Exchange Rate Regimes

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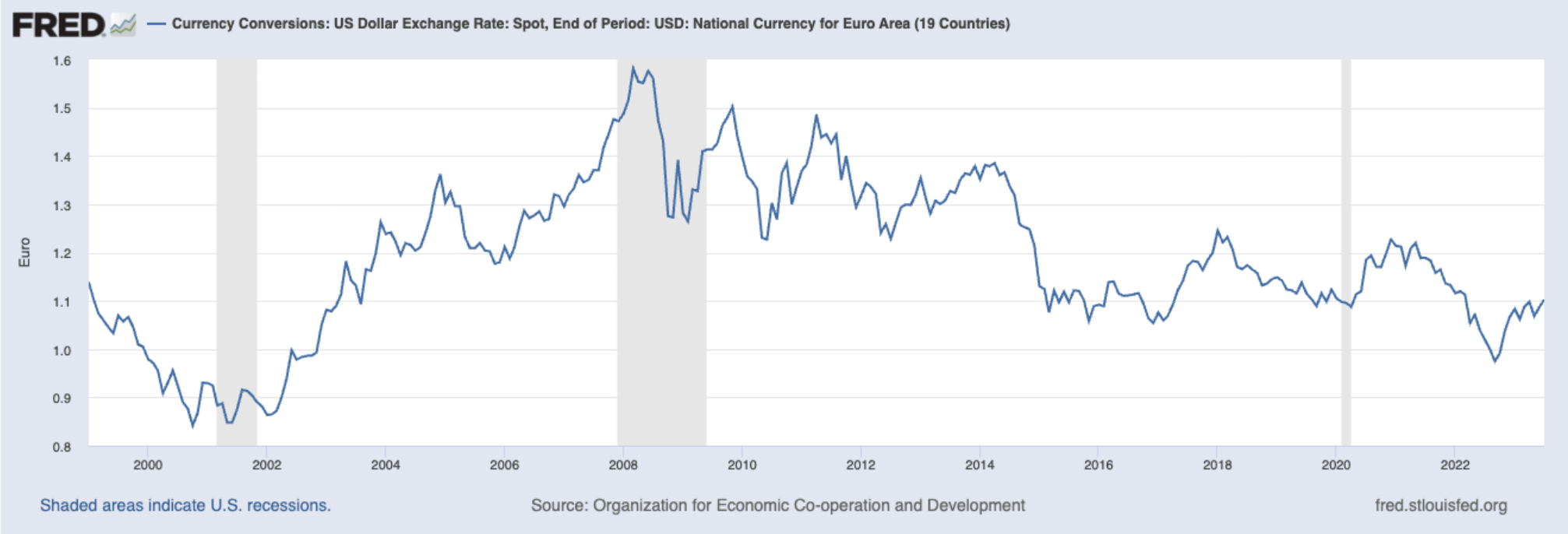
Fixed or Floating?

The AS/AD model makes **fixed** exchange rates look very **attractive**

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

Exchange rate volatility



Even for major currencies, exchange rates fluctuate a lot.

Source: FRED

Drawbacks of Fixed Exchange Rates

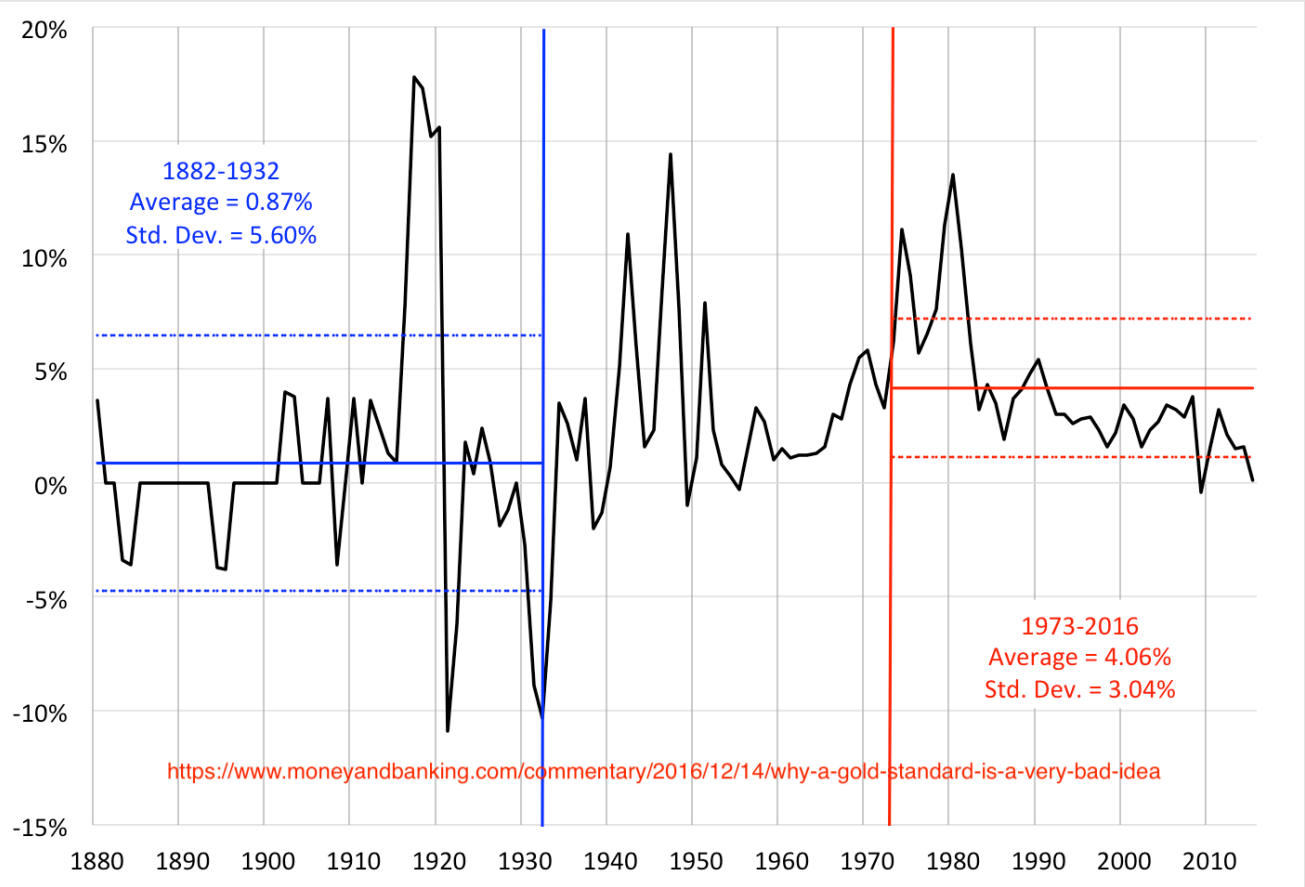
Loss of **monetary policy** tools

- but that can also be a benefit …

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

One answer: Volatile interest and **inflation** rates.

Inflation volatility

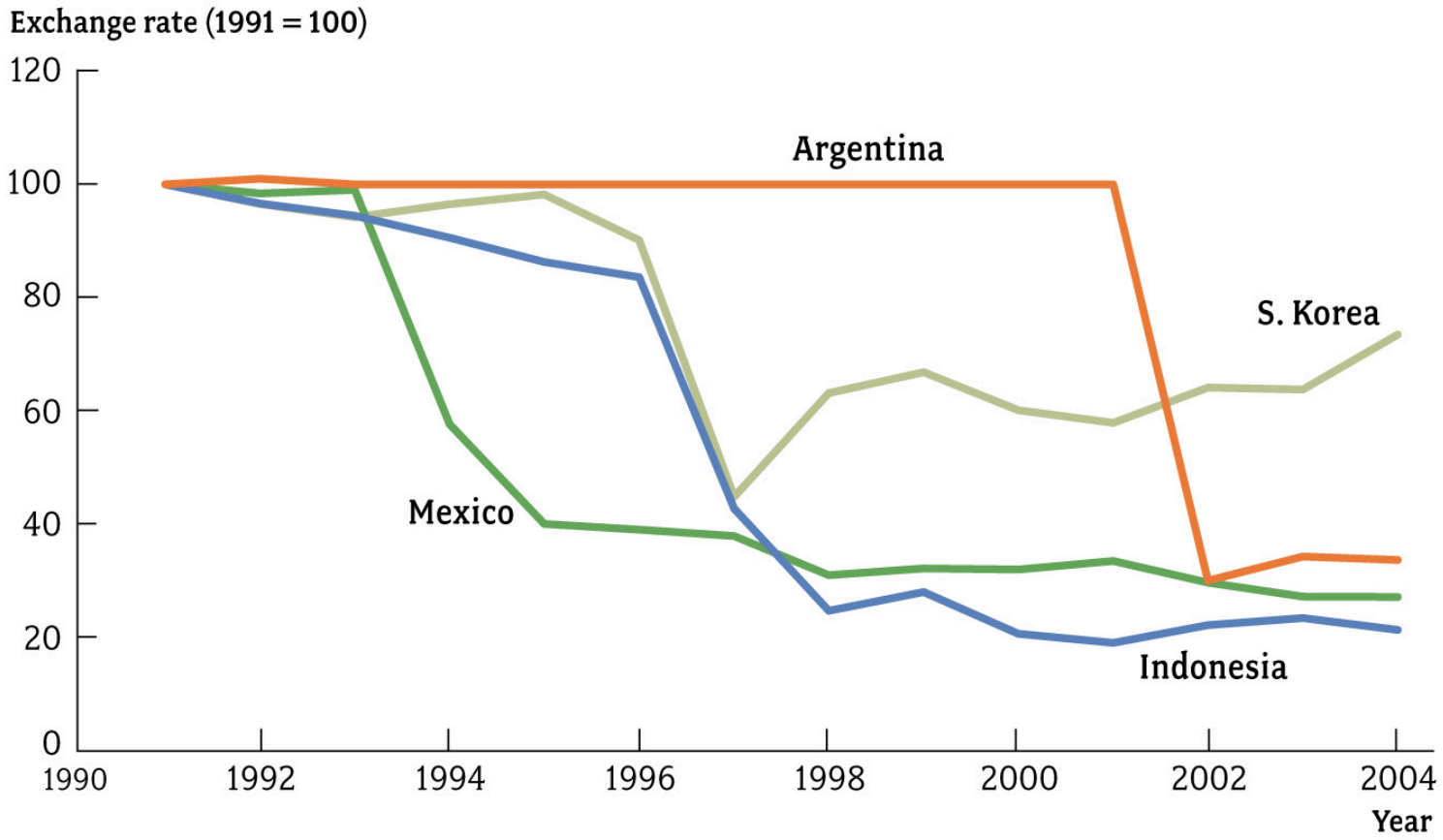


Inflation is volatile with fixed exchange rates.

Intuition?

Currency Crises

Currency Crises



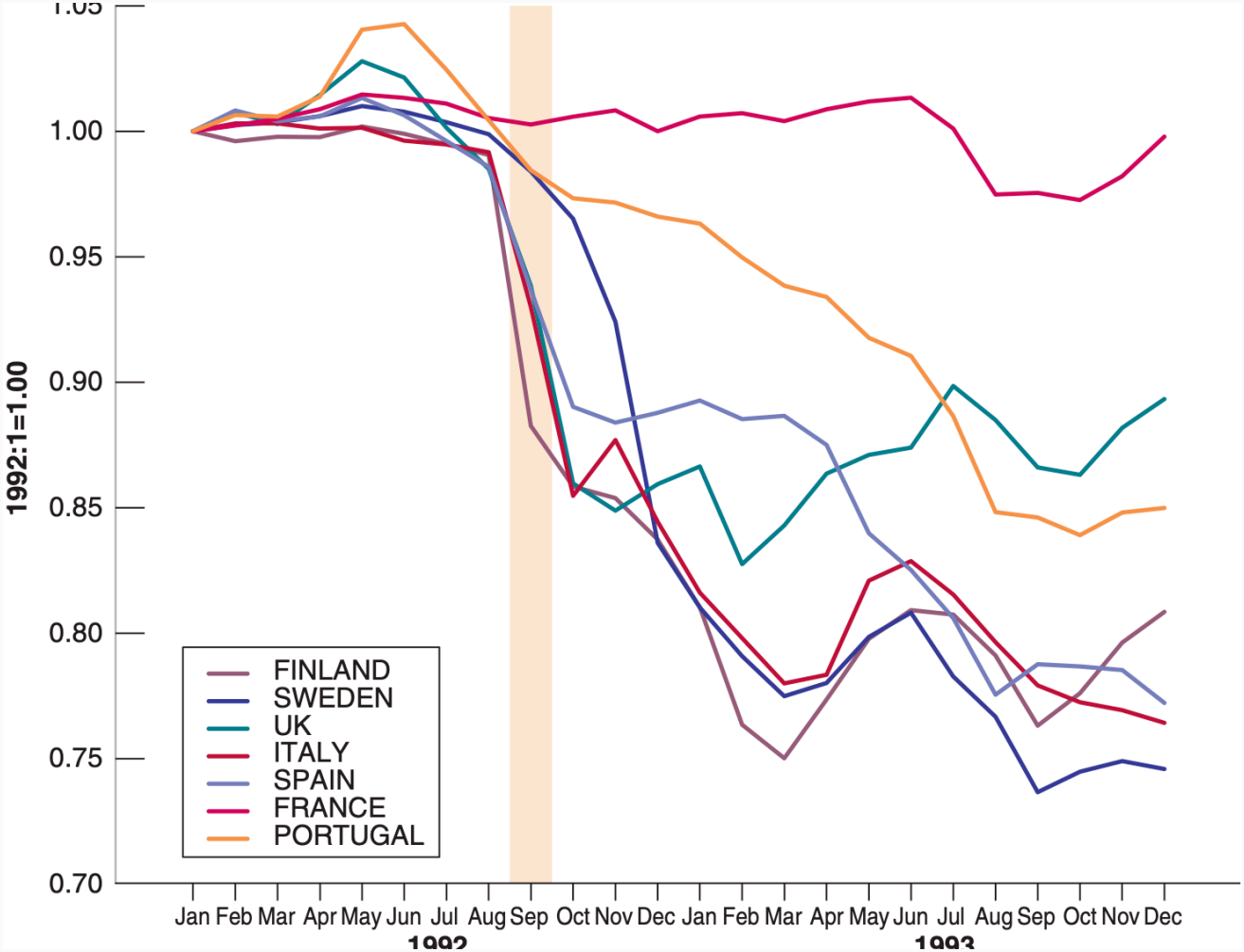
Fixed exchange rate regimes usually fail spectacularly.

Source: Charles Jones, Macroeconomics, 2008

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
- traders start to **short-sell** the currency
- the central bank raises **interest rates** to prevent capital flight
- recession
- the central bank gives up: **devaluation**

Crisis Examples



Speculative attacks even hit the Euro zone.

Source: Blanchard Macroeconomics 7th ed

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:

$$i_t = i_t^* + x_t$$

$$x_t = \frac{E_{t+1}^e - E_t}{E_t}$$

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

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

Consequences

What Happens After a Crisis?

A currency crisis typically ends with a large **devaluation**.

Typical problems that follow:

1. The local currency value of external debt rises.
   Trouble making **interest payments**. Rising budget deficits.
   Trouble borrowing internationally.
2. **Inflation** rises.
   because import costs rise
3. Fiscal contraction causes **recession**.

Lessons

1. Fixed exchange rates are fragile
   - they can only be sustained as long as investors remain utterly convinced that a peg will hold
   - 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:

- Investopedia article on currency crises.
- Jones, Macroeconomics, ch. 15.