International Economics
Lecture notes

Euro: Experiments of Regional Common Currency

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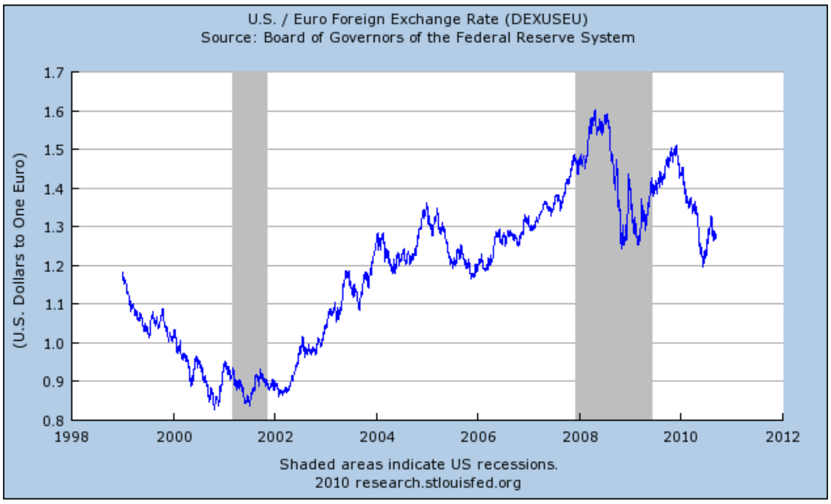
Preview

- Introduction to Euro & EMU
- Theory of optimal currency areas
  - Is the EU an optimal currency area?
- Euro: the major flaws

Introduction

- In 1973, Bretton Woods System, or the Dollar Standard, collapsed. European countries let their currencies float against the US dollar, but narrowed the extent to which their currencies fluctuate against each other.
- This had developed into the **European Monetary System (EMS),** a system of fixed exchange rates implemented in 1979 through **ERM**, or **exchange rate mechanism**.
- The EMS has since developed into an **economic and monetary union** (EMU), replacing the previous fixed exchange rate with a common currency, Euro, in 1999, under the economic and monetary union.

$/€ Exchange Rate since 1999

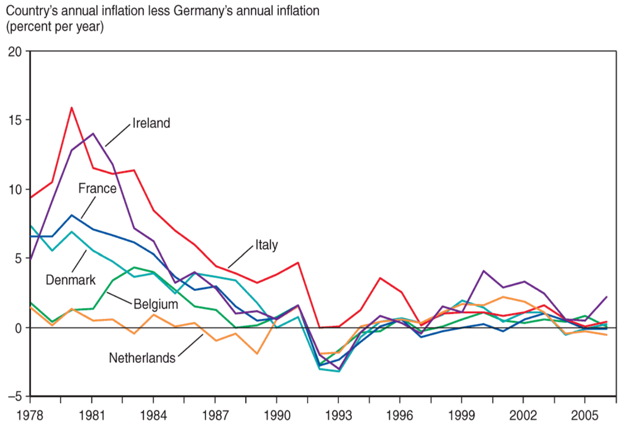


Members of the Euro Zone as of January 1, 2008

Policies in the Euro Zone

- **The Maastricht Treaty Convergence Criteria** requires that EU members that want to enter the economic and monetary union must satisfy the following:
  1. price stability - maximum inflation rate of 1.5% above the average of the three lowest national inflation rates among EU members.
  2. exchange rate stability – stay within the ERM without devaluating on its own initiative
     - Sweden did not satisfy this criteria
  3. government deficit no bigger than 3% of GDP
  4. government debt no bigger than 60% of GDP

Price Stability: Inflation Convergence for Six Original EMS Members, 1978–2006



→ Similar to Chinese Yuan's peg to the US dollar, by pegging exchange rate with Germany, and/or later adopting a common currency, EU countries have achieved lower inflation very close to Germany's.

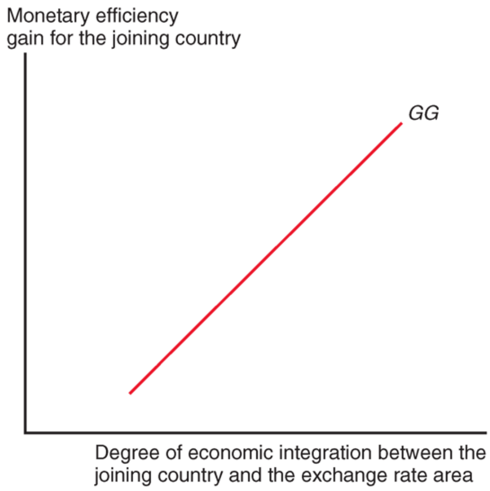
Theory of Optimum Currency Areas

- Developed by Robert Mundell in 1961 – Mundell is nicknamed "father of Euro".
- It is a theory that analyzes a country's costs and benefits from joining a fixed exchange rate area such as EMS.
  - The benefits are called "monetary efficiency gain"
  - The costs are called "economic stability loss"
  - It Implies there is a trade-off between efficiency and stability
- The theory predicts that fixed exchange rates are most appropriate for areas closely integrated through international trade and factor movements, including capital and labor.

Theory of Optimum Currency Areas

- The **monetary efficiency gain** - joining fixed exchange rate system would be beneficial for a country if:
  - trade is extensive between member countries
    - as the transaction costs due to currency risk would be greatly reduced
  - capital flows freely between member countries
    - as the uncertainty about rates of return due to currency risk would be greatly reduced
  - people migrate freely between member countries
    - as the uncertainty about the purchasing power of earned wages from another member country would be greatly reduced
- In general, as the degree of economic integration increases, the monetary efficiency gain increases.

➔ The *GG* Schedule



Theory of Optimum Currency Areas

- **The economic stability loss**
  - the loss of autonomy in monetary policy for stabilizing output and employment
  - the loss of the self-adjustment mechanism through floating exchange rates
- In general, as the degree of economic integration increases, the economic stability loss decreases.
- Let's use Denmark as an example ➔

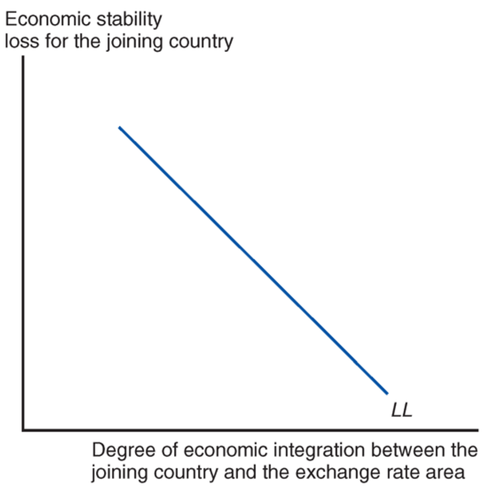
Theory of Optimum Currency Areas

- **Loss from independent money policy and economic integration**
  - **When economic integration between Denmark and EU is high,**
    - an output fall in Denmark is most likely in sync with a simultaneous output fall in EU. So, if ECB lowers interest rate to stimulate economy, it will be beneficial to Danish economy too.
    - In this case, loss of autonomy in money policy is relatively small.
  - **When economic integration between Denmark and EU is low,**
    - Imagine Danish economy is booming while other EU economies are in recession. If ECB lower interest rate to stimulate economy, it also lowers interest rate in Denmark (because of pegging to the Euro), potentially overheating Danish economy.
    - In this case, loss of autonomy in monetary policy is much bigger.

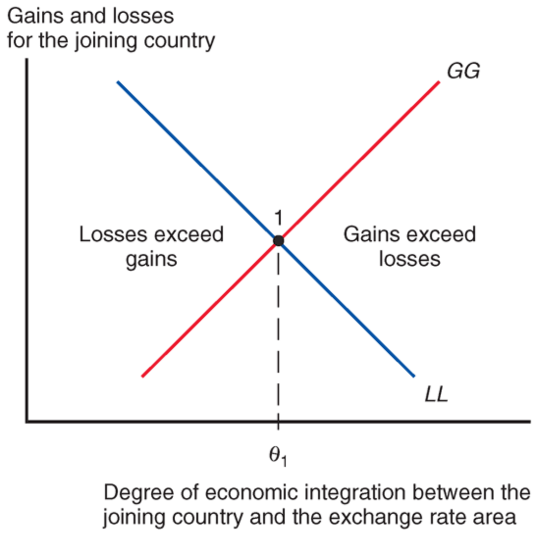
Theory of Optimum Currency Areas

- **Loss from self-adjustment mechanism under floating exchange rate and how it's related to economic integration**
  - **When economic integration between Denmark and EU is high,**
    - an output fall in Denmark is more likely in sync with a simultaneous output fall in EU. The fall in output in EU will cause euro to depreciate against the currencies of non-EU countries.
    - Since Danish Krone is pegged to the Euro, Danish krone also depreciates against other currencies, thus increasing its export increases and output.
    - So the loss is smaller in this case.
  - **When economic integration between Denmark and EU is low,**
    - Denmark had a sharp fall in demand (DD schedule shifts left), while EU economies may grow at a normal rate.
    - Euro won't depreciate, so Danish Krone can't depreciate either. Thus Danish economy can't increase its output through currency depreciation. It may have to go through a long slump.
    - So the loss is greater in this case.

➔ The *LL* Schedule



When to Fix the Exchange Rate



→ When the monetary efficiency gain exceeds the economic stability loss for a member country, which corresponds to degree of integration beyond theta 1 in the graph, the country has incentives to join fixed exchange rate system.

Is the EU an Optimum Currency Area?

- Trade volumes as a fraction of GDP
  - Most EU members export from 10% to 20% of GDP to other EU members. This compares with exports of less than 2% of EU GDP to the US.
  - But trade volumes between US regions are much larger.
- Capital flow from within EU relative to total investment
  - There are some evidence that financial assets were able to move more freely within the EU after 1992 and 1999
- Migration workers as a percentage of total labor force
  - There is little evidence that regional migration is extensive in the EU

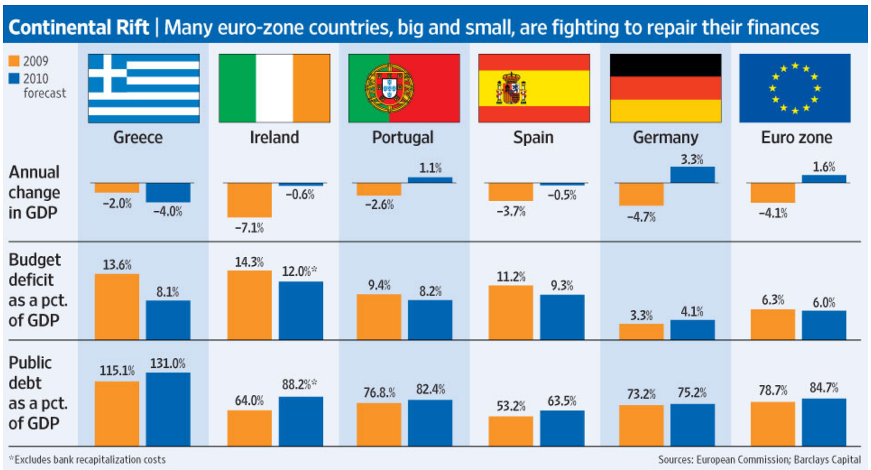
Major Flaws of Euro

- Fixed exchange rate or common currency requires homogeneous economic structure and performance among member countries, but currently there are substantial differences.

  For example, as of 2009,
  - Unemployment rate: Germany 7.5%, Spain 12.8%;
  - Growth of industrial production: Germany -3.9%, Spain -11%, France -7.2%
  - Trade balance: Germany + $280 billion, Spain -$154 billion, France -$83 billion.

- Different economic structure and diverging economic performance require different monetary policy and fiscal policy.
  - Easier monetary policy is not possible for member countries with relatively weaker economic performance
  - Expansive fiscal policy is seriously restrained by the Maastricht Treaty, especially when member countries are already seriously indebted (due to economic and financial shocks, such as burst of a housing bubble). This was certainly the case in countries like Portugal, Ireland, Italy, Greece and Spain.

Common Currency, Diverging Performance



Major Flaws of Euro, cont.

- Under current system, there is no mechanism for a common fiscal policy for the entire EMU
  - In Europe, there is no equivalent of ECB when it comes to fiscal policy. Germany is worried that a common EU tax authority would undermine their own fiscal soundness.
  - In contrast, Washington offsets 1/3 of any local fall in incomes by reduced collection of federal taxes and increased unemployment benefits
- Finally, under current treaty, there is no provision for a country to leave the EMU

Euro: a demon of its own design

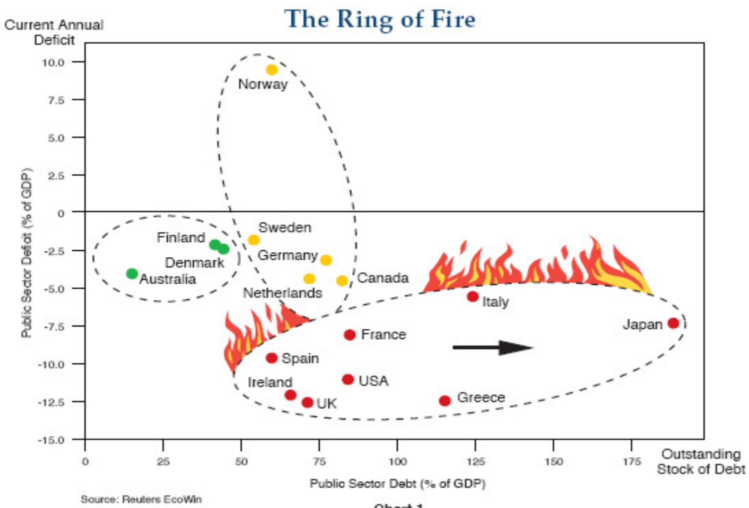


Chart 1

Comparisons to the U.S.

- Why a single currency is good for the US, but not for Europe?
  - much less labor mobility in Europe
  - different languages
  - different cultural traditions
  - national identity and sovereignty still matter a great deal to European countries
  - Unlike the US, there is no single tax authority at the federal level to coordinate fiscal policies among countries