

EC 312 International Economics

2003 Handout No. 8

Possible Exchange Rate Regimes

This Handout presents some of the arguments for the choice of different Exchange Rate regimes – mainly Fixed (Pegged) and Floating.

It includes some limited discussion of alternative nominal anchors namely Monetary Targets and Inflation Targets

Choosing an Exchange Rate Regime

- Choice between FIXED (including Currency Board and band-limited fixed rate systems) and FLOATING exchange rates is not always clear-cut.

Fixed exchange rates:

- provides a **nominal anchor** to prices (help to bring down inflation);
- promotes **fiscal discipline** or contribute to maintaining it once achieved;
- generate credibility gains, in the form of lower expectations of inflation and devaluation.

Arguments against fixed exchange rate:

- The evidence on the disciplinary effect of a fixed exchange rate on fiscal policy is inconclusive.

Continued

- Credibility gain with pegging to a low-inflation country tends to be limited . It also requires significant **domestic** policy and institutional reforms
- **Flexibility** in the design of exchange rate policies is also necessary to:
 - avoid excessive real appreciation;
 - offset the impact of destabilizing shocks.
- Pegging: prevent **real exchange rate adjustment** in response to large domestic and external shocks.
- Pegging creates a **moral hazard problem**. Over-borrowing may lead to increase in the vulnerability of the economy to adverse shocks.
- In countries prone to large random shocks, monetary aggregates may fluctuate erratically.

The Case for a Nominal Peg (Anchor)

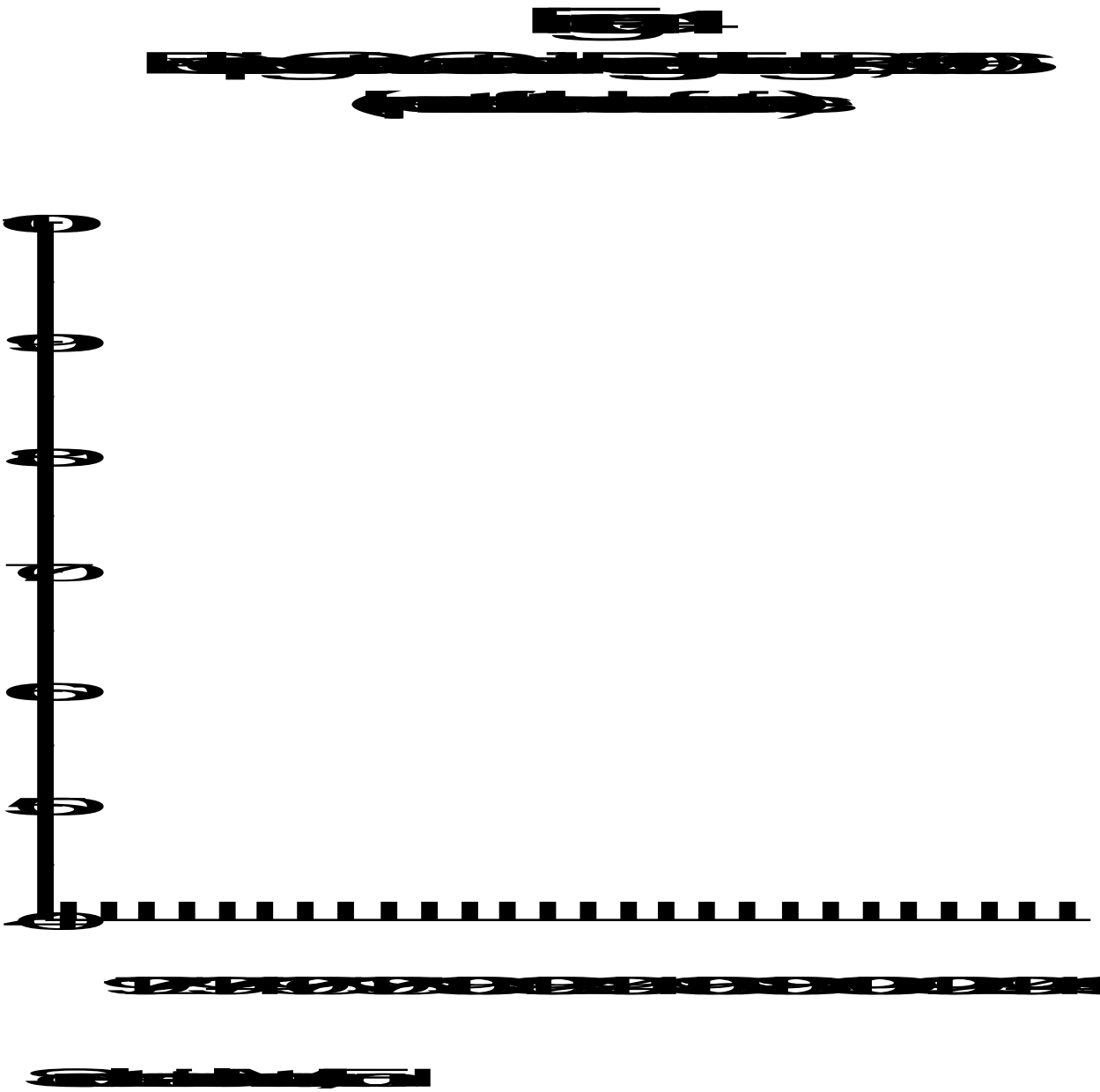
- 1. If credible it can tie-down agents' price expectations and so contribute indirectly to lowering actual inflation**
- 2. It can avoid the time inconsistency problem (Barro and Gordon, JPE 1983). This is the incentive of the authorities to pursue expansionary short-term policies to stimulate growth and employment even though it may be evident that such expansion cannot succeed longer term.**
- 3. Properly done it can remove politics from the discussion of the most appropriate monetary stance at any given point in time.**

Exchange Rate Targeting is still Quite Common

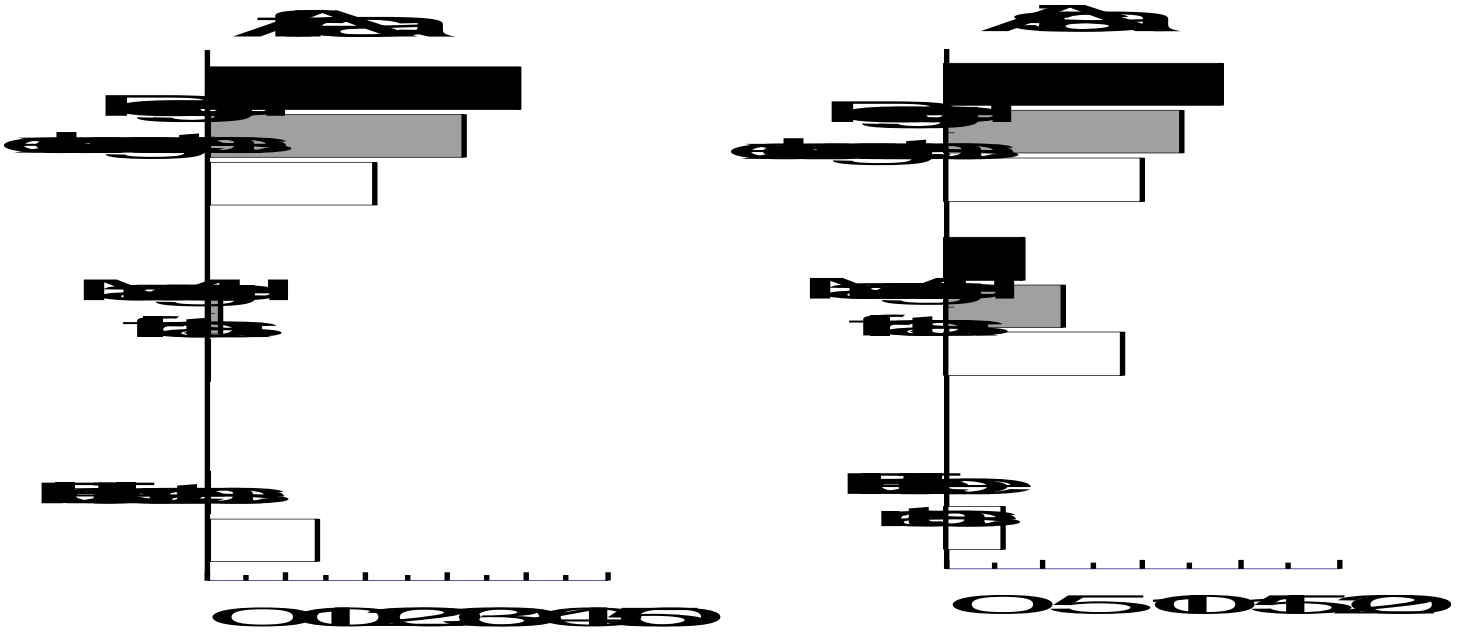
Pegging or Targeting fixes the value of the domestic currency in terms of some external commodity such as gold or in terms of the currency of a (normally) larger and low inflation country (e.g. Estonia and the dm/euro; Hong Kong and the dollar)

Advantages include:

- fixes prices for traded goods (via PPP) and so provides ONE block of stability in the overall price index.**
- if credible, the peg connects expected inflation to the inflation rate of the anchor currency**
- it creates an automatic control on domestic monetary policy and so avoids the time inconsistency problem (i.e. monetary policy becomes endogenous)**
- it is a simple rule which easily commands respect. i.e. a strong currency is a very effective rallying cry c.f. the French franc in the early 1990s**

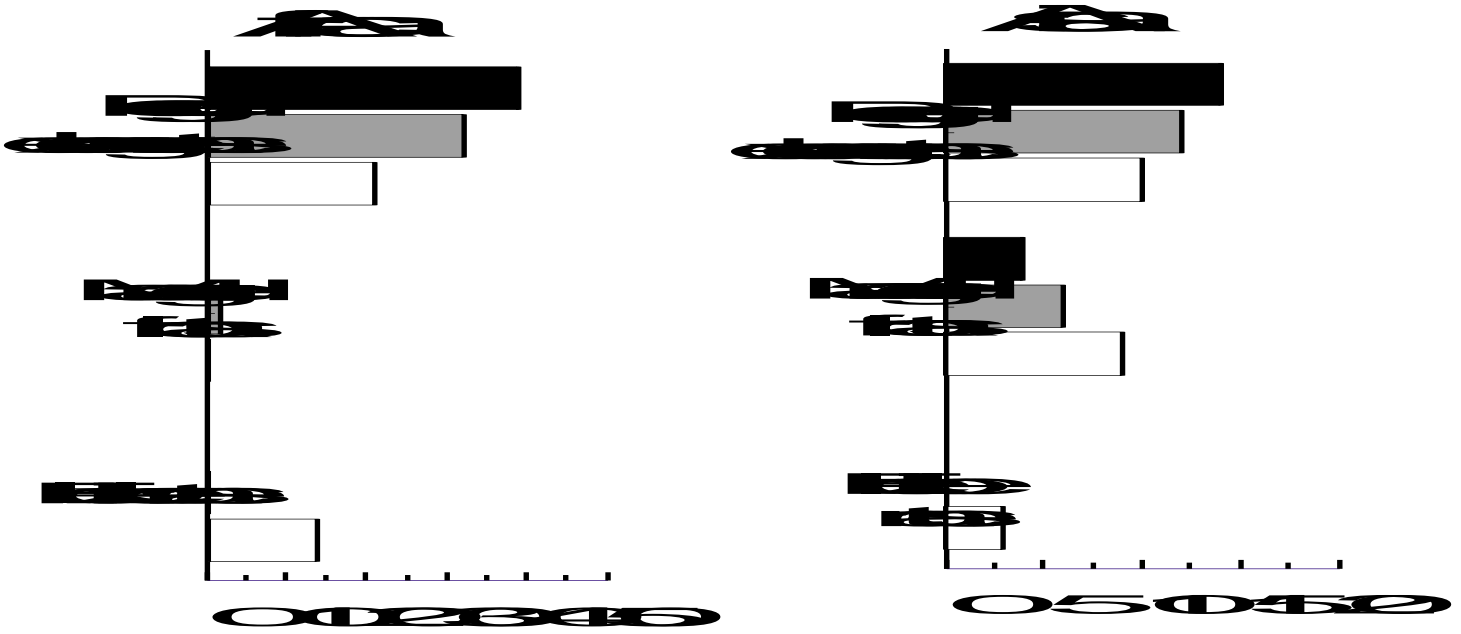


[REDACTED]

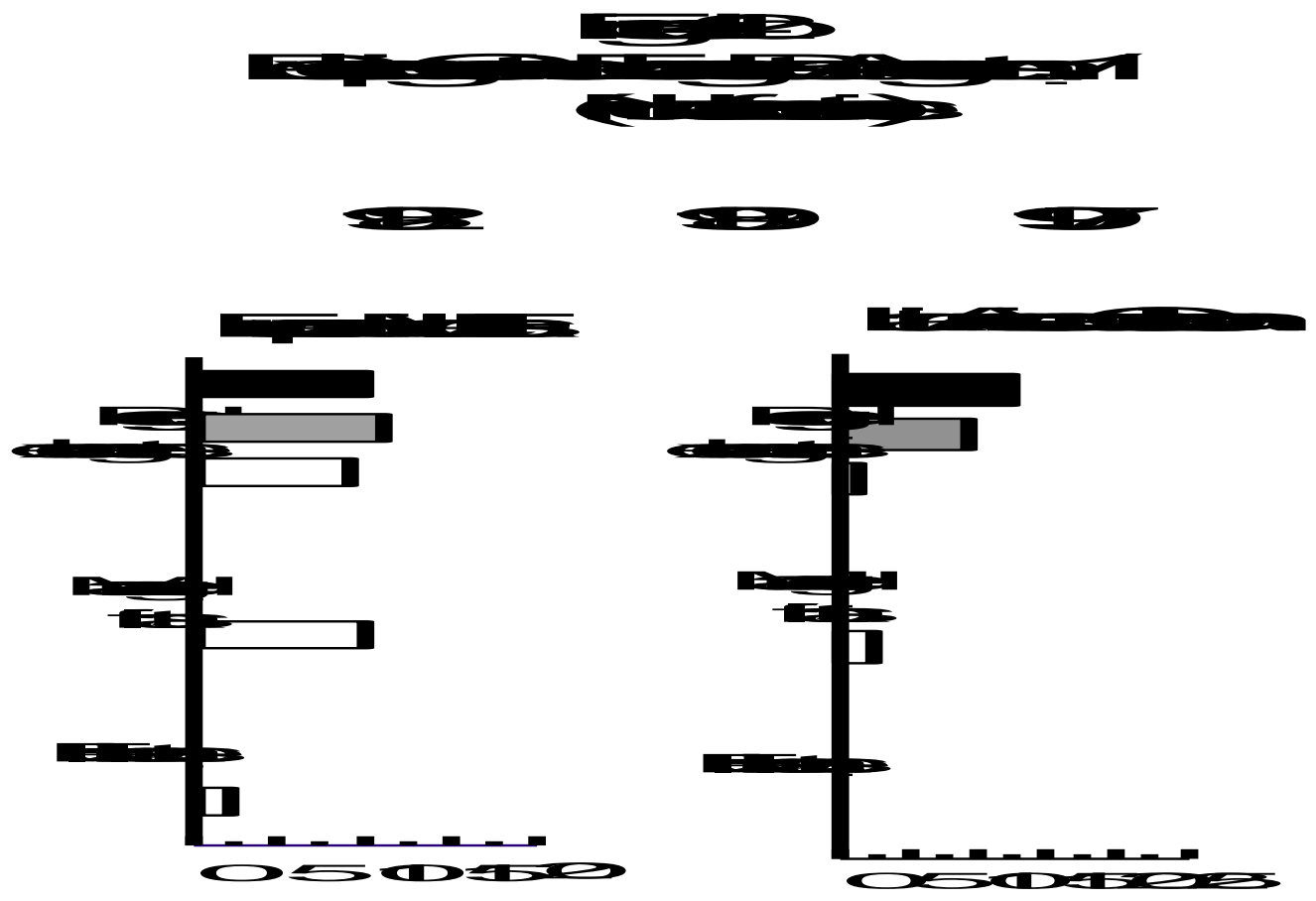


[REDACTED]

[REDACTED]



[REDACTED]



0 5 10 15 20 25 30 35 40 45 50
 0 1 2 3 4 5
 0 5 10 15 20 25 30 35 40 45 50
 0 1 2 3 4 5

What Factors Determine Merits of Pegging? –Agenor, 2000 Ch 4

- **Size and degree of openness** of the economy: the higher the share of trade in output, the higher the costs of exchange rate volatility, the more likely is a small country to follow a pegged exchange rate regime.
- **Level of inflation:** a country maintaining a rate of inflation that is higher than that of its trading partners needs to maintain a flexible exchange rate.
- **Degree of price and wage flexibility:** the more rigid real wages are, the greater the need for exchange rate flexibility to respond to external shocks.

Continued

- Degree of **financial development**: if financial markets are poor and thin, a flexible exchange rate regime may lead to large fluctuations in the exchange rate.
- Degree of **credibility of policymakers**: the weaker is the **anti-inflation reputation** of the central bank, the stronger the case for pegging the exchange rate in order to build confidence that inflation will be controlled.
- Degree of **capital mobility**:
 - the more open the economy is to capital movements, the more difficult it is to defend and maintain a fixed exchange rate regime.

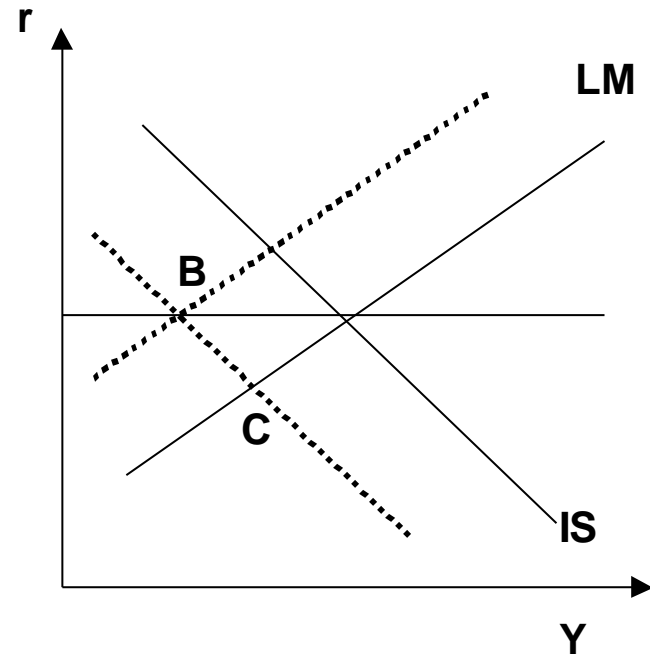
Continued

- **Open-economy trilemma** (Obstfeld, 1998):
 - a country cannot simultaneously maintain fixed exchange rates and an open capital market while pursuing a monetary policy geared toward domestic economic objectives.
 - The more important the exchange rate is as a policy goal, the more constrained monetary policy is in pursuing other policy objectives.

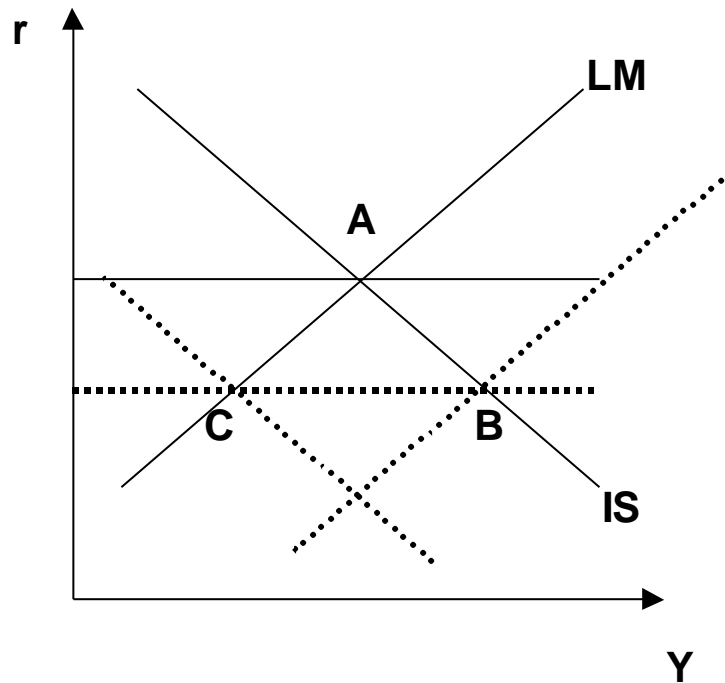
Example: Foreign (real) Output Shock

Lower foreign demand for our goods results in shift in IS curve. With FIXED ER there is also an induced reduction in Money Supply and LM –new equilibrium is at B

With a flexible rate the new equilibrium is at C (i.e far more insulation from the shock)



Example: Foreign Monetary Shock



Lower interest rate abroad results in

- (1) New equilibrium at B in the case of a FIXER ER (I.e. no insulation from shock) and at
- (2) C in the case of a FLEXIBLE ER –I.e. no protection from the shock but the ability to avoid monetary expansion

The Main Problems of Pegging?

- **Loss of independent monetary policy means - shocks originating in anchor country transmit without blockage directly to the targeting country (example - German re-unification in 1990 resulted in unreasonably tight money in France and UK)**

- **Same point if economic cycles are out of phase in the two countries (e.g. UK in 1999 when euro was established)**

- **Peg opens up countries to speculative attack if the "adopted" monetary stance is clearly inappropriate in terms of immediate domestic priorities (e.g. UK in September 1992) . this conjuncture constitutes a one way bet for speculators –Krugman JPE 1979**

Costs if speculative attacks emerge are huge and of two types (reserve losses and losses to central banks in trying to defend the peg; and recession costs if attack is successfully combated as in France in 1992/1993)

-

Particular Problems For Developing Countries

- Such economies often have very thin financial markets making local borrowing difficult for both government and enterprises**
- Borrowing via foreign currency loans is often easier and can seem quite attractive (e.g. the Mishkin, 1996 paper)**
- ER targeting achieved over a short period of time can increase the attractiveness of such borrowing [by apparently eliminating the foreign currency risks]**

Continued

But experience shows that abandonment of the peg (if it becomes necessary) is a large and non-linear shock that can do great harm to both output and inflation. Why?

- Previous FOREX borrowing implies an increased (local currency) burden on govt. and enterprises**
- Lower enterprise profitability results in weaker portfolios (even collapse) of banks**
- Lower profitability reduces the collateral for further lending**
- Further lending faces increased problems of moral hazard**
- Defence of peg will create very high interest rates which intensifies adverse risk selection problems for lenders and recession generally**

So central banks may be less keen to mount a defence of the peg thereby increasing the likelihood that the peg will fail

Continued

Examples:

- **Mexico in 1988 had inflation in excess of 100% . Pegging to the \$ through December 1994 brought inflation down to only 7-8%. But collapse of peg thereafter pushed inflation rapidly above 50% and necessitated a major output recession.**
- **Argentina - 1990 Currency Board**
(Inflation 1000% In 1989 But Down To 5% By 1994).
After 2002 collapse inflation rampant again
- **East Asian countries such as Indonesia have confronted a similar experience.**

Other Problems

Stable ER for a while may stimulate large capital inflows and rapid (but risky) expansion of bank credit which intensifies danger of eventual financial crisis

ER peg may weaken the accountability of the authorities. notional endogeneity of monetary policy may hide [via poor quality accounts] a variety of damaging interventions ultimately likely to boost inflation

Does a currency board [as in Argentina 1990 -2002 and Bulgaria since 1996 a better bet? However, this provides zero insulation against external shocks [e.g Argentina imported some of the recession experienced in Mexico after 1994]

Alternative Inflation Anchors-Targets

Monetary Targeting

It is hard for larger countries/blocs to use an exchange rate peg [examples Euroland, USA, Japan]

Advantages include:

Monetary targets can be set partly to respond to domestic objectives additional to price stability

- **Targets based on monetary aggregates are easily understood though a bit less visible than an ER target**
- **Such targets can provide for strong accountability of the central bank [i.e. they help to avoid time inconsistency problems]**

How to Choose?

- Agénor and Montiel (1999): under imperfect capital mobility, disinflation through a reduction in the nominal devaluation rate or a fall in the rate of growth of domestic credit are **not equivalent**.

Choice between the **exchange rate** and the **money supply** as a nominal anchor depends on three main considerations:

- **degree of controllability** and the effectiveness of the instrument in bringing down inflation;
- **adjustment path** of the economy and the **relative costs** associated with each instrument;
- **degree of credibility** that each instrument commands, and its relationship with fiscal policy.

1. Controllability and Effectiveness

- Policymakers cannot control directly the money supply, but fixing the exchange rate can be done relatively fast and without substantial costs.
- When **money demand** is subject to large random shocks and **velocity** is unstable, the effectiveness of the money supply as an anchor is reduced.
- But an exchange rate peg will anchor the price level through its direct impact on **prices of tradables**.
- So fixing the exchange rate rather than the money stock may appear preferable.

2. Adjustment Paths and Relative Costs

- Money -based and exchange-rate-based stabilization programs differ significantly.

Calvo and Végh (1993):

- Exchange-rate-based stabilization programs lead to an initial **expansion** and a **recession** later on.
- Money-based programs cause **initial contraction** in output.
- Former pattern: **boom-recession cycle** since credibility of the stabilization program is low and perceived as **temporary**.
- Agents, to take advantage of temporarily low prices of tradable goods, increase spending.

Continued

- Result: current account deficit and real exchange rate appreciation by forcing the authorities eventually to abandon the attempt to fix the exchange rate.
- Weak evidence in favor of large **intertemporal substitution effects**.
- Reinhart and Végh (1995): it can explain the behavior of consumption for some of the programs implemented in the 1980s, but not for the tablita experiments of the 1970s in Argentina, Chile, and Uruguay.
- Nominal interest rates would have had to fall more than they did to account for a sizable fraction of the consumption boom recorded in the data.

3. Credibility, Fiscal Commitment, and Flexibility

- Degree of credibility of the money supply and the exchange rate is important in choosing a nominal anchor.

Credibility depends on:

- policymakers' ability to convey clear signals about their **policy preferences**;
- degree of controllability of policy instruments and the dynamic adjustment path of the economy, as discussed earlier.

Continued

- Public **observability** of the exchange rate as opposed to monetary and credit aggregates enhances the credibility of an exchange rate anchor.
- Money-based stabilization by an **immediate recession** may lose credibility rapidly, if the short-term output and employment cost is high.
- When the exchange rate is used as a nominal anchor, **residual inflation** in home goods prices may remain high combined with the expansion of aggregate demand, it may lead to a **real appreciation**.
- This directly weakens credibility.

Continued

- When lack of credibility is pervasive, the choice between money and the exchange rate may not matter; inflation will remain high regardless of the anchor.
- An exchange-rate rule is, however, more successful in reducing inflation if there is **some** degree of credibility; initial expansion and the upward pressure on the real exchange rate will be dampened.
- Exchange rate anchor may induce a higher commitment to undertake stabilization measures: **fiscal adjustment**.

Continued

- If there are doubts about the government's commitment to fiscal restraint, an exchange rate peg would also lack credibility.
- Végh (1992): ten exchange-rate-based programs aimed at stopping high chronic inflation.
- Seven of them were failures:
 - In two cases: failure was due to real appreciation of the currency following slow convergence of inflation, in spite of achieving fiscal balance.
 - In the remaining five: **failure to implement a lasting fiscal adjustment** was the main factor.

Finally: Inflation Targeting

Examples.

- **New Zealand Since 1990**
- **UK Since 1992**
- **SPAIN Since 1994**

Advantages Include:

- **The Flexibility To Respond To Domestic Considerations And To External Shocks**
- **Velocity Instability Matters Less - No Stable Money Demand Function Is Implied**
- **An Inflation Target Is Easily Understood And Easily Checked**
- **Enhanced Central Bank Accountability Avoids The Time Inconsistency Problem**
- **Political Pressures Are Sidelined**

Continued

- **Problems Include:**

A rigid inflation target will impose undoubtedly large falls on output if target is used to bring inflation down from rates in excess of 10-20% to low levels close to zero. Less of a problem if targeting starts when inflation is already in low single digits. (reason- the stickiness of price expectations when the past has been one of high inflation).

-

But if too much flexibility is allowed when the past has been highly inflationary then the target will really not be credible - i.e.time inconsistency re-appears.

-

One reconciliation of this problem is a gradual hardening of the targets as actual inflation is reduced [e.g. Chile after 1990]

Useful Reference: Bernanke, Laubach, Mishkin And Posen, *Inflation Targeting: Lessons From International Experience*, 1998