

# Economic Policy #07\_08

## Foreign-Exchange Policy

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- History of monetary system
- Convertibility and exchange-rate regimes
- Currency crisis
- Nominal vs. real exchange rate
- Theory of optimum currency areas
- Balance of payments
  - pros and cons of capital openness
  - capital allocation puzzle
  - global imbalances

# Brief history of the international monetary system #1

- System of *Gold Standard* was extended to all major economies in the 1880s and lasted until WWI: value of national currency was determined by a given gold weight => fixed exchange rates between national currencies.
- Gold Standard was temporarily restored in the end of 1920s but finally abandoned during 1930s as the countries turned to protectionist measures and *competitive devaluations*.

# Brief history of the international monetary system #2

- After WWII Bretton Woods Conference established a *Gold Exchange Standard*, where all currencies were convertible into gold at a fixed rate. This system broke down in 1972.
- In 1979 *European Monetary System* (EMS) was established, whereby all cross exchange rates had to fluctuate within margins of +/- 2.25 % (in some cases +/- 6 %) around a central rate.
- In 1999 *European monetary union* was initiated.

# Currency convertibility and exchange rate regimes

Governments need to make two crucial decisions:

- on the conditions for exchanging the domestic currency for foreign currencies => *currency convertibility*
- on the extent of exchange rate flexibility => *exchange rate regime*

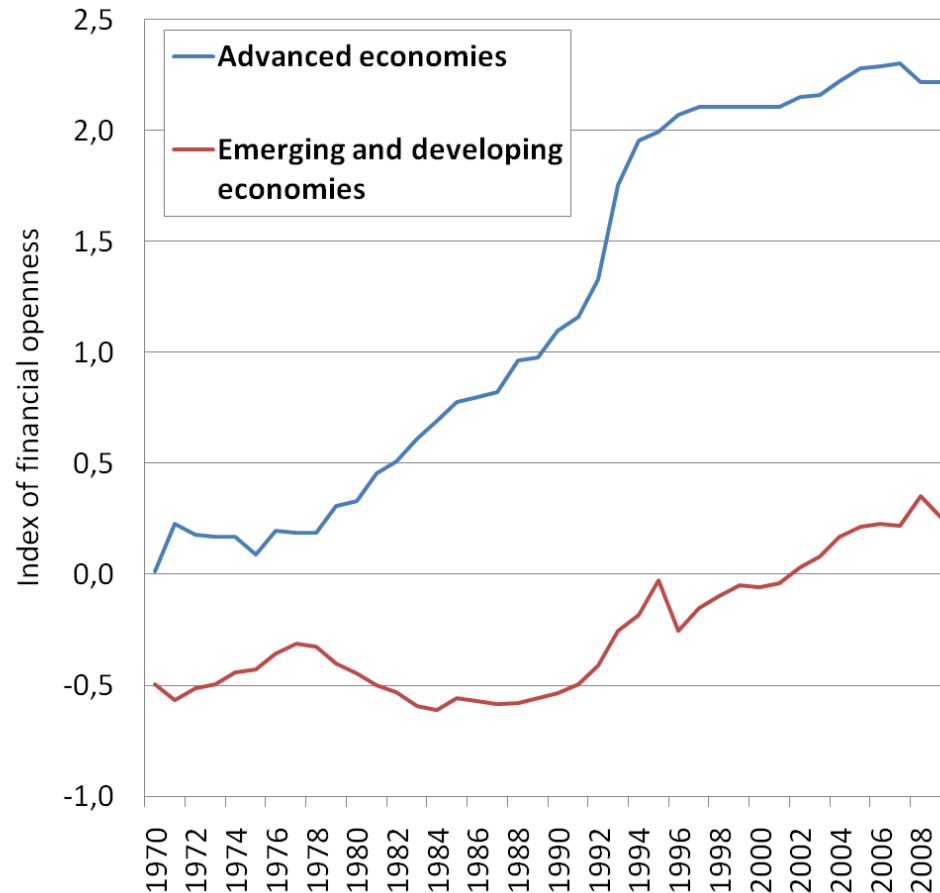
# Currency convertibility

Currency is *nonconvertible* if the government set the value of the exchange-rate and submit foreign-exchange transactions to prior authorization (e.g. Soviet bloc before 1990).

It is useful to distinguish:

- *current account convertibility*: the currency can be exchanged freely for the purpose of importing good and services, current transfers and factor income
- *financial account convertibility*: direct investments, portfolio investments and bank loans without restriction (=> *capital mobility*)

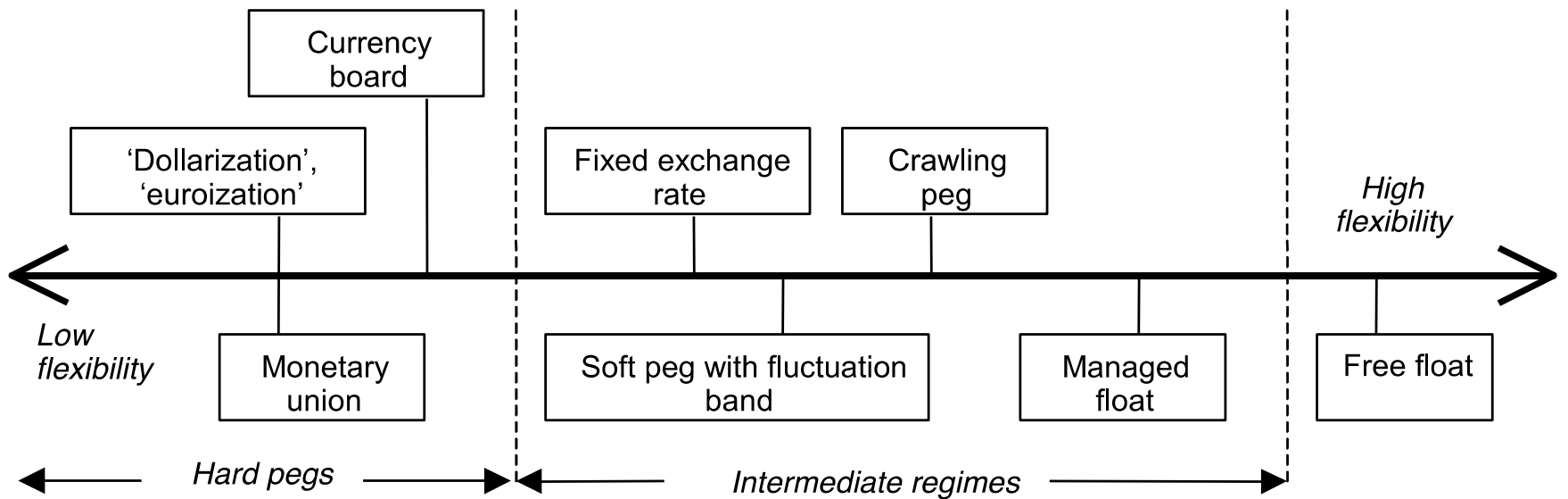
# Financial openness



Source: Chinn and Ito (2011).

While advanced economies have liberalized capital flows in the 1980s, this movement is still incomplete in developing countries.

# Exchange-rate regimes #1





# Exchange-rate regimes #2

- '*Dollarization*', '*euroization*': the currency of another country circulates as the sole legal tender: dollar (e.g. Panama, Ecuador), euro (e.g. Montenegro and San Marino). Another option is that the same legal tender is shared by members of *monetary union*.
- *Currency board*: explicit legislative commitment to exchange domestic currency at a fixed rate, issuance of domestic currency is backed by foreign assets only.
- *Fixed exchange rates*: the country pegs its currency within margins of +/- 1 % or less vis-à-vis another currency (or basket of currencies)

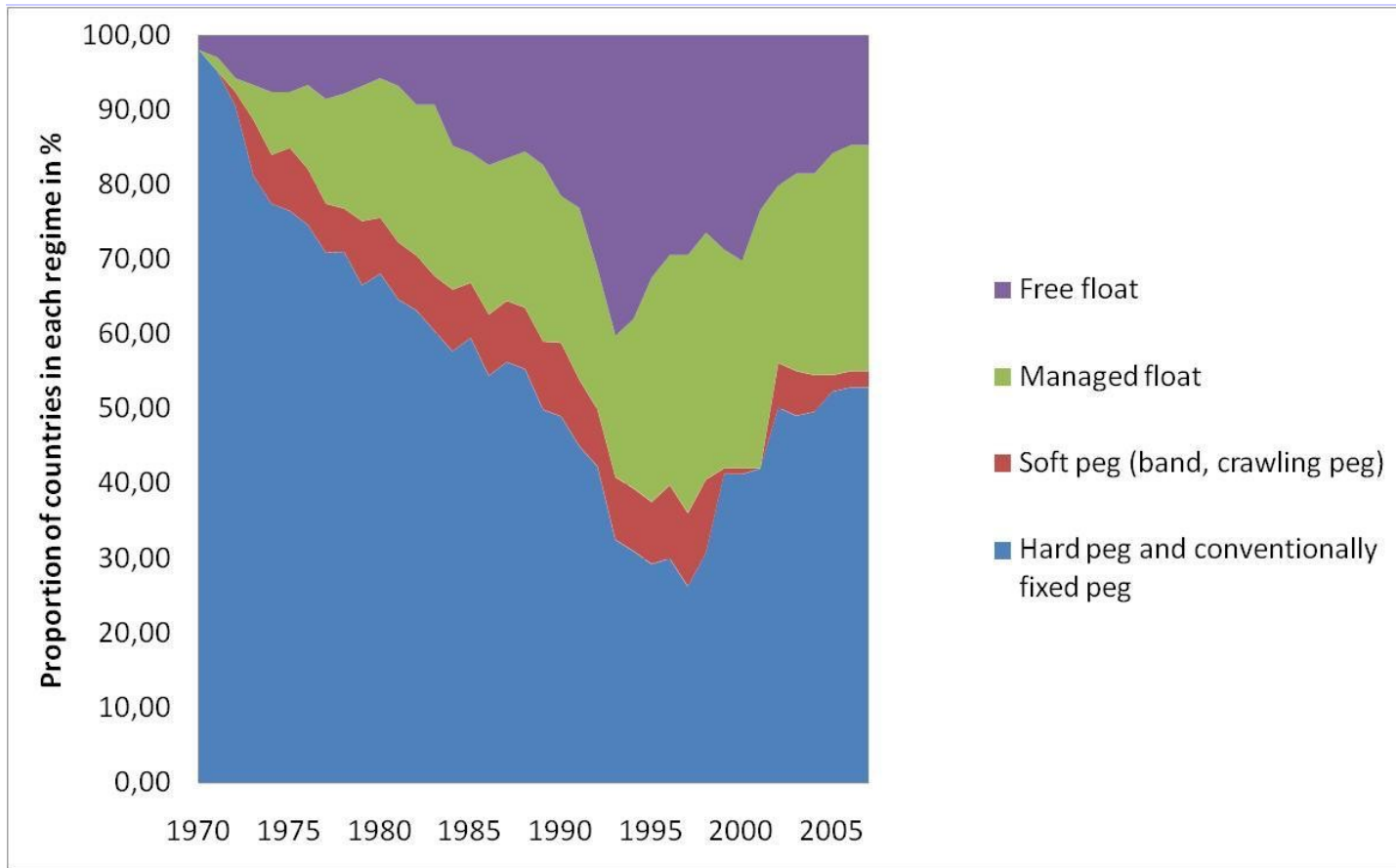
# Exchange-rate regimes #3

- *Soft pegs with fluctuation band*: the value of the currency is maintained within certain margins of fluctuation of more than +/- 1 % around a fixed central rate
- *Crawling pegs*: the central rate is adjusted periodically, usually in response to changes in selective quantitative indicators (e.g. inflation differentials)
- *Managed floating*: The CB attempts to influence the exchange rate without having a specific exchange rate path or target
- *Free floating*: the exchange rate is fully market-determined

# Exchange-rate policy in a flexible exchange-rate regime

- Who decides?
  - USA, Japan, UK: Treasury decision, Central bank implementation
  - Eurozone: ECB's decision after consulting the Eurogroup
- What instruments?
  - Policy rates
  - Foreign exchange interventions
    - Unsterilized: portfolio channel
    - Sterilized: portfolio/signal/monetary-policy channels
  - Declarations (ex: G7 statements)
  - Bilateral meetings (ex. in Beijing)

# Exchange-rate regimes: fear of floating?



# The Exchange Rate Regime Dilemma: the pros and cons of fixed regime

- The risk of speculative attacks when the firmness of the commitment is being questioned that can lead to currency crisis.
- A country must keep large quantities of foreign currency.
- By committing to a fixed rate a country committs itself not to engage in inflationary policies.
- CB must give up independent monetary policy.

# The benefits of pegs: credibility

## Inflation and growth performance under various exchange-rate regimes

	CPI inflation	GDP growth
<b>Pegged</b>	<b>8.4%</b>	<b>1.4%</b>
<b>Intermediate</b>	<b>11.6%</b>	<b>2.1%</b>
<b>Floating</b>	<b>15.2%</b>	<b>1.7%</b>

Source: Gulde, Gosh and Ostry (1997), based on 36 countries over 1960-1990.



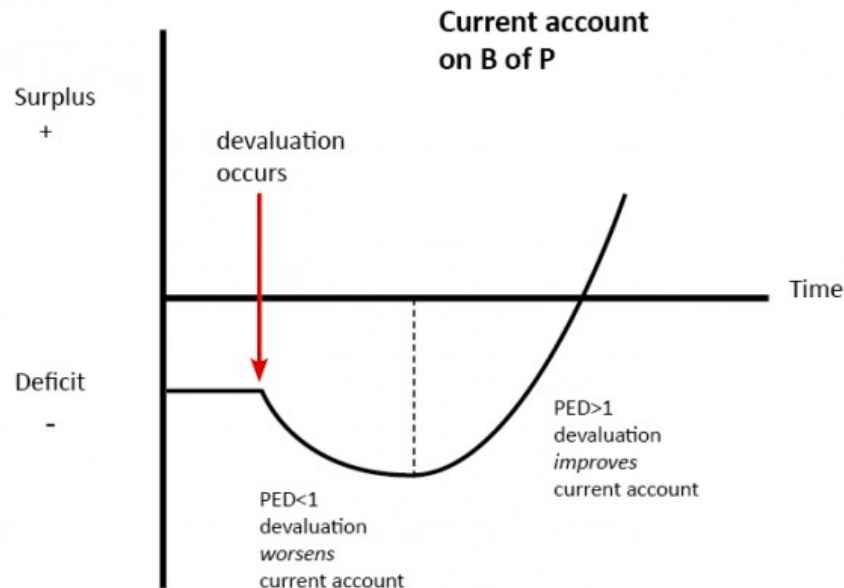
# The Exchange Rate Regime Dilemma: the pros and cons of floating

- Large exchange rate fluctuations are a major source of uncertainty.
- Exchange rate fluctuations affect the relative value of assets and liabilities => depreciation raises the value of the external debt.
- Monetary independence if the CB is sustained.
- Countries are better able to absorb economic shocks.

# J-curve

What is the effect of currency depreciation?

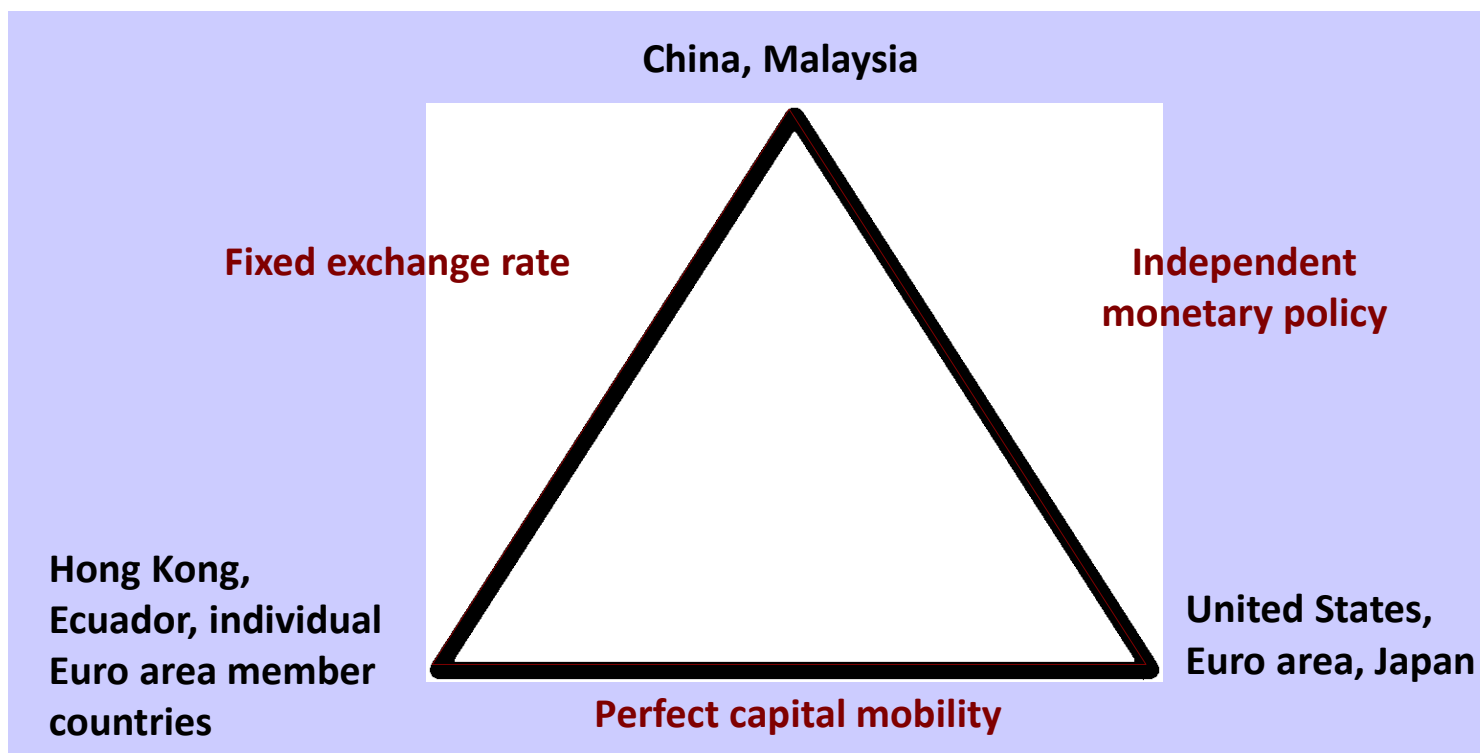
In the SR trade volumes tend to react slowly to relative price variations, while the valuation effect is immediate => immediate deterioration in trade balance, then improvement in the LR.





# Convertibility and exchange-rate regime: a joint choice

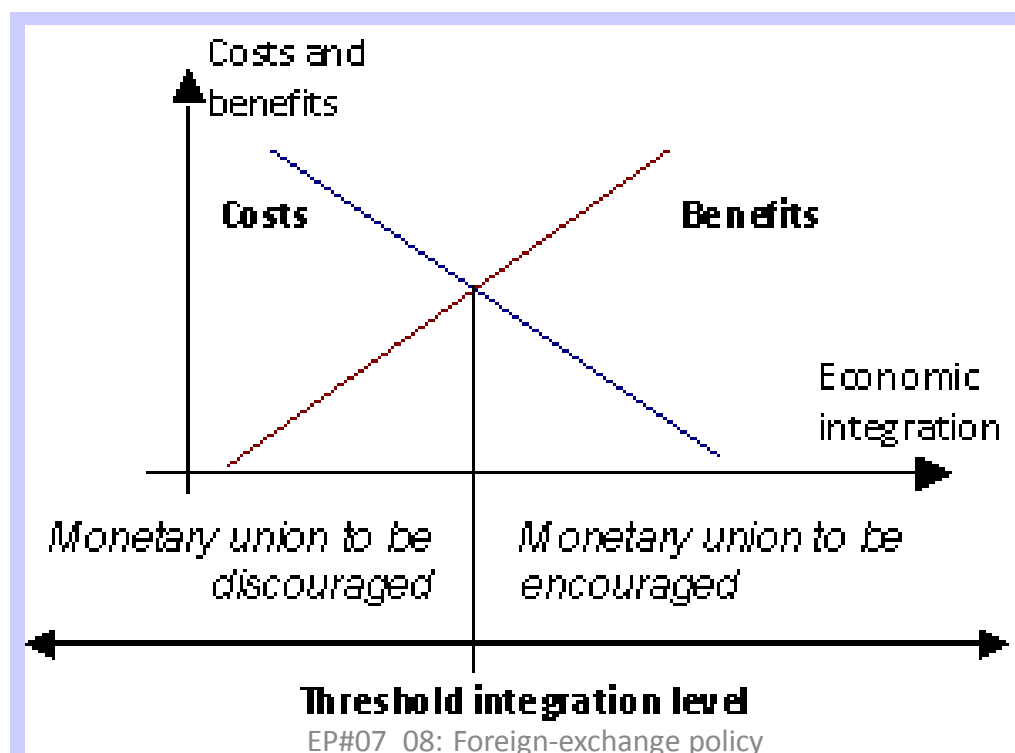
*Mundell's impossible trinity*



A country cannot simultaneously enjoy an independent MP, a stable exchange rate and a perfectly mobile capital.

# Regime choice: the optimum currency area theory (OCA) #1

The OCA theory predicts that fixed exchange rates are most appropriate for areas closely integrated through international trade and factor movements.



# The optimum currency area theory #2

- Benefits:
  - saving from avoiding the uncertainty, confusion, and calculation and transaction costs that arise when exchange rates float
  - are higher, the higher the degree of economic integration between the joining country and the fixed exchange rate area

# The optimum currency area theory #3

- Costs:
  - arise because a country that joins an exchange rate area gives up its ability to use the exchange rate and monetary policy for the purpose of stabilizing output and employment
  - are lower, the higher the degree of economic integration between a country and the fixed exchange rate area that it joins

# Is the euro area an optimal currency area? #1

An OCA occurs when

- Countries have achieved real convergence
- They respond in similar ways to external economic shocks or macro policy changes
- They have sufficient flexibility in both their product markets and labor markets to deal with these shocks
  - High mobility of labor
  - Wage and price flexibility in factor markets
- Countries are prepared to use fiscal transfers to even out some of the regional economic imbalances

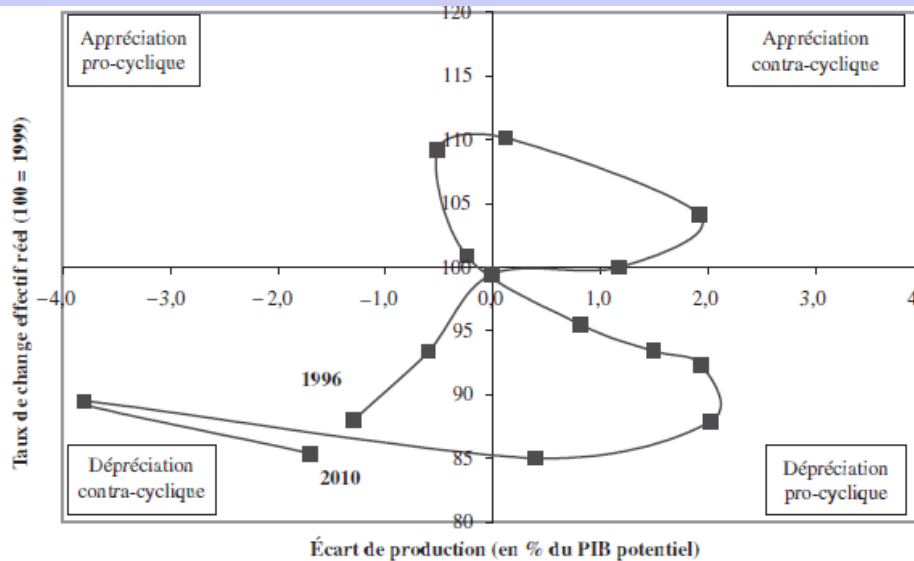
# Box. Is the euro area an optimal currency area? #2

The Euro Zone does not come close to an OCA by most criteria, because

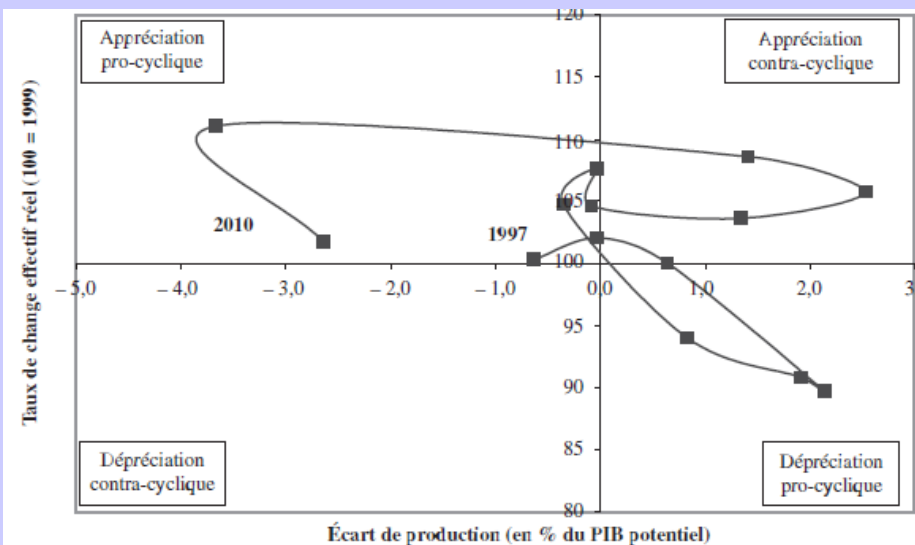
- The core group of EU countries are broadly similar (Germany + France + Netherlands + Belgium) but peripheral countries have big structural differences
- There are barriers to the mobility of labor
- Price and wage flexibility is rather low
- The role of fiscal transfers is limited

# The euro: a counter-cyclical exchange rate?

## United States



## Euro area



# Foreign exchange crises

- *Exchange-rate crisis* is sudden move from a fixed to a floating exchange rate under the pressure of market participants.
- Such crises have occurred repeatedly in recent history, especially since capital movements are free
  - 1992/1993: European Monetary System (Sweden, UK, Italy ...)
  - End-1994: Mexico
  - 1997/1999: Emerging market crises (Thailand, Korea, Indonesia, Brazil, Russia...)
  - 2000/2001: Turkey, Argentina
  - 2008: Iceland, Pakistan, Hungary, Latvia (without devaluation)

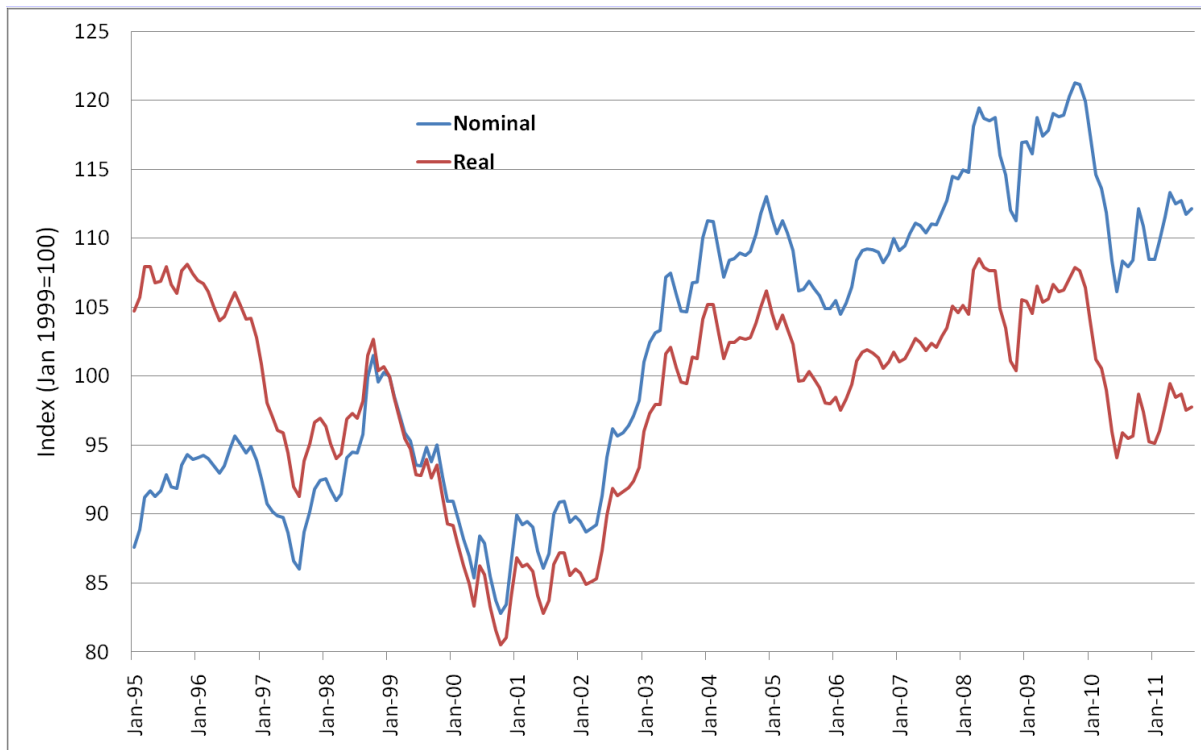


# Theoretical explanations of currency crisis

- 1<sup>st</sup> generation:
  - the crisis occurs when foreign exchange reserves are depleted or are expected to be depleted given credit growth
  - does not apply to ERM crises (current account surpluses, low inflation)
- 2<sup>nd</sup> generation
  - the crisis occurs when defending the peg becomes too costly (interest rate, unemployment)
  - does not apply to East Asia (the crisis itself was more costly)
- 3<sup>rd</sup> generation
  - the crisis occurs when confidence in debtors' solvency is lost
  - twin crises (monetary and financial)

# Nominal versus real exchange rate

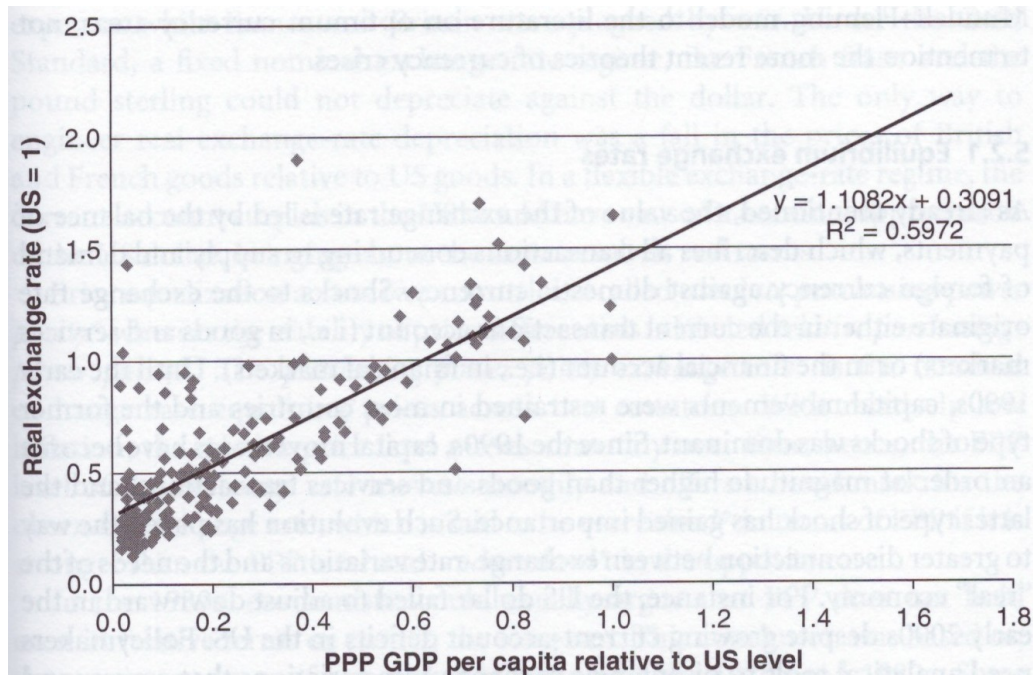
*Stylized fact 1:* When inflation is low, real exchange rate is strongly correlated with the nominal exchange rate.



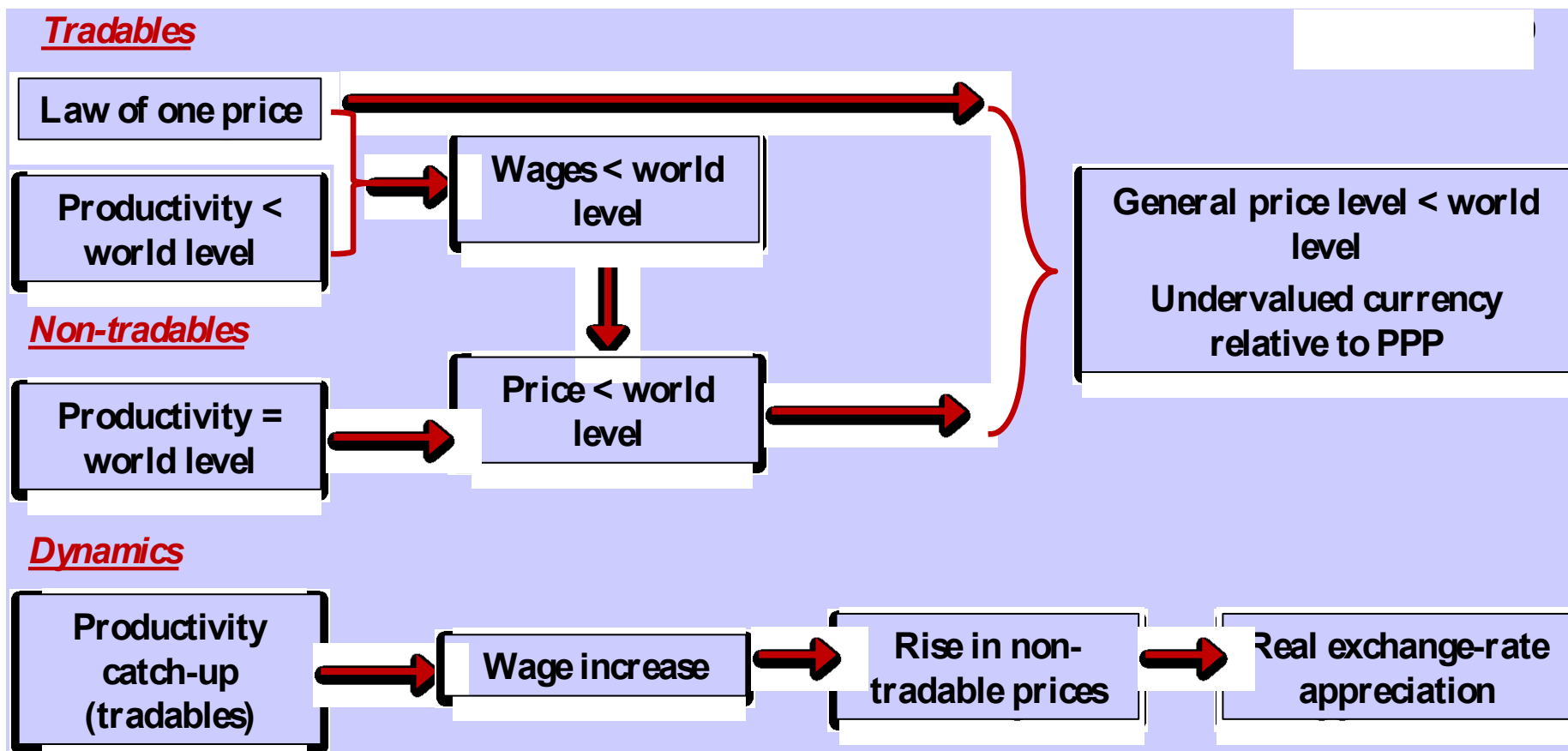
# Nominal versus real exchange rate

*Stylized fact II:* Real exchange rate tends to constant in the LR, in developing countries it appreciates as the country develops.

*Fig.* PPP GDP per capita and real exchange rate in 2006



# The Balassa-Samuelson effect



Consequence: inflation rates should remain dispersed in the euro area  
=> contradiction with Maastricht convergence criteria.

# Balance of payments (BP)

- It is a double entry system of record of all economic transactions between the residents of the country and the rest of the world carried out in a specific period of time.
- It takes into account the export and import of both visible and invisible items.

# Structure of balance of payment

BP consists of three accounts:

- *Current account*: all payments from/to the rest of the world deriving from exports of goods and services, labor and capital income
- *Capital account*: capital transfers without a counterpart
- *Financial account* (formerly capital account): all sales of domestic assets to the rest of the world (*capital inflows*) and all purchases of foreign assets (*capital outflows*).

# The US and euro area BP in 2008

	US		Euro area	
	\$bn	% GDP	€bn	% GDP
<b>Current account</b>	<b>-673.3</b>	<b>-4.7%</b>	<b>-67.3</b>	<b>0.7%</b>
Goods and services	-681.1		47.0	
Factor income	127.6		-22.0	
Transfers	-119.7		-92.3	
<b>Capital account</b>	<b>-2.6</b>	<b>-0.0%</b>	<b>13.7</b>	<b>0.1%</b>
<b>Financial account*</b>	<b>546.6</b>	<b>3.8%</b>	<b>212.6</b>	<b>2.3%</b>
Direct investments	7.4		409.2	
Portfolio investments	154.4		235.7	
Financial derivatives	-373.9		-12.3	
Other investments	342.2		102.1	
Foreign exchange reserves	416.5		-4.9	
<b>Statistical discrepancies</b>	<b>129.3</b>	<b>0.9%</b>	<b>-151.1</b>	<b>-1.6%</b>

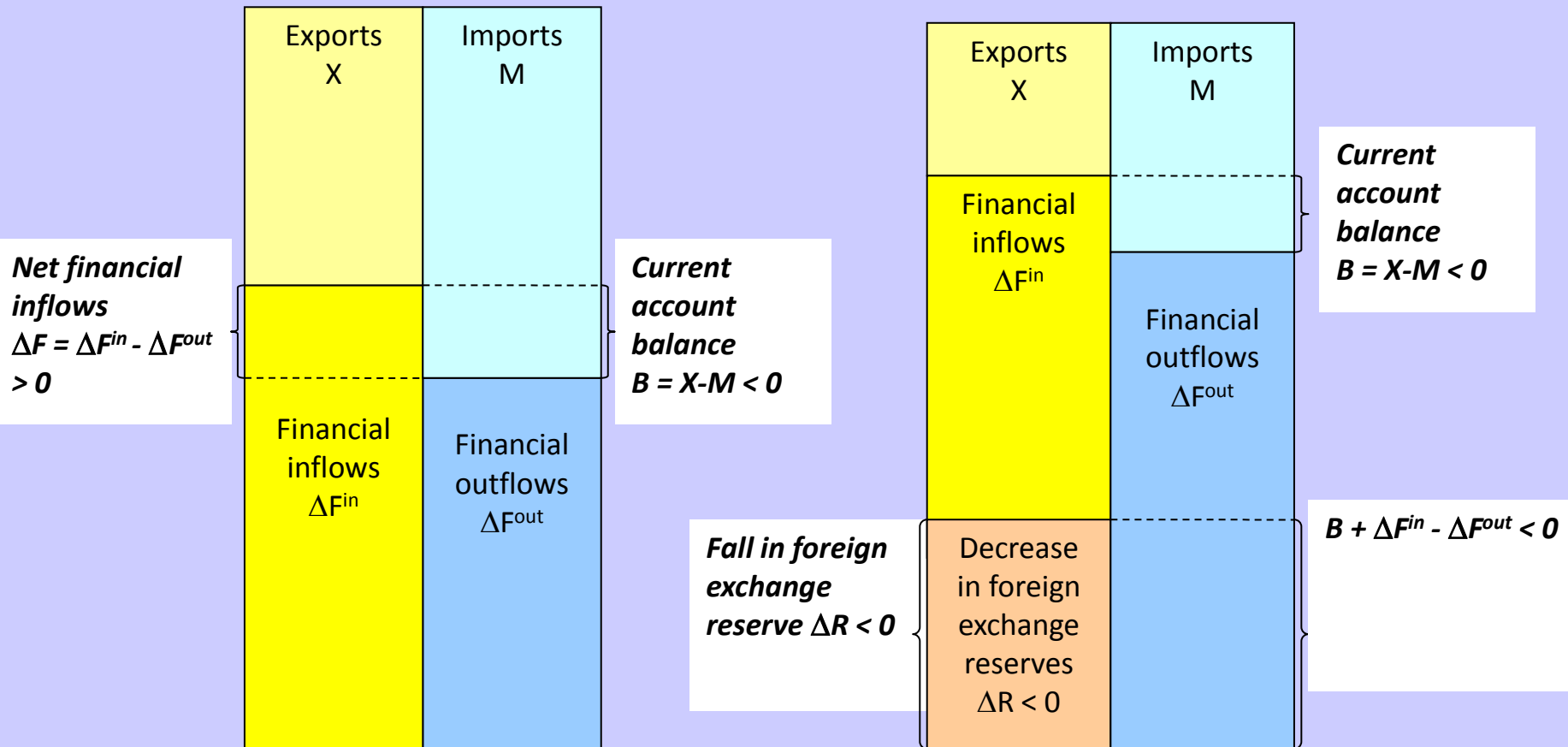
Note: Financial account: net capital inflows (+), net capital outflows (-).

Source: European Central Bank and US Bureau of Economic Analysis.

# Adjustment under fixed and floating exchange rates

Floating exchange-rate regime:  $B + \Delta F = 0$

Fixed exchange-rate regime:  $B + \Delta F = \Delta R$





# The pros and cons of capital openness

## #1

- Theoretical advantages:
  - enables the capital to flow to the most efficient places
    - helping both investors as well as all stakeholders
  - enable emerging economies to diversify narrow production base while simultaneously benefiting from technological spillover
  - capital flows from capital rich to capital poor countries as they should have higher returns
    - reduce cost of capital
    - enable investments
    - increase growth

# The pros and cons of capital openness

## #2

- Potential problems:
  - fear of appreciation of domestic currency and making domestic manufacturers less competitive in global markets
  - fear of hot money; sudden injection of funds into small markets can cause initial dislocation and strains associated with sudden withdrawal
  - fear of large capital inflows, that can cause dislocations in the financial system and fuel asset price bubbles
  - fear of loss of monetary autonomy; see impossible trinity

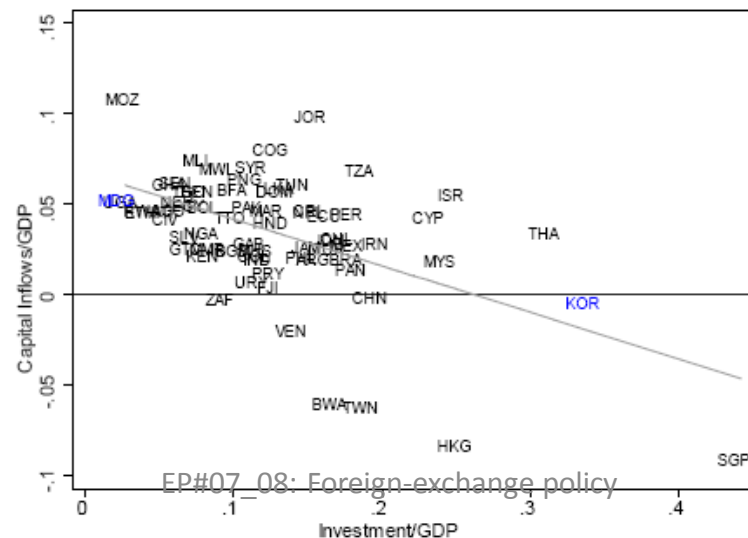
# The capital allocation puzzle #1

- Some countries are structural capital exporters, due to:
  - an undervalued exchange rate, or
  - a high domestic saving rate (in ageing countries, or in countries where social security is underdeveloped )
  - limited investment needs due to a already high stock of capital
- Some are structural capital importers, due to:
  - a high investment needs in the catch-up process
  - a low domestic saving rate

=> One would expect long-term capital to flow from North to South

# The capital allocation puzzle #2

- In the real world, however,
  - Gross capital flows have been mostly North- North although increasingly South-South
- Net capital flows have been South-North
- No correlation between incoming investment and the marginal return of capital (the allocation puzzle)



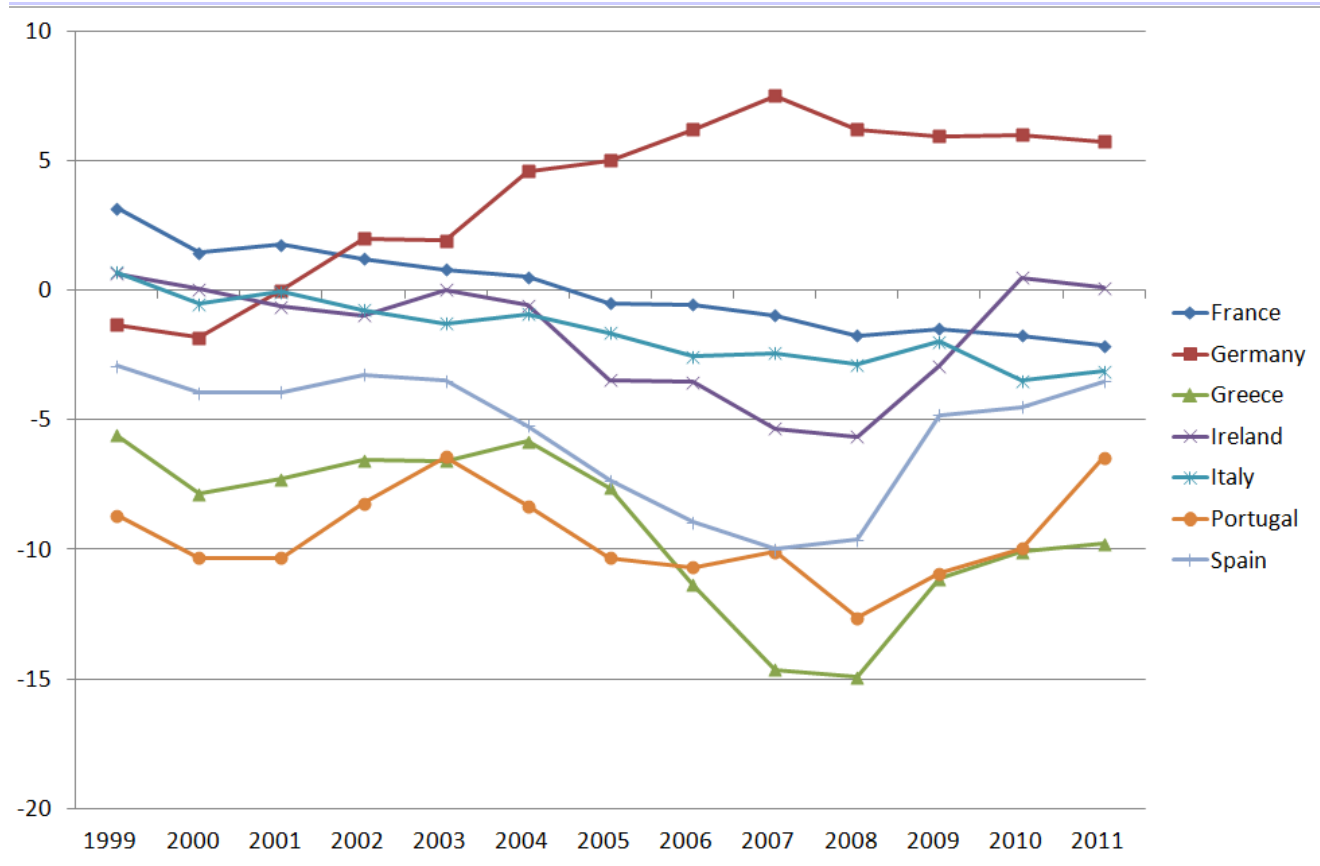
# Global imbalances: the policy discussions

- Current account surpluses have piled up in Asian countries in the 2000s.
- Meanwhile, the US deficit has grown from 2 % GDP in 1997 to more than 6 %.
- The Eurozone suffers from internal imbalances.

# The imbalanced eurozone

- Countries with current account deficits are those where productivity grows fast (e.g. some new member states)
- Other possible explanations:
  - Excess demand due to insufficient supply- side reform (excess development of non- tradable sectors, e.g. Greece, France?)
  - Speculative capital inflows due to asset price bubble (e.g. housing market in Spain), themselves related to single currency (negative real interest rates)

# Current account balance (% of GDP)



# Global imbalances: four explanations

## The US side

- ***Low savings***
  - Ageing population
  - Consumption made easy by financial innovation (mortgages and credit cards) in the run-up to the crisis
  - Low interest rates due to loose monetary policy
- ***High expected productivity gains***
  - Support current account deficits and capital inflows (intertemporal approach)
  - But external financing through Treasuries, not corporate bonds and stocks?

## The Asian side

- ***The ‘saving glut’*** (B. Bernanke)
  - Earlier stage of demographic transition
  - Insufficient social security
  - Low-developed financial systems
  - Self-insurance through foreign-exchange reserve accumulation out of defiance against the IMF
- ***Exchange-rate undervaluation***
  - In particular as concerns the RMB
- ***G-20 ‘Framework for a strong sustainable and balanced growth’***  
***(see Cannes Action Plan, Nov. 2011)***