Capital Controls – Are they a free lunch?

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Warning!

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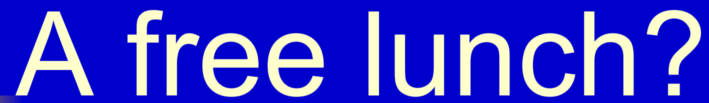
The problem: “excessive” capital inflows

- All over Asia, countries have been deluged with capital inflows over the past few years, putting (unwanted) upward pressure on exchange rates
- This has posed a policy dilemma, especially for countries with high inflation
- They wish to maintain relatively high interest rates to quell inflation
- But these high interest rates only attract more capital inflows, aggravating the problem

The solution: capital controls?

- So far, efforts to manage capital inflows have focused on intervening to limit appreciation, and then sterilizing to limit the impact on liquidity
- But some have suggested a more direct solution
- They've argued that if inflows are considered "excessive", why not just discourage them from coming in?
- Moreover, there is an attractive precedent for doing this
- Chile imposed a tax on inflows in the 1990s, without damaging growth
  - GDP growth was maintained around 7 percent per year
  - The current account deficit averaged around 3 percent of GDP
  - Inflation was reduced from about 25 percent to 4 percent



- Could capital controls represent the elusive “free lunch”?
- Let’s take a look at the Chilean case

- How did Chile’s system work?
- How well did it work?
- What were the costs?

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Chile's strategy

- Two rounds: Chile imposed capital controls on inflows twice in the past three decades:
  - 1978-82
  - 1991-98

- Reasons: Authorities were finding it difficult to manage capital inflows
  - Inflows had generated a sizeable real exchange rate appreciation – by around 20 percent between 1985 and 1990
  - Inflows were also making it difficult to manage the money supply, and rein in inflation

- Basic strategy: Foreign portfolio investors were required to make non-interest bearing deposits at the central bank
  - Regulation was an Unremunerated Reserve Requirement (URR)
  - System was called the *encaje*

Theoretical basis for the *encaje*

- Inflows were being attracted by the differential between Chilean and US interest rates
- The *encaje* aimed to tax away this differential; it was a "Tobin" tax
- Tax rate varied from ½ percent to 5 percent
  - Rates varied through time, depending on the level of the URR and the opportunity cost
  - But generally, higher rates applied to shorter maturities
  - Rates on longer maturities were still significant

Rate of tax by maturity

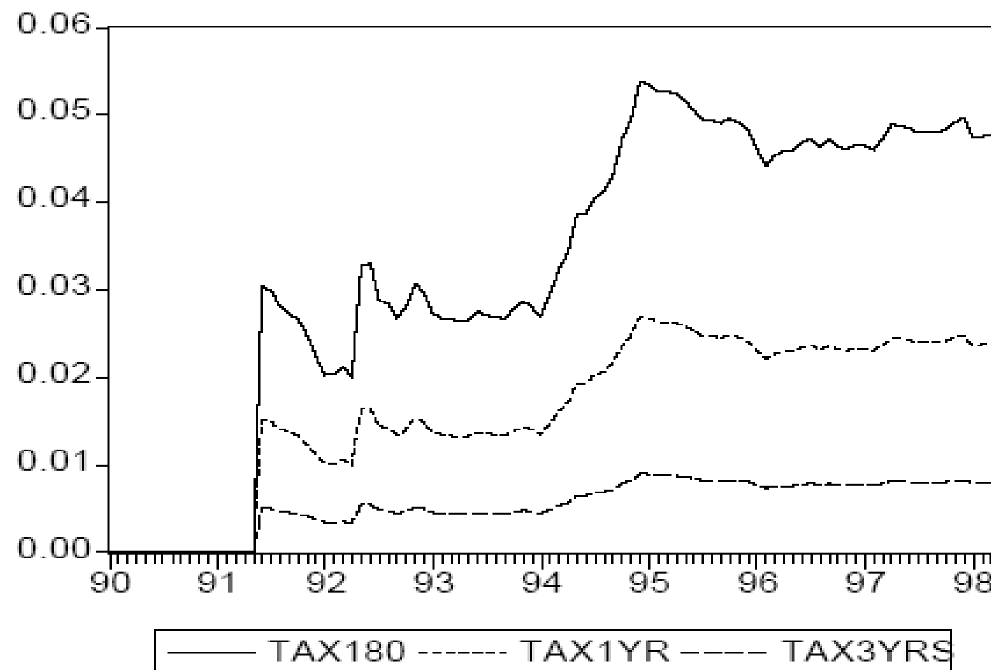


Figure 1: Tax Equivalent of Capital Controls: Stay of 180 days, 1 year and 3 years

Nature of *encaje*

- First round
  - Inflows with maturities below 24 months were prohibited
  - URRs of 10-25 percent imposed on those with maturities from 24 to 66 months
- Second round
  - URR of 20 percent
  - Requirement applied for one year, or for entire duration on inflows less than one year

But modifications proved necessary

- Initially, the URR applied to foreign loans except trade credits
- But the private sector found ways around the controls
  - Claimed that inflows were “trade credits” or “loans for FDI”
- So, controls were tightened
  - Coverage extended to trade credit, foreign currency deposits in commercial banks, secondary depository receipts and FDI of a potentially speculative nature
  - In 1995, controls were extended to Chilean stocks trading on the NYSE
  - URR raised to 30 percent
  - Holding period raised to 1 year minimum

Roadmap of presentation

- How did Chile’s system work?
- How well did it work?
- What were the costs?

What were Chile’s objectives?

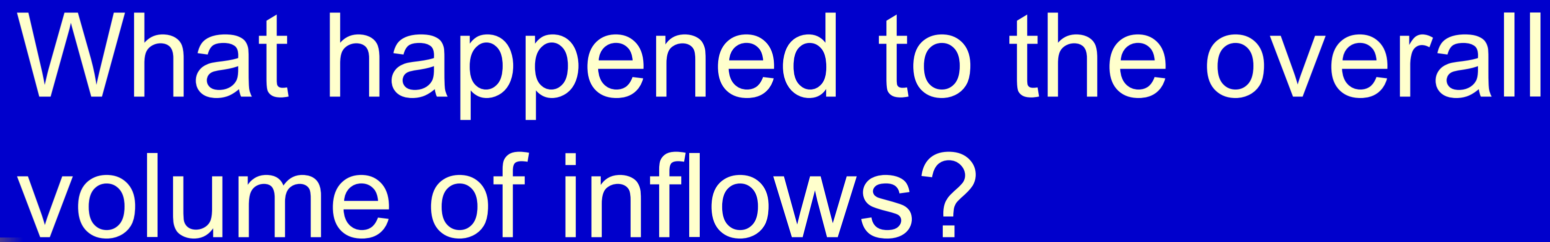
- In imposing the *encaje,* Chile had three main objectives:
  - Regain monetary independence
  - Slow the volume of capital flowing into the country and tilt its composition toward longer maturities
  - Reduce real exchange rate appreciation

Did controls give Chile some monetary independence?

- Studies found that they did, although the extent was unclear
  - De Gregorio et al (1998) found that a 30 percent URR allowed domestic rates to rise by 140 bps
  - But Edwards (1999) and Soto (1997) found a much smaller effect

How did they affect inflows?

- Official evidence suggests that the controls succeeded in lengthening maturities
  - First Round: average maturity of inflows was 59 months between 1979 and 1981
  - Round Two also seemed to work:
    - In 1990, 90 percent of inflows were short-term
    - By 1992 the proportion had fallen to 29 percent
    - By 1996, to 3 percent
  - But BIS data suggests that the share of short-term debt actually rose!



What happened to the overall volume of inflows?

- In the first year, there was a sharp fall in inflows
- But then the effect seemed to wear off
- Soto (1997), DeGregorio (1998), and Valdes-Prieto and Soto (1998) found that controls did not affect aggregate capital inflows
- Unsurprising result, considering that average capital inflows amounted to 7.3 percent of GDP in 1990-95 and 11.3 percent of GDP in 1996-97

And the real exchange rate?

- From April 1991 to September 1998, the real exchange rate appreciated by a further 28 percent (in addition to the earlier 20 percent)
- Valdes-Prieto and Soto (1996) found the controls had no effect on the exchange rate level
- Edwards (1999) found the same thing
- So did De Gregorio et al (1998)

Summary of benefits

- Controls had some effect on:
  - Monetary independence
  - The composition of inflows

- But not much measurable effect on:
  - The volume of inflows
  - The real exchange rate

- How did Chile’s system work?
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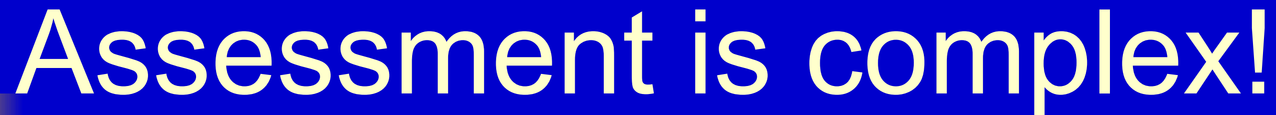


Assessment is complex!

- During the *encaje* period, growth remained rapid
- But at the same time, the authorities implemented sweeping reforms
- So, isolating the impact of the controls requires some careful analysis
- What has the literature found?

Two types of costs

- Enforcement costs
- Distortions to the economy:
  - Cost of capital
  - Financing decisions
  - Market discipline

Controls can be difficult to enforce

- Chile has sound institutions, strong rule of law, and low levels of corruption
- Still, the government had to constantly modify the *encaje* to close loopholes discovered by firms
- Examples:
  - Types of inflows covered
  - Currency of tax payment
  - Restrictions on rolling over maturing investments

Authorities' assessment

- "Since the URR was not applied to all foreign capital inflows, the regulations tended to lose their effectiveness over time, as ways of circumventing them were developed channeling the inflows through exempted windows."
- "Some of the identified gaps were closed and the coverage increased, [but] others could not be fixed because of legal limitations or the strong actions of the lobbies."
  - --Le Fort (1999)

Controls raised the cost of capital

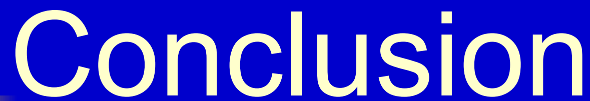
- Forbes (2003) and Gallego and Hernandez (2003) found that the *encaje* increased funding costs and reduced investment by smaller companies
- Edwards (1999) noted that the cost of funds for smaller firms reached 24 percent in 1996

Controls distorted financing decisions

- Gallego and Hernandez (2003) found larger firms responded to the *encaje* by raising capital
- Cifuentes, Desormeaux, and Gonzalez (2002) found that after the *encaje* was extended to ADRs, liquidity and investment in the domestic stock market plummeted
- Meanwhile, smaller firms actually increased their short-term financing, by delaying tax payments and obtaining suppliers' credits

Controls can also reduce market discipline

- Couldn’t find evidence for Chile
- But there’s much evidence from other countries
- Li, Morck, Yang, and Yeung (2004) examined “synchronicity”, the extent to which individual stock prices move up and down together
- They found that countries with more open capital markets had greater firm-specific content in stock prices – more market discipline and more efficient pricing



Conclusion

- The *encaje* had only limited success: it gave Chile some monetary independence, but it did not “solve the inflow problem” – capital inflows remained large, while the exchange rate kept appreciating
- Moreover, it required ever more complex regulations, as the private sector discovered loopholes
- These regulations imposed costs, which fell disproportionately on the smallest firms
- By 1998, capital inflows to all Emerging Markets were drying up, eliminating the inflow problem
- So, the *encaje* was lifted, and has not been brought back since

Bottom line

- Capital controls are no free lunch!

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