

Monetary Policy in Open Economies

1. Exchange-Rates
2. Exchange-Rate Regimes
3. Mundell-Fleming
4. Fear of Floating
5. Evidence
6. Currency Unions
7. External Effects

Exchange Rates

The Dollar/Euro Exchange Rate



The Yen/Dollar Exchange Rate



Dollar/Yuan



What is an exchange-rate?

An exchange rate is the rate at which one currency can be exchanged for another. In other words, it is the value of another country's currency compared to that of your own (and vice versa).

What drives exchange-rates?

...in the short run?

we don't know or:

alternatively

sentiments

rumors

expectations about the expectations of other investors

events (shocks)

... in the long run?

the relative ratio of productivity growth and inflation

expectations about productivity and inflation

→ policies

Exchange-Rate Regimes

Flexible Exchange-Rate

the market decides on the relative value of the currency

Managed Float

in principle the currency floats, but the government may under certain circumstance intervene

Fixed Exchange Rate

Fixed to Key Currency (Dollar, Euro, Yen?)
Fixed to Currency Basked

the government(s) has/have the obligation to intervene

important: parities, bandwidths

Currency Board

Value of Issued Money held in Reserves

Dollarization

Introduction of Dollar/ Euro/ Franc/ Pound as SOLE Means of Payments

Currency Union

Introduction of Common Currency (and common monetary policy)

Why do some countries peg their currency, and other float?

Advantages of stable exchange-rates:

stable expectations

no need to insure against exchange-rate risks
(futures, hedges,...)

→ low transactions costs to trade

→ more trade (Andrew Rose)

→ higher economic growth (?)

Disadvantages of fixed exchange-rates

risk of severe misalignment

speculative attacks on exchange-rate peg

reduction in monetary policy autonomy

How are exchange rate regimes and monetary policy are related?

Why does the exchange-rate and the exchange-rate regime matter for monetary policy?

Mundell-Fleming theorem (unholy trinity):

Government can only reach two of the following three policy goals simultaneously:

stable exchange rates

absence of capital controls

monetary policy autonomy

De Facto Monetary Policy Autonomy: The Fear of Floating Literature

The New Standard?: Fear of Floating

Empirical observation: 'Dirty' Float

Explanations:

a)

Monetary authorities stabilize the exchange-rate to prevent an increase in the value of debt denominated in foreign currency to their GDP (or to their tax revenue).

b)

Monetary authorities stabilize the exchange-rate to prevent exchange-rate pass-through thereby keeping the inflation rate down.

Hence: There is no clear trade-off any more: Pegging countries largely surrender monetary policy autonomy (degree depends on bandwidths of the peg and ease of realignment). Floating countries do not necessarily allow their currency to freely float but stabilize the exchange-rate to the key currency/ the key currencies.

→ De facto monetary policy autonomy is a continuum $[0,1]$.

Empirical Evidence for Fear of Floating

Abundant:

Calvo and Reinhardt (QJE 2002): Empirical Evidence of 'Dirty Float'

Shambaugh (QJE 2004): Pegged countries stabilize exchange-rates more than floating countries, but much additional evidence of dirty float.

Obstfeld, Shambaugh and Taylor (NBER 2004): Narrative of Fear of Floating

Campa and Goldberg (RES 2005): Evidence for Exchange-Rate Pass-Through

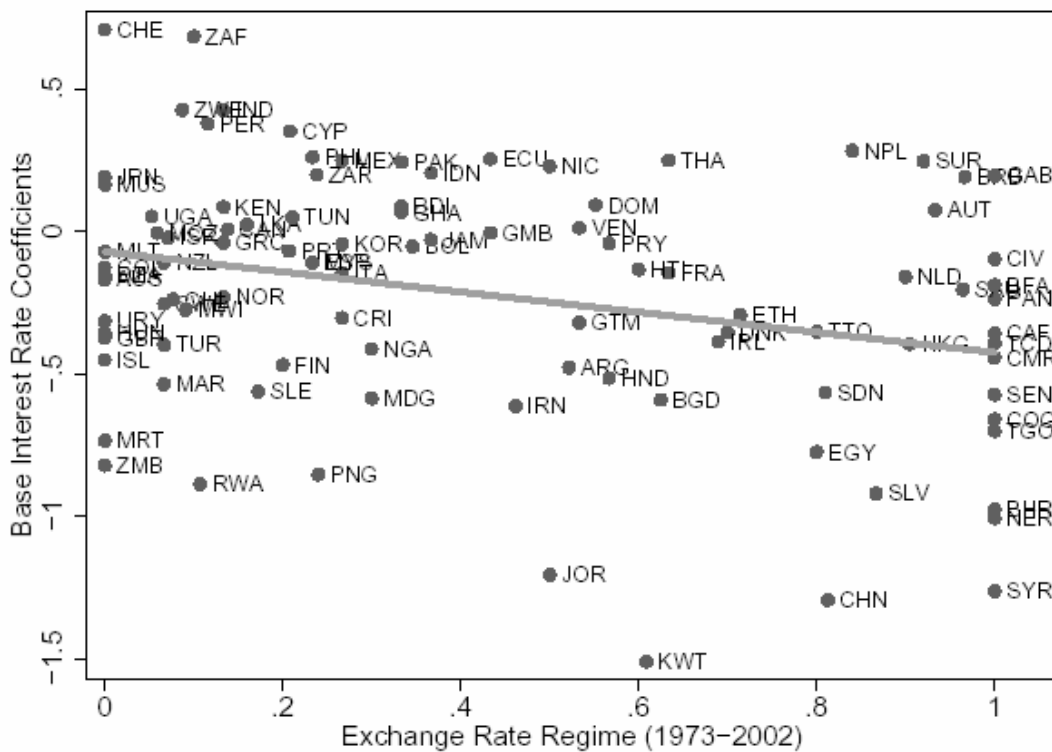
Hausman, Panizza and Stein (JDE 2001): Evidence for Borrowing – Float Hypothesis

Frankel, Schmuckler and Serven (NBER): Transmission of Interest Rates

And many more..

... and even more to come soon, I guess.

Figure 1. Impact of Exchange Rate Regime on Estimated Base Interest Rate Coefficients



di Giovanni/ Shambaugh

The Political Economy of Monetary Unions

Why monetary unions?

Advantage:

Reduction in transaction cost of trade.

Andrew Rose for empirical evidence that common currencies increase trade.

Disadvantage:

Almost complete reduction in monetary policy autonomy.

Which countries then are more likely to join a currency union?

- **neighboring countries**
- **small, open countries**
- **countries with independent central banks**

■ The Intuition of the Argument

Monetary authorities in floating countries stabilize the exchange-rate to key currency areas (in the presence of competing key currencies).

Since key currencies float with respect to each other, monetary authorities may need to stabilize to more than one key currency simultaneously.

They 'weight' the importance of key currencies.

Direction of capital flows (currency conversion flows) matters since they determine exchange-rate effects.

Share of both currency unions from key currency areas matters because of exchange-rate pass-through effects.

How do currency unions enter the equation?

The establishment of a currency union increases the size of the key currency area, increases the attractiveness of the union's currency for investors. Accordingly and in the absence of intervention, the elasticity of the exchange rate to changes in the real interest rate difference increases.

Table 1 Determinants of monetary policy in Denmark, Sweden and the UK, 1980–2002

<i>Dependent variable: changes in real interest rates of non-EMU countries (Den, Swe, UK)</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
	<i>Unweighted</i>	<i>Trade weighted</i>	<i>Trade weighted</i>
<i>Mean equation:</i>			
Intercept	-0.046** (0.020)	-0.044** (0.020)	-0.561*** (0.108)
Level of real interest rate (DNK, SWE, UK)	0.021*** (0.006)	0.020*** (0.006)	0.047*** (0.008)
Δ Real interest rate Germany, 1980–90	0.015 (0.064)	0.041 (0.067)	0.029 (0.076)
Δ Real interest rate Germany/euro zone, 1990–94	0.059 (0.067)	0.053 (0.068)	0.032 (0.073)
Δ Real interest rate euro zone, 1994–99	0.238** (0.118)	0.241** (0.118)	0.266*** (0.102)
Δ Real interest rate euro zone, 1999–2002	0.353*** (0.104)	0.352*** (0.102)	0.339*** (0.107)
Δ Real interest rate euro zone, 2002–05	0.493*** (0.073)	0.611*** (0.127)	0.601*** (0.133)
Δ Real interest rate USA, 1980–90	-0.011 (0.035)	-0.016 (0.031)	-0.034 (0.033)
Δ Real interest rate USA, 1990–94	0.150*** (0.054)	0.143*** (0.046)	0.160*** (0.046)
Δ Real interest rate USA, 1994–99	0.078 (0.084)	0.074 (0.075)	0.072 (0.059)
Δ Real interest rate USA, 1999–2002	0.024 (0.021)	0.018 (0.020)	0.025 (0.021)
Δ Real interest rate USA, 2002–05	0.026 (0.017)	0.013 (0.020)	0.011 (0.031)
Exchange rate against DM/eURO			0.040*** (0.010)
Exchange rate against US\$			0.006 (0.012)
Growth (Den, Swe, UK)			0.007 (0.007)
Growth Germany/euro zone			-0.005 (0.005)
Growth USA			0.035*** (0.006)

continued

Table 1 Continued

<i>Dependent variable: changes in real interest rates of non-EMU countries (Den, Swe, UK)</i>	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
	<i>Unweighted</i>	<i>Trade weighted</i>	<i>Trade weighted</i>
FE Sweden			-0.060* (0.034)
FE UK			0.178** (0.088)
χ^2 -test difference of EMU coef 80-90 = 99-02 ($p > \chi^2$)	7.72*** (0.006)	6.67*** (0.010)	5.74** (0.017)
χ^2 -test difference of EMU coef 90-94 = 99-02 ($p > \chi^2$)	5.79** (0.016)	6.16** (0.013)	5.59** (0.018)
χ^2 -test difference of EMU coef 90-94 = 02-05 ($p > \chi^2$)	19.23*** (0.000)	14.92*** (0.000)	13.84*** (0.000)
Variance equation:			
Intercept	0.0004 (0.0005)	0.0003 (0.0005)	0.001 (0.001)
ARCH 1 (ϵ_{t-1}^2)	0.061*** (0.006)	0.062*** (0.006)	0.097*** (0.013)
GARCH 1 (σ_{t-1}^2)	0.936*** (0.005)	0.936*** (0.005)	0.902*** (0.011)
<i>N</i>	906	900	900
Wald χ^2 (Prob > χ^2)	94.92 (0.000)	75.71 (0.000)	172.60 (0.000)
Log likelihood	-704.615	-700.825	-688.963

Note: Standard errors in parentheses.

*** $p < .01$; ** $p < .05$; * $p < .1$