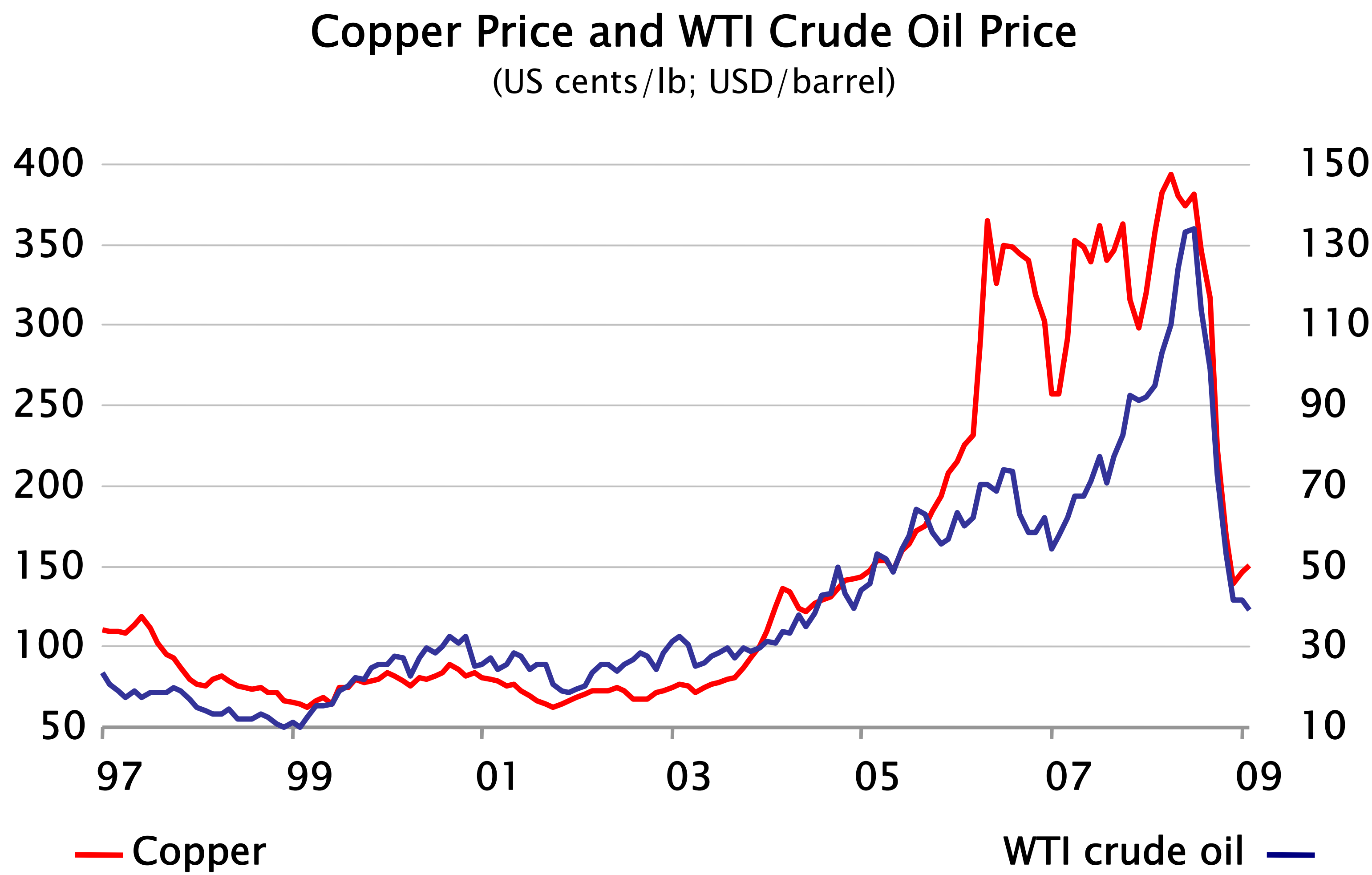
Rise and Fall in Commodity Prices: Economic Impact and Policy Responses

José De Gregorio
Governor
Central Bank of Chile

Outline

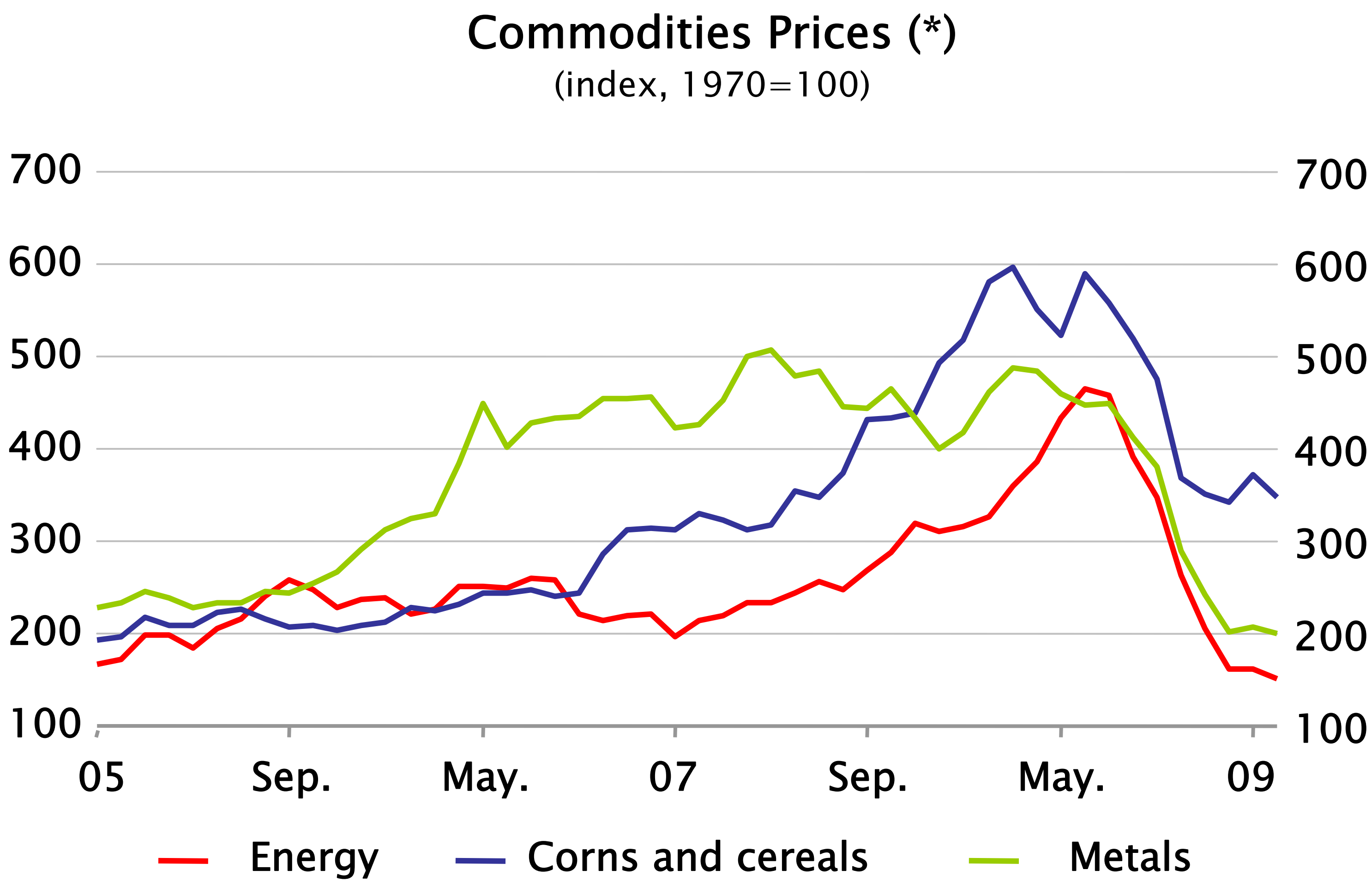
- The rise and fall in commodity prices: causes.
- The rise and fall of commodity prices: consequences on inflation and policy responses.
- The case of copper in Chile.
- Industrial vs. commodity exports in the crisis.

The Rise and Fall: Causes



Source: Bloomberg.

The Rise and Fall: Causes



(*) Index GSCI initially elaborated by Goldman Sachs and recently by S&P.
Source: Bloomberg.

The Rise and Fall: Causes

- *World Growth:* Strong growth and evidence of declining impact of oil on the economy (Blanchard and Galí, 2008; De Gregorio et al., 20008) requires a greater increase in prices to reduce demand. The extreme increase in oil prices is result of the low sensitivity of the world economy to oil I a high growth environment.

- *Structural change:* World growth was biased toward emerging Asia, which demand relatively more food, energy, and commodities in general, so the change in relative price. Also some constraints on the supply side.

- *Financial factors and speculation:* Minor role, no inventory accumulation. However, more financial activity may increase volatility, resulting in greater and short-lived spikes.

- *Others:* depreciation US dollar, monetary expansion and others.

The increase in oil prices was mostly the result of high growth, specially en emerging economies.

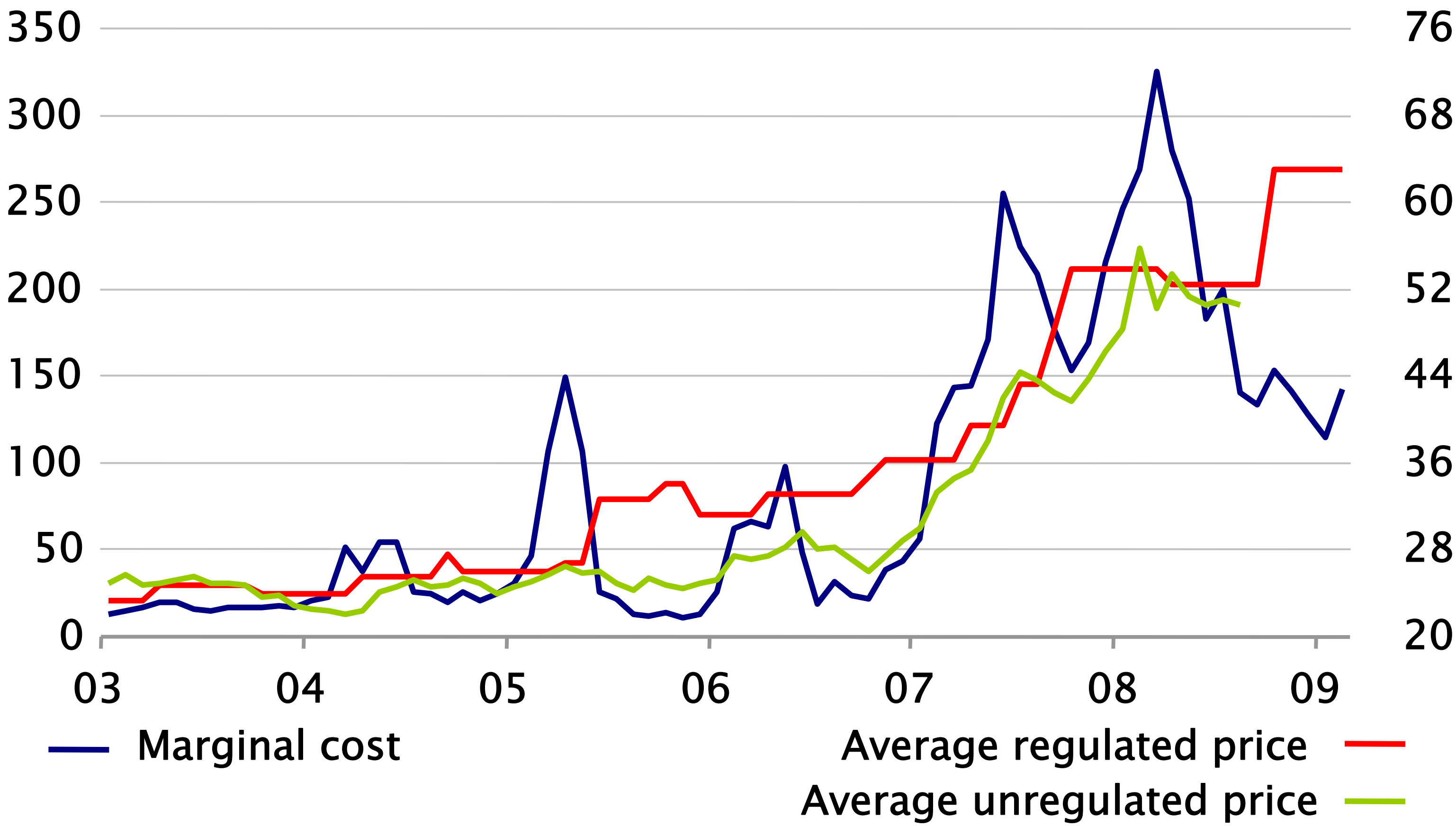
The Rise and Fall: Consequences on Inflation and Policy Response

- The impact on inflation depends on the degree for pass-through from international prices to domestic prices, and depends to a large extent on the degree of distortions in the price-setting mechanism.
- Chile is an interesting case of sharp rise and sharp fall in inflation stemming from external factors. Very large increase in inflation.
- Relative price changes must happen, but monetary policy must avoid undesirable second round effects.
- Additional monetary policy tightening starting June 08 to limit inflation persistence.
- Process of tightening stopped when the inflation outlook improved, due to sharp decline in world activity. Since commodity prices started falling, Chile has had one of the largest decline in inflation.
- Then, during the first quarter of this year, the bank initiated an unprecedented monetary loosening.

The Rise and Fall: Consequences on Inflation and Policy Response

Central Grid Electricity (SIC) Generation Cost

(USD/Mwh.; CLP/Kwh.)

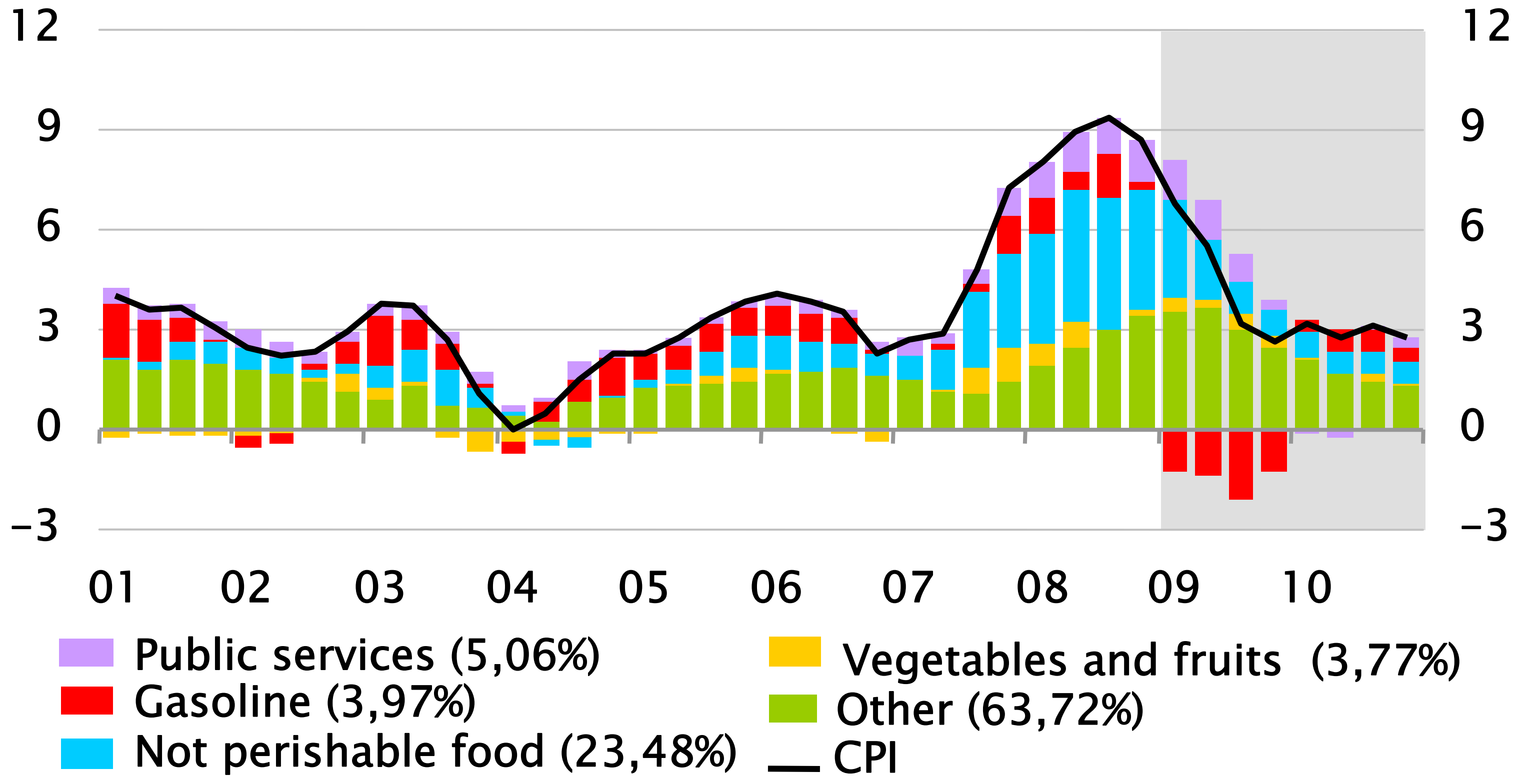


Source: National Energy Commission.

The Rise and Fall: Consequences on Inflation and Policy Response

Contribution to annual CPI (1) (2)

(percentage points)

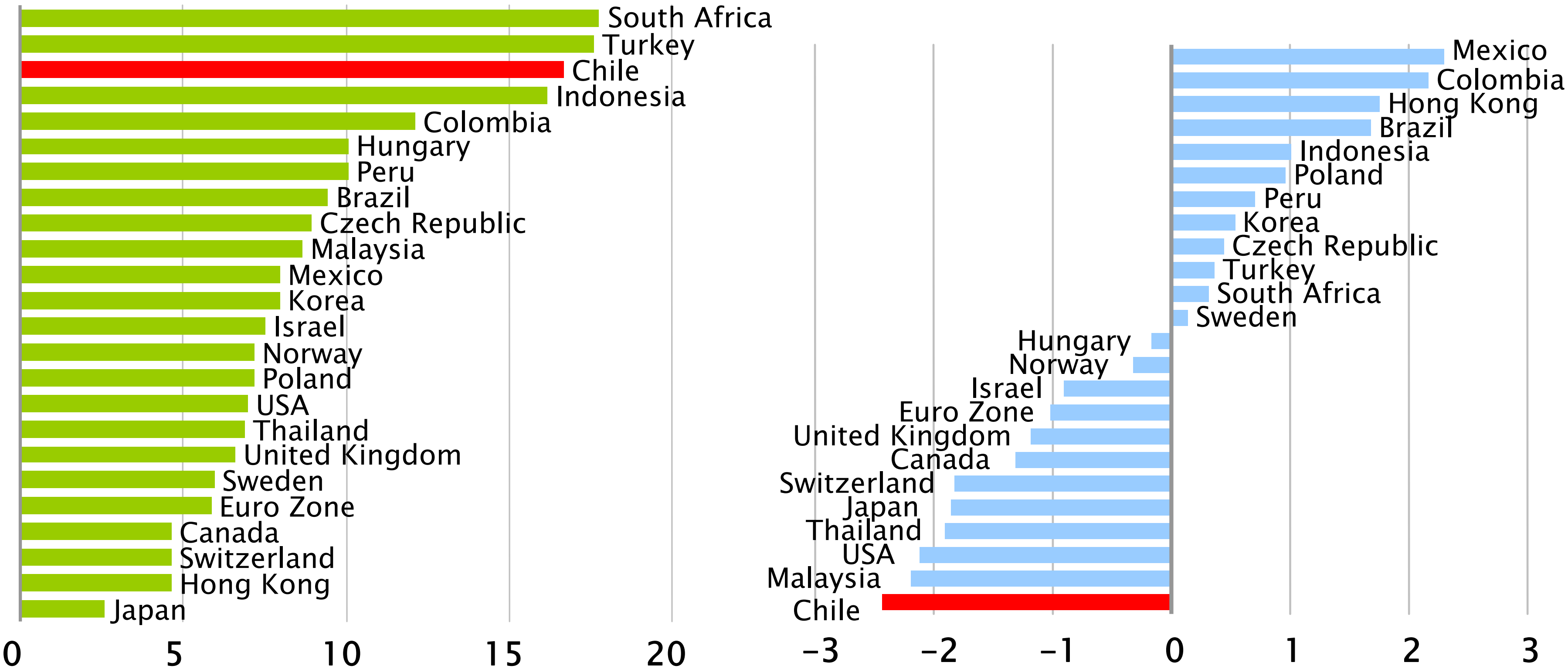


(1) Gray area since first quarter of 2009, corresponds to the desegregation of inflation forecast in the baseline scenario on the Monetary Policy Report (January 2009).
(2) In parenthesis, the proportions in CPI basket from 1998.
Source: Central Bank of Chile.

The Rise and Fall: Consequences on Inflation and Policy Response

CPI: Cumulate Change by Country

(percentage)



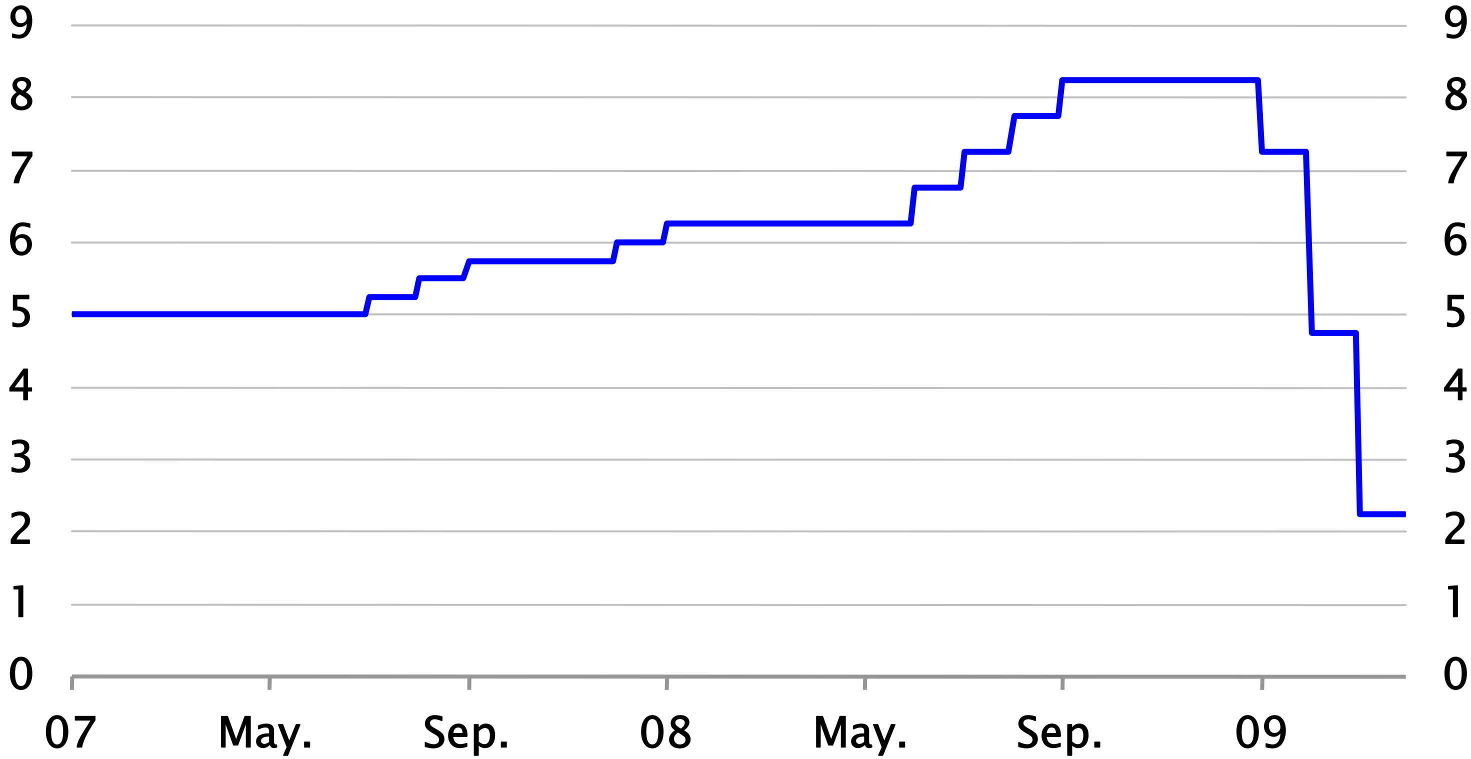
(a) Between January of 2007 and October of 2008

(b) Between October of 2008 and January/February of 2009 (*)

(*) For Canada, Hong Kong, Hungary, Israel, Japan, Malaysia and United Kingdom data corresponds until January of 2009. For the others, until February of 2009. Sources: Statistics institutions of each country.

The Rise and Fall: Consequences on Inflation and Policy Response

Monetary Policy Rate
(percentage)



Source: Central Bank of Chile.

The Case of Copper in Chile

- In the past, the Chilean economy has always been severely affected by copper prices. Large activity booms during high copper price periods and busts when copper price fell. Not now. In this decade copper price has had sharp fluctuations, but there was no boom-bust, as used to be in the past.

- Currently, given the macroeconomic policy framework (fiscal-rule, inflation target plus flexible exchange rate and adequate access to foreign financing), and characteristics of the copper sector (foreign owned and public company and limited spillover effects on the whole economy), its effects are much more limited.

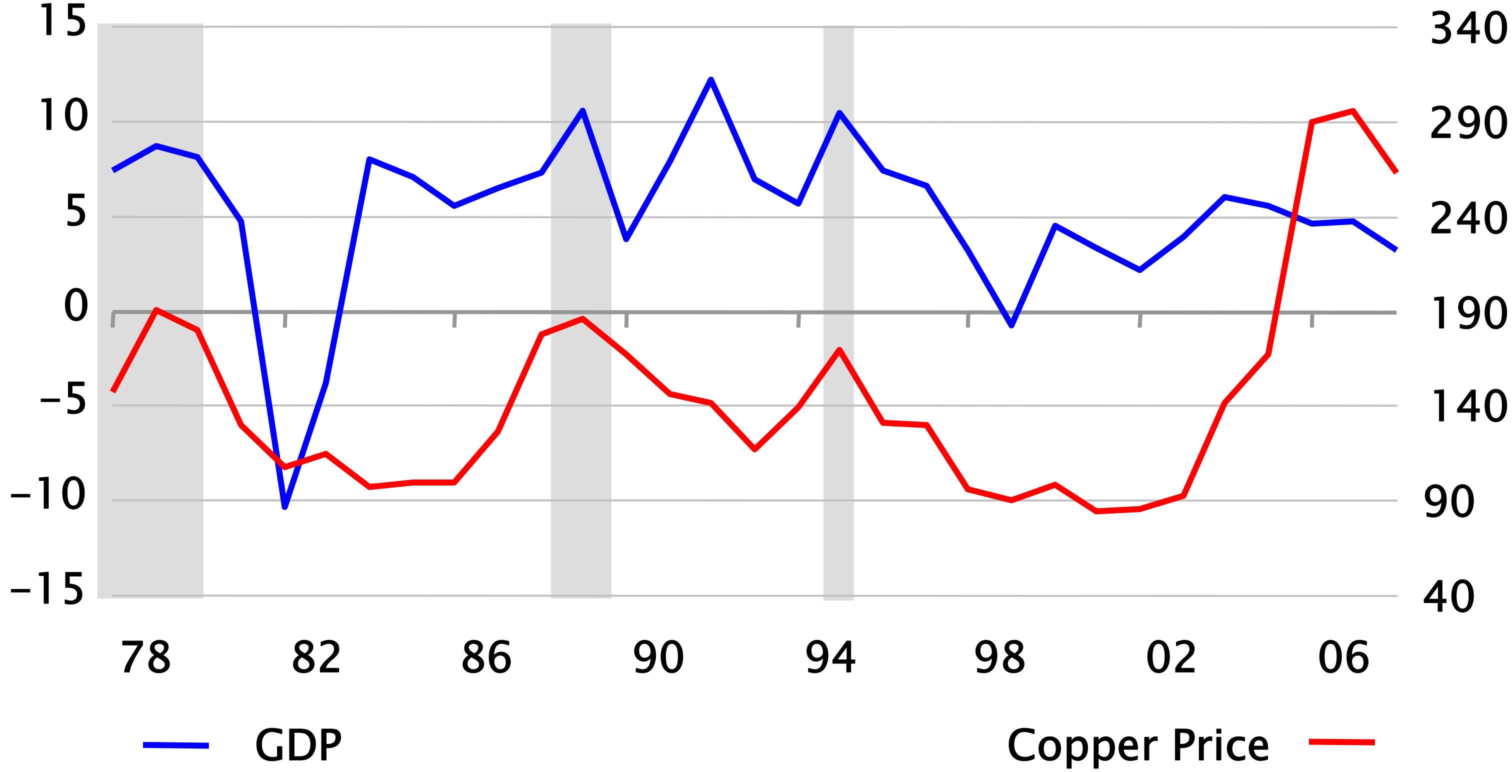
- Copper has low impact on the business cycle, but still is very important in national wealth.

- Much more important in recent economic performance has been the price of oil. Significant effects on inflation and activity.

The Case of Copper in Chile

GDP Growth and Real Copper Price (*)

(annual change, percentage; US cents per pound)

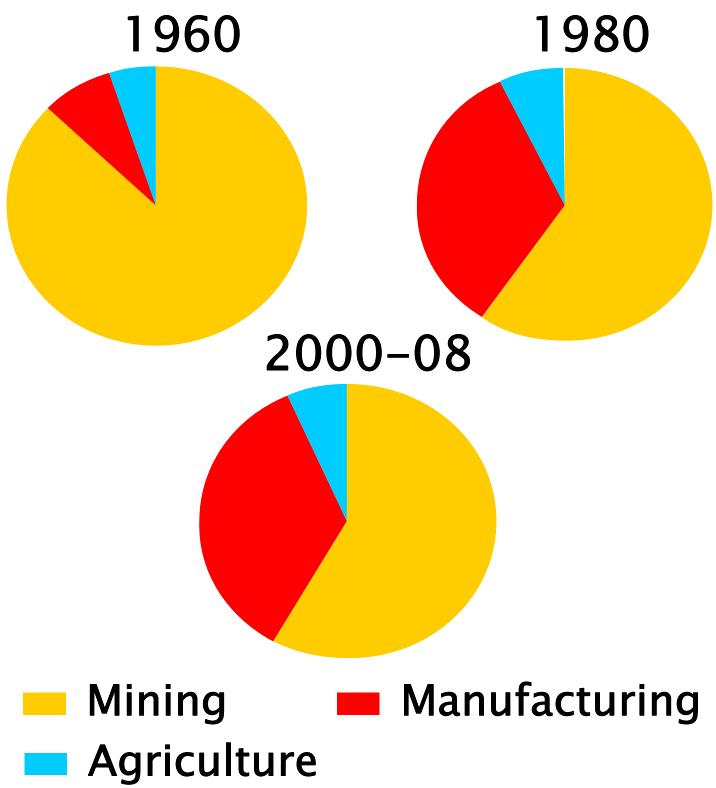


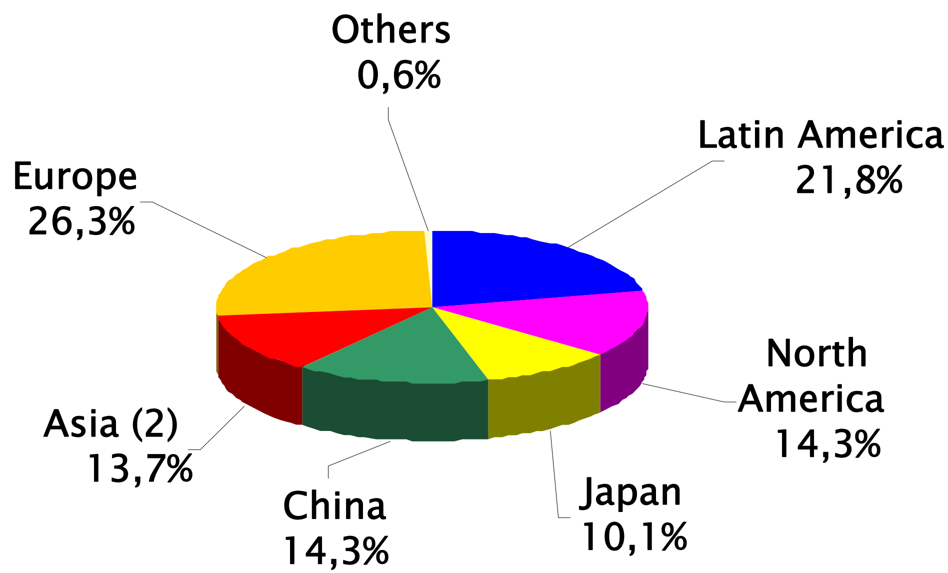
(*) Copper price deflated by U.S. Commodity PPI (2005=100).
Sources: Central Bank of Chile and Cochilco.

The Case of Copper in Chile

Chilean Exports by Economic Sector and Destination (1)

(share of total exports, percentage)

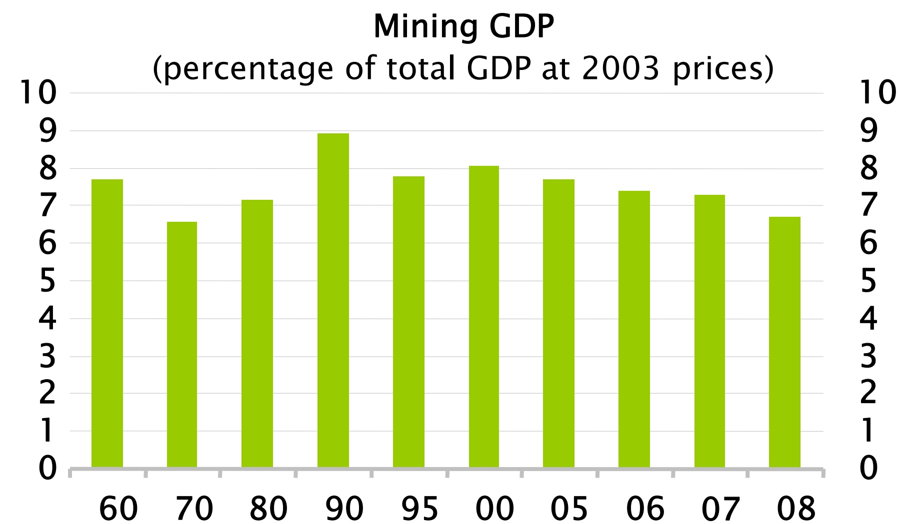


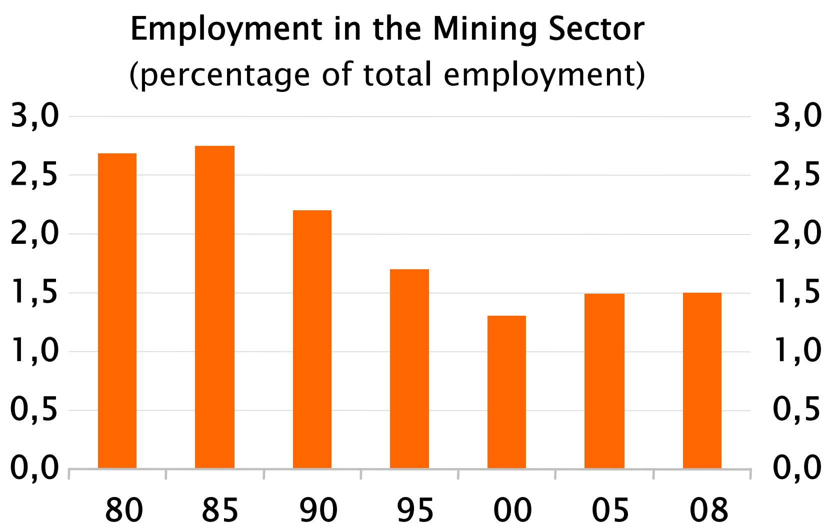


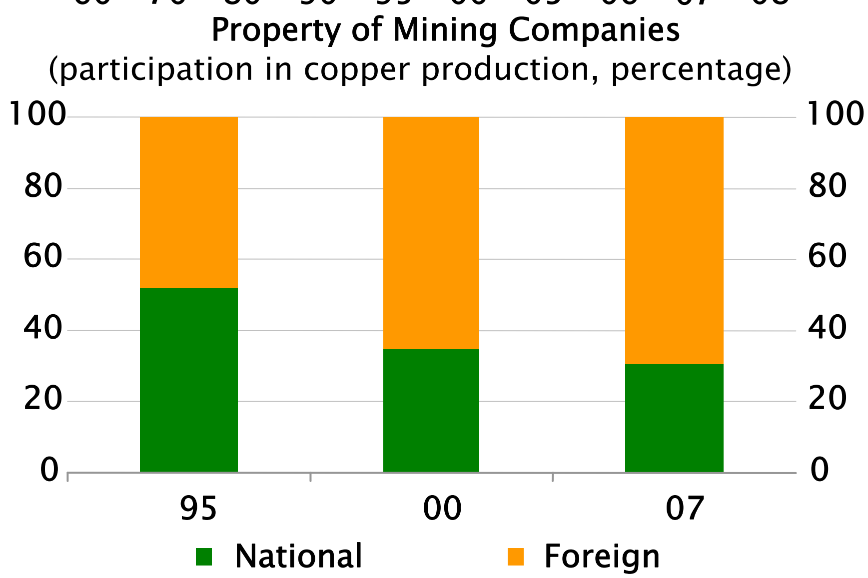
(1) Export destination data as of 4Q08.
(2) Asia excluding China and Japan.
Source: Central Bank of Chile.

The Case of Copper in Chile

Mining accounts for less than 10% of Chile's GDP and less than 2% of total employment. A large fraction of mining is foreign-owned and the copper price mostly affects fiscal revenues, through state-owned copper enterprise and taxes.

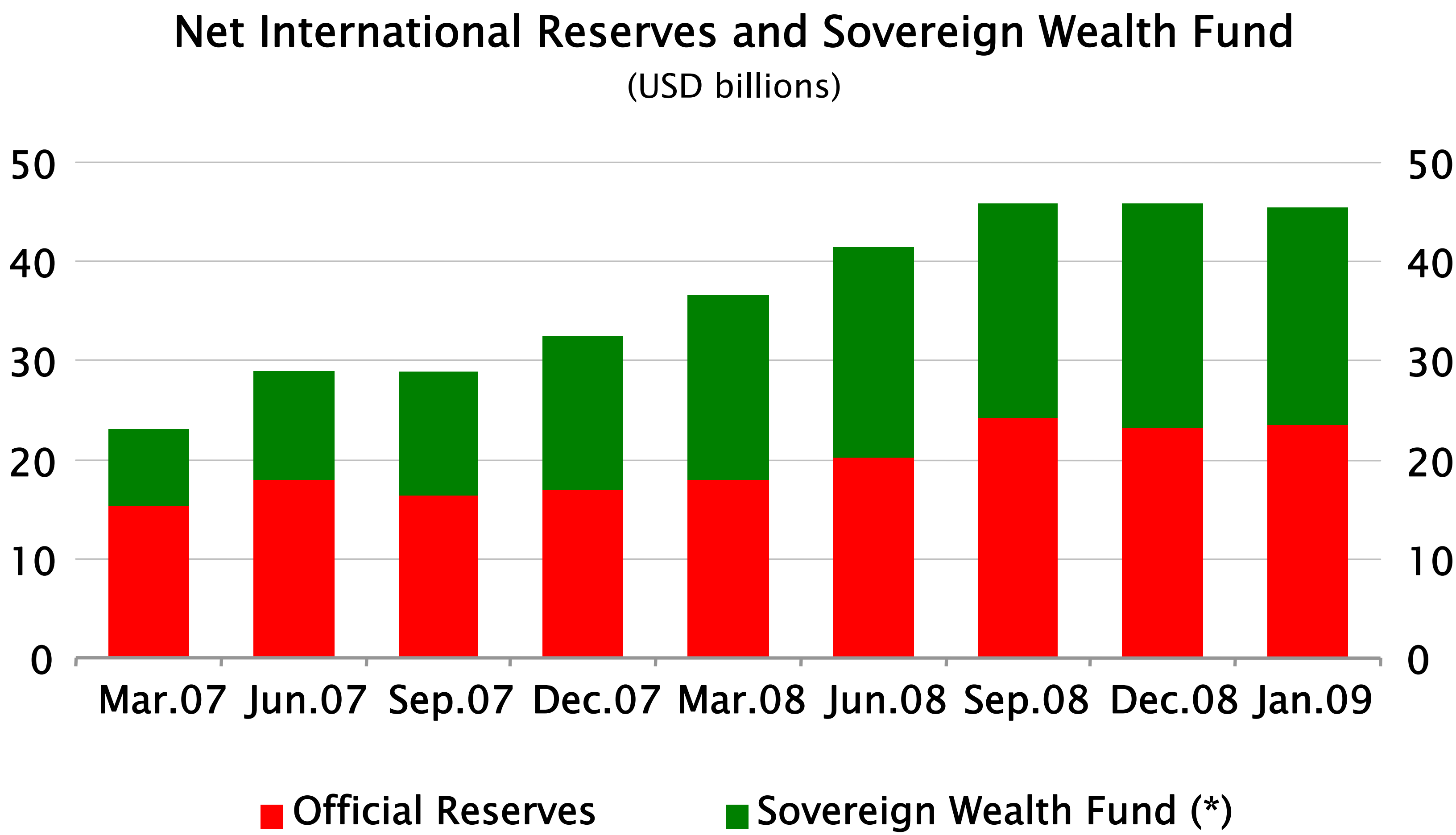






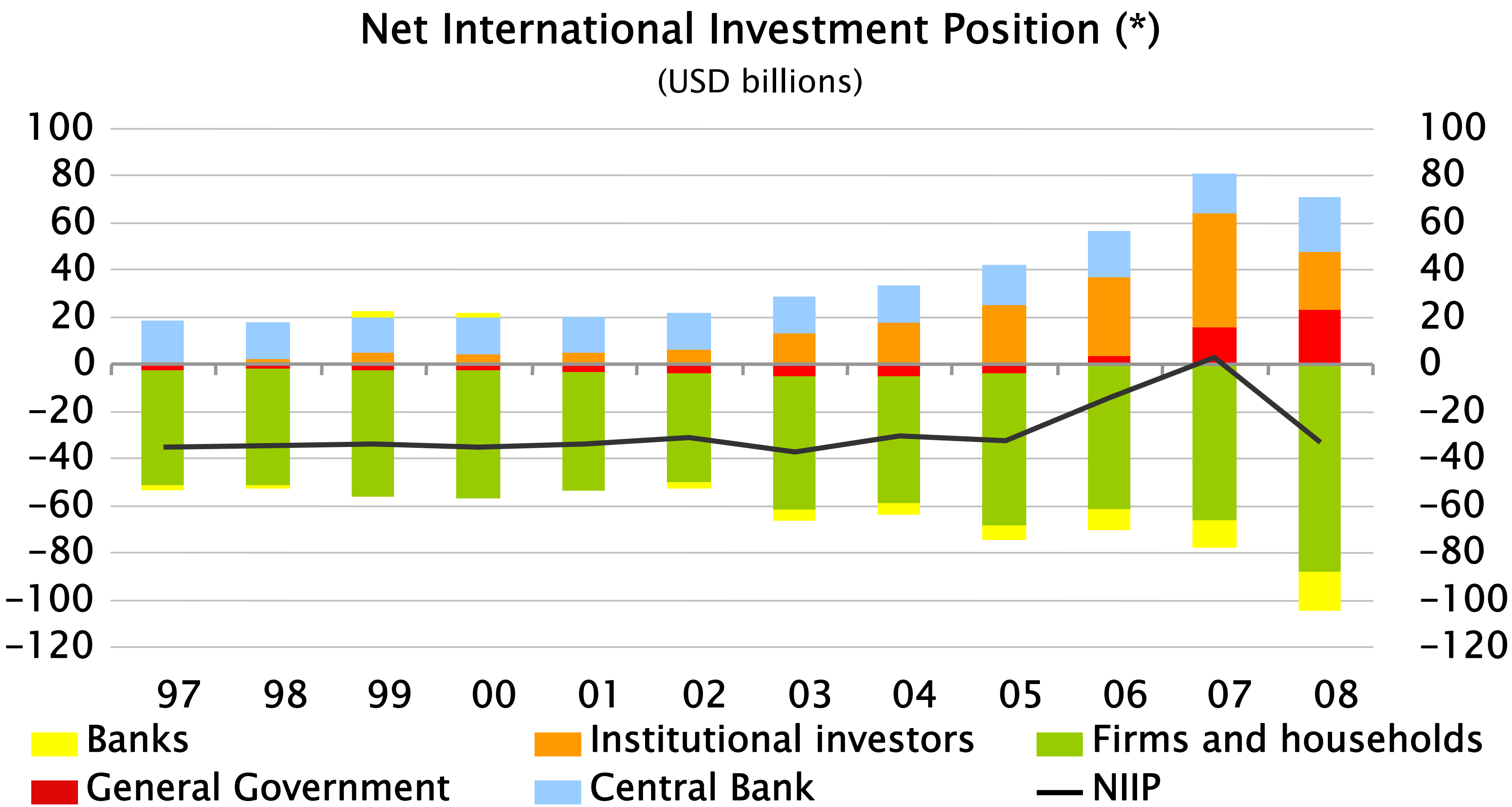
Sources: Central Bank of Chile, Cochilco and National Bureau of Statistics.

The Case of Copper in Chile



(*) Includes the Pension Reserve Fund (PRF) and the Economic and Social Stabilization Fund (ESSF).
Sources: Central Bank of Chile and Ministry of Finance.

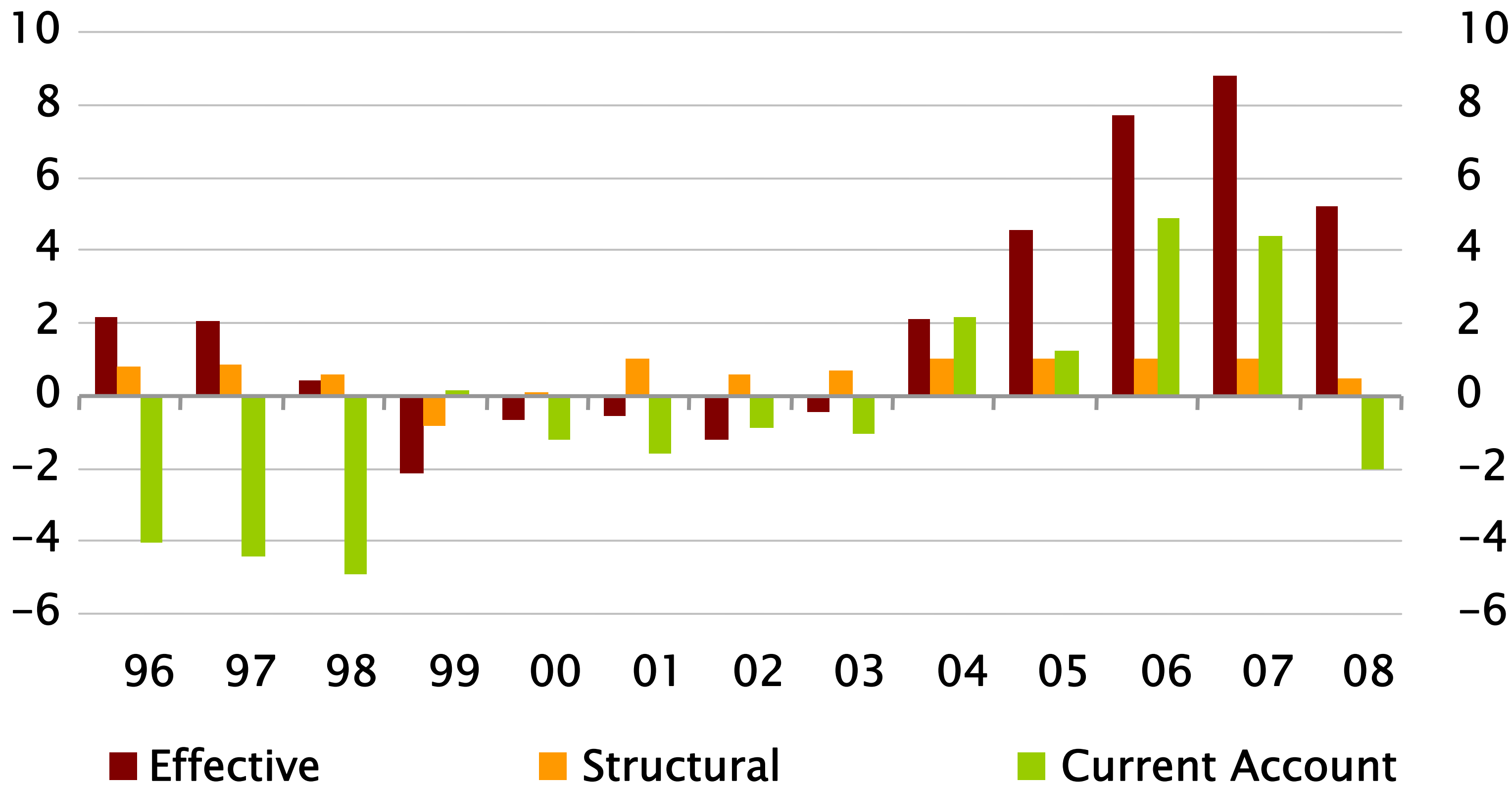
The Case of Copper in Chile



(*) Bars represents nets changes of accounts.
Source: Central Bank of Chile.

The Case of Copper in Chile

Effective and Structural Fiscal and Current Account Balances
(percentage of GDP)

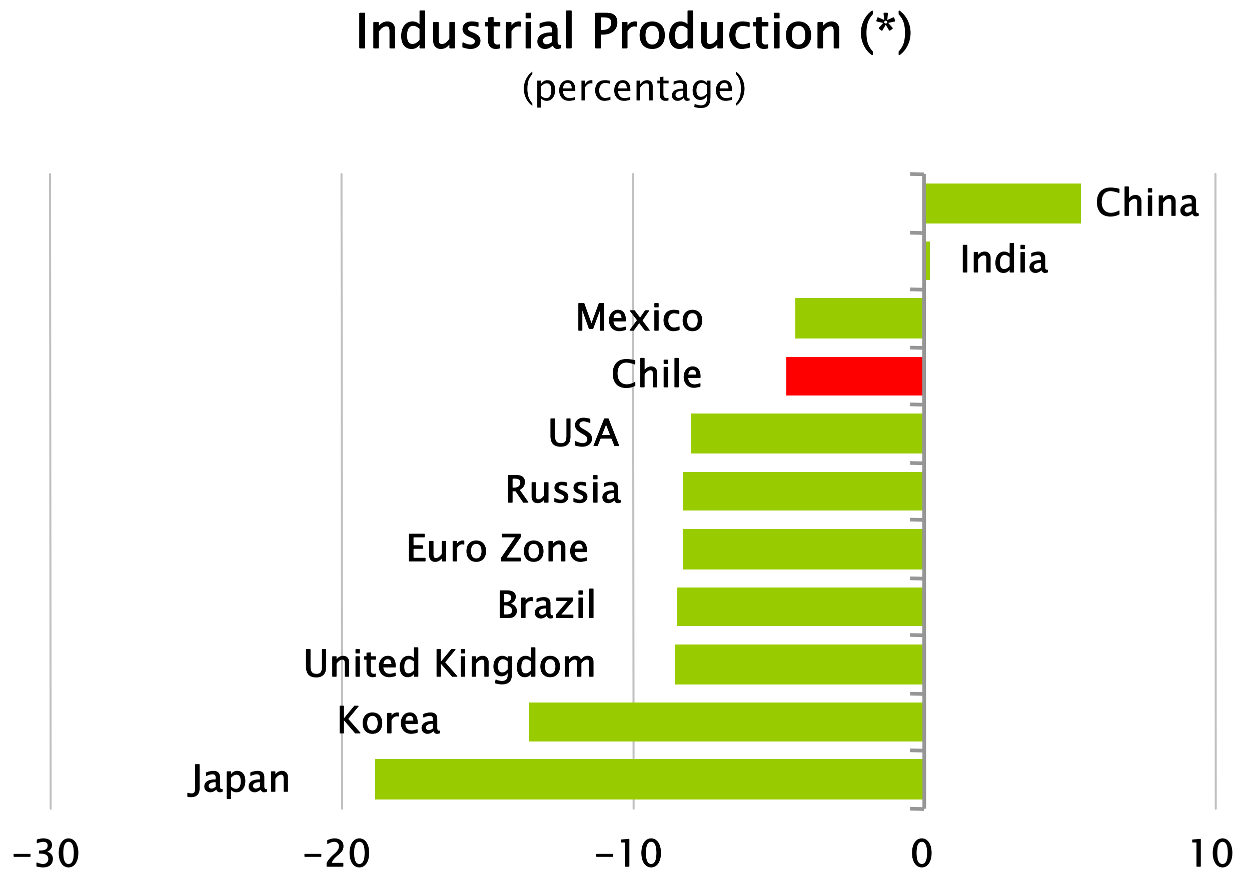


Source: Central Bank of Chile.

Industrial vs. Commodity Exports in the Crisis

- The current crisis has impacted severely industrial activity in the world.
- Commodities have been mostly affected by price declines rather than quantity constraints.
- The decline in commodity prices will affect more adversely countries where recent macroeconomic improvements depended more heavily on the rise of commodities. Chile is not the case.
- The evidence on the dependence of macroeconomic performance on commodity prices is mixed (e.g., Izquierdo and Talvi, 2008; Osterholm and Zettelmeyer, 2007).

Industrial vs. Commodity Exports in the Crisis



(*) Average annual change of industrial production between October of 2008 and January of 2009.
Sources: Central Bank of Chile and CEIC Data.

Industrial vs. Commodity Exports in the Crisis

Source: Banco Central de Chile.

References

Blanchard, O. and J. Galí (2007), "The Macroeconomic Effects of Oil Price Shocks: Why Are the 2000s So different from the 1970s?", NBER Working Paper N°13368.

De Gregorio, J., O. Landerretche and C. Neilson (2007), "Another Pass-Through Bites the Dust? Oil Prices and Inflation", *Economía*, volumen 7, número 2, pp. 155-196.

Izquierdo, A. and E. Talvi (2008), *All the Glitters may not be Gold: Assesing Latin America´s Recent Macroeconomic Performance*, Washington DC: IADB.

Osterholm, P. and J. Zettelmeyer (2007), "The Effects of External Conditions on Growth in Latin America," IMF Working Paper, WP/07/176.