# Fixed or Floating: Which is Best?

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Econ520

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The model makes fixed exchange rates look very attractive

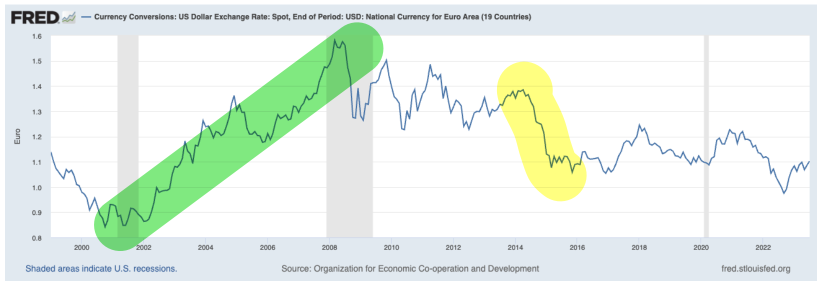
- avoid volatile exchange rates
- gain the exchange rate as a policy tool

Main drawback

- loss of monetary policy tools
- but that can also be a benefit ...

Then why are there so few fixed exchange rate regimes left?

# Exchange rate volatility

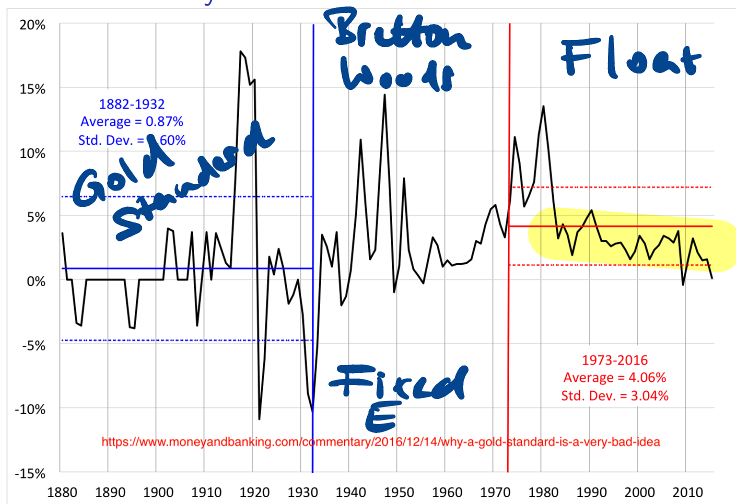



Even for major currencies, exchange rates fluctuate a lot.

Source: FRED

$$E(t) = E(t+1)\,\frac{1+i}{1+i^*}$$

# Inflation volatility




But there is a trade-off: inflation is volatile with fixed exchange rates.

Intuition?

# Currency Crises

# Currency Crises

Nearly all fixed exchange rate regimes have collapsed

- traders sell a currency, hoping for a devaluation
- "**speculative attacks**"

As capital flows got larger, CBs found it harder to defend against attacks.

This is the main reason why fixed exchange rate regimes are now rare.

- but "hard pegs" like the EU have become more common.

# Crisis Examples

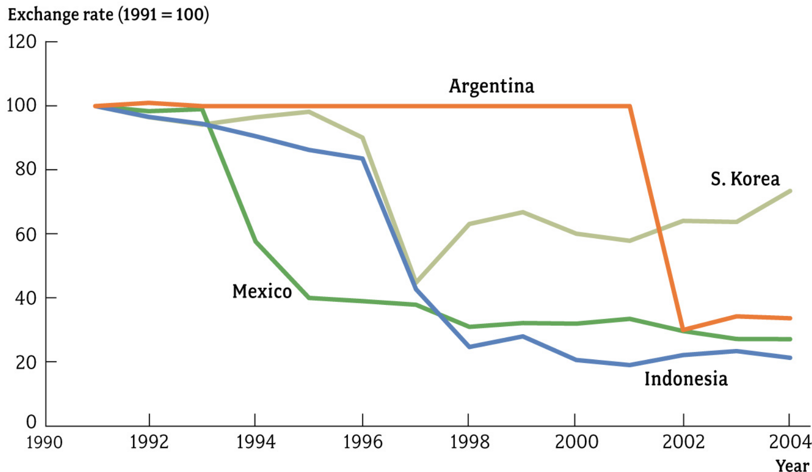



FIGURE 15.7 Depreciations During Several Currency Crises, 1991–2004

*Macroeconomics*, Charles I. Jones

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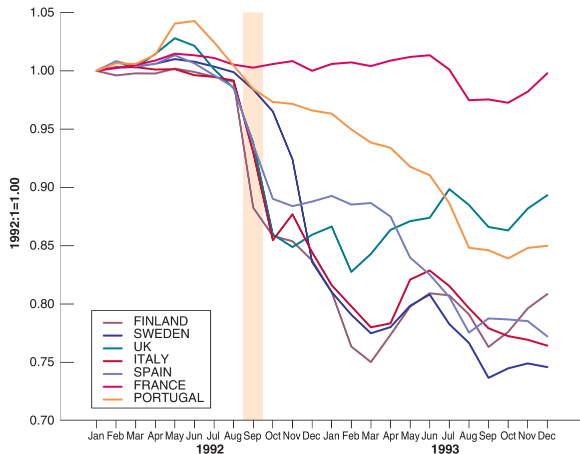
# Crisis Examples

A typical (Latin American) story:

- a country pegs against the dollar
- large fiscal deficits are financed by printing money
- high inflation causes real appreciation and trade deficits
- the central bank raises interest rates to prevent capital flight
- crash

# Crisis Examples




Speculative attacks even hit the Euro zone.

# Currency Crises

Why are speculative attacks so common?

The short answer:

- The peg provides **insurance** for speculators who bet against a currency.

With floating:

- The exchange rate could move up or down in the future.

With the peg:

- The currency can only go **down**.
- Then short sellers make large profits.

Short selling is low risk.

# The Logic of Speculative Attacks

UIP:

$$i_t = i_t^* + x_t \quad (1)$$

$$x_t = \frac{E_{t+1}^e - E_t}{E_t} \quad (2)$$

$x$: expected FX appreciation appreciation.

**Floating**: $x_t$ can be positive or negative.

- Selling a currency has upside risk and downside risk.

**Peg**: the CB ensures that the currency does not appreciate

- $x_t$ can never be negative.
- Selling a currency only has upside risk.

# Currency Crises

Even small chances of devaluation have big effects.

Example:

- 25% chance of 20% devaluation over the next month
- $x_t = 0.75 \times 0 + 0.25 \times -0.2 = -0.05$
- investors demand an interest premium of 5% **per month** to compensate for this risk

# Policy Options

$i = i^* + 60\%$ (handwritten annotation; "60%" marked as $x$)

1. Raise $i$ by 60%
   major recession as borrowing shuts down
2. Raise $i$ by less than 60%
   - capital outflows
   - CB must sell FX to stabilize currency
   - CB eventually runs out of reserves
3. Devalue the currency

# Lessons

1. Fixed exchange rates are fragile
    1.1 they can only be sustained as long as investors remain utterly convinced that a peg will hold
    1.2 betting against a peg is insured by the government
2. Fixed exchange rates can collapse without reason
   If many investors believe the peg will fail, it will fail.

# Currency Unions

One solution: get rid of the exchange rate entirely

- Main example: Euro
- Speculative attacks are no longer possible.

Costs:

- hard to reverse (Brexit)
- EU monetary policy may not suit all countries

# Recap Questions

1. Why might a country with a weak central bank choose a peg?
2. Why are interest rates volatile under fixed exchange rates?
3. Why is inflation volatile under fixed exchange rates?

# Reading

Blanchard / Johnson, Macroeconomics, 6th or 7th ed., ch. 21

Additional reading:

- Jones, Macroeconomics, ch. 15.