IFM 2014 Lecture 8

Monetary Union

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Outline of lecture

Lecture 8

- Key features of monetary union
- Costs and benefits of monetary union
- Applications
  1. The UK and the Eurozone
  2. Scottish Independence
- Summary

Monetary union

- The key features of monetary union are:

  1. Permanent creation of a single currency
  2. Complete capital market integration
  3. A single union central bank

- Let's look at each of these aspects in greater detail...

Permanent creation of a single currency

- Monetary union involves **permanently fixed** exchange rates
- It makes sense for all members to adopt a single currency to eliminate currency conversion costs
- This also enhances credibility – separate currencies cease to exist!

Table 1 – Selected Euro conversion rates

Currency	Conversion rate
Cyprus Pound	0.585
Deutschmark	1.955
French Franc	6.559

Source: Pilbeam, Table 16.6 (p. 429)

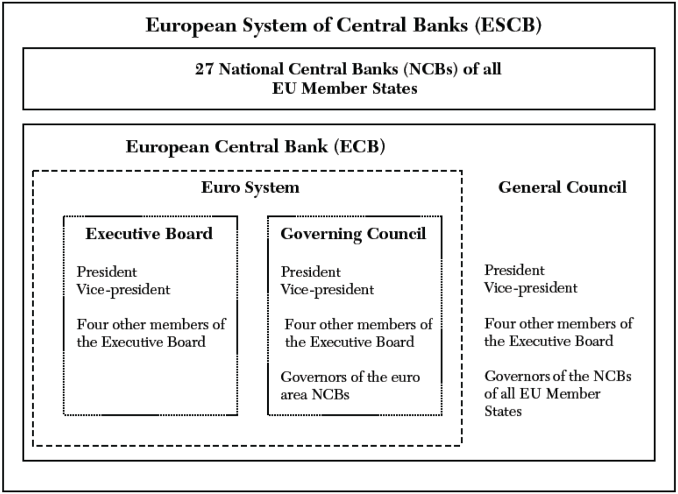
Complete capital market integration

- All obstacles to free movement of **financial capital** are removed
- In other words, €1 in Brussels is treated the same as €1 in Ireland
- This is a requirement of monetary union because a currency ceases to be the 'same' in all countries if location is a condition of payment
- **Example:** what would happen if other Eurozone members refused to accept Euros from Greece?
- Likewise, Scottish notes are accepted in the rest of the UK

A single union central bank

- A single currency implies a single monetary policy
- For example, interest rates in the UK are denominated in £
- And there is only one £ money supply, set by the Bank of England
- In the Eurozone, the ECB sets the money supply and interest rates
- The central bank should be concerned with what is best for the monetary union as a whole

The European System of Central Banks



Source: Beetsma and Giuliodori (2010)

Benefits of monetary union

- These include:
    1. Increase in intra-union trade (Rose effect)
    2. Increase in investment
    3. Removal of currency conversion costs
    4. Price transparency
    5. Improvement in monetary policy credibility (in high inflation countries)
- **What will determine the magnitude of these benefits?**

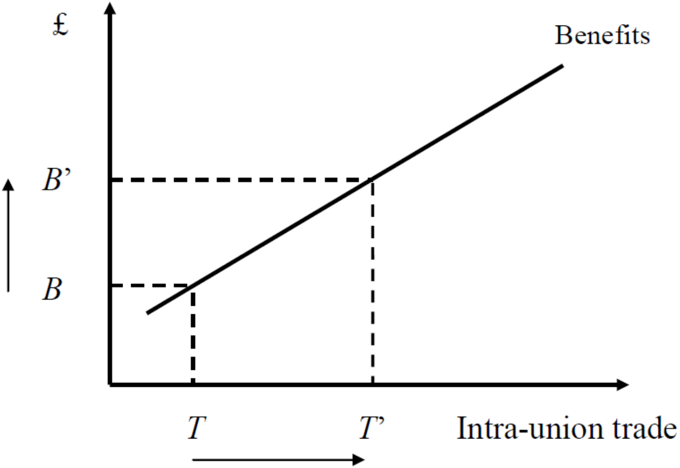
1. Increase in intra-union trade

- The argument here is that removing exchange rate uncertainty would boost trade between union members
- The overall impact on a country's trade will be large if the economy trades a lot with union members
- The overall impact on trade is likely to be low if exchange rate uncertainty can easily be hedged
- But note that well-developed forward markets do not exist at 1+ years

The Rose effect

- Andrew Rose (2000) has attempted to estimate the impact of monetary union entry upon a country's trade
- He concludes that trade could be doubled or even tripled!
- The benefits from an increase in trade will depend on
  1. The magnitude of the trade increase
  2. The importance of trade relative to GDP – ie 'openness'
- The diagram on the next page illustrates the Rose effect

The Rose effect



- Trade increases from T to T'; benefits of entry rise from B to B'

2. Increase in investment

- Since much inward investment by foreigners will not yield a return for several years, exchange rate uncertainty can be difficult to hedge

- It has therefore been argued that entry would boost inward investment in the home economy by other union members

- The potential benefits will be larger if

  1. Other union members are a significant source of inward investment

  2. Inward investment is important to the economy

3. Removal of currency conversion costs

- Avoiding currency conversion would save resources
- **Example:** European Commission (1990) estimated that the savings would average 0.4% of GDP for Eurozone members
- For countries with advanced banking sectors, the savings are likely to be lower than this
- In countries with more primitive banking sectors, the savings would exceed this figure

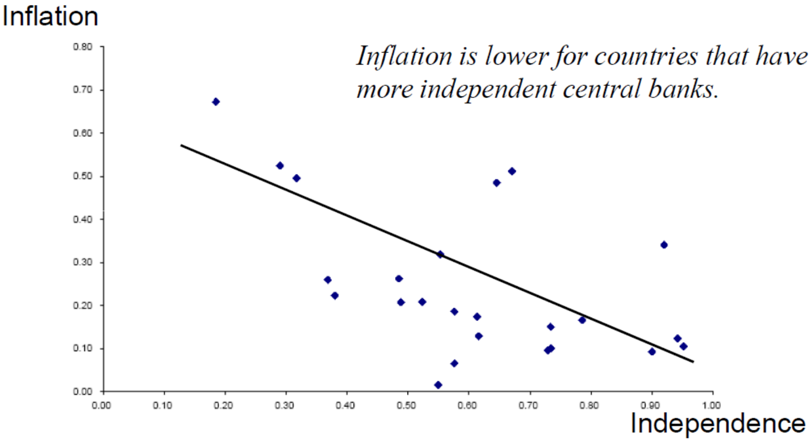
4. Price transparency

- Having a single currency would make it easier to compare prices across countries
- This should increase competition and reduce prices as consumers and firms source products from the cheapest location
- There are limits to this, however, and they are set by geography
- **Example:** Ireland is unlikely to benefit much from price transparency in goods markets, because it will face higher transport costs than other Eurozone members

5. Improvement in monetary policy credibility

- Entering a monetary union is one way for high-inflation economies to build **monetary policy credibility**
- The reasons are twofold:
  1. Enhanced central bank independence
  2. Credible commitment to low inflation
- Over time, this should enable high-inflation economies to reduce inflation to low levels

Inflation vs central bank independence



Source: Walsh (2003)

ECB credibility

- The Maastricht Treaty gives the ECB the **primary objective** of "maintenance of price stability"
- This is interpreted in practical terms as "inflation rates below, but close to, 2% over the medium term" (ECB website)
- So far the ECB has done well at meeting this inflation objective
- Eurozone members with a history of weak monetary discipline have reduced inflation substantially
- Between 1999 and 2007, 2-yr and 5-yr inflation expectations were close to but below 2% (Beetsma and Giuliodori, 2010)

Eurozone inflation and nominal interest rates

TABLE 1
Annual CPI and HICP Inflation in Selected Countries and the Euro-Zone

	Greece	Italy	Portugal	euro-zone	EU-3	OECD-5
1990	19.89	6.25	13.30	—	6.57	5.28
1995	8.90	5.37	3.98	2.44	2.49	2.65
2000	2.89	2.58	2.80	2.10	1.60	2.53
2005	3.48	2.21	2.13	2.19	1.52	2.14
2006	3.31	2.22	3.04	2.18	1.89	2.47
2007	2.99	2.04	2.42	2.14	1.89	1.96

TABLE 2
Long-Term Nominal Interest Rates in Selected Countries

	Greece	Italy	Portugal	euro-zone	EU-3	OECD-5
1990	23.00*	13.54	20.82	10.80	11.86	10.37
1995	15.52*	12.21	11.47	8.39	7.03	8.91
2000	6.11	5.58	5.60	5.43	5.45	5.37
2005	3.59	3.56	3.44	3.41	4.19	3.73
2006	4.07	4.05	3.91	3.84	4.42	4.01
2007	4.46	4.47	4.40	4.30	4.59	4.50

Source: Beetsma and Giuliodori (2010)

Costs of monetary union

- These include:

    1. Loss of independent monetary policy
    2. Loss of the exchange rate policy instrument
    3. Transition costs

- The costs of monetary union are largely **macroeconomic costs**

Cost 1: Loss of independent monetary policy

- Countries in a monetary union face a "one-size-fits-all" interest rate
- This can be problematic if one country is in boom and another is in recession
- The one requires an increase in interest rates, but the other needs a cut in interest rates
- The union central bank does not have enough instruments to solve both problems!

Cost 1: Loss of independent monetary policy cont'd

- The costs of losing monetary policy will be particularly high if some countries in the union are growing faster than others

- If this situation persists we end up with a "two-speed" monetary union

- **Example:** the house price booms in Ireland and Spain were exacerbated by low interest rates set by the ECB

- The ECB did not raise interest rates because Eurozone inflation was near its target

Optimum currency area criteria

- The OCA criteria set out circumstances in which the costs of losing monetary policy are likely to be low
- The main ones are as follows:
  1. Labour mobility between countries
  2. High degree of openness
  3. High degree of product diversification
  4. Fiscal transfers between countries
- Let's look at a couple of these...

Labour mobility

- Robert Mundell argued that intra-union labour mobility could substitute for the loss of monetary policy
- **Example:** If country A is in a recession and country B is in a boom, workers can move from A to B to avoid unemployment
- As a result, wages will rise in country A and fall in country B
- In practice, however, labour mobility is far from perfect

Fiscal transfers

- If workers are not willing to move between countries, we could always shift government spending instead
- Increasing government spending in country A, and reducing it in country B, will shorten the recession in A and soften in the boom in B
- We could also use tax rates to achieve this, but problem is that the effects of fiscal policy are less predictable than monetary policy
- An example of fiscal transfers in action is the Greek bailout in 2010

Cost 2: Loss of the exchange rate policy instrument

- Suppose a country experiences a fall in demand for its exports and runs a current account deficit
- With its own currency, the exchange rate would be expected to depreciate, restoring competitiveness and reversing the fall in demand
- In a monetary union, country-specific depreciations are not possible
- Consequently, the fall in demand will not be reversed, so some countries may run persistent deficits and others persistent surpluses

Cost 3: Transition costs

- New notes need to be printed and the old ones need to be removed from circulation
- Vending machines need to be changed and so do payment systems
- These are 'one-off' costs, but they were estimated at £6-8 billion for the Euro changeover (European Banking Federation, 1995)
- In the short run, there could also be negative effects on inward investment into the currency union – at least until the new currency has been successfully established

Applications

- In this section, will we consider two potential currency unions which have received a lot of interest:

  1. UK and the Eurozone
  2. An independent Scotland and the UK

- It will not be possible to give a detailed analysis, but we can identify some key points

- We will link our analysis to the points we have already discussed

UK and the Eurozone

UK and the Eurozone: benefits

- The UK could potentially benefit a lot from the Rose effect, since it does around 50% of its trade with the Eurozone
- The benefit from removing currency conversion is likely to be less than 0.4% of GDP, because the UK has a highly advanced banking sector
- Price transparency benefits are likely to be relatively small because the UK is some distance from mainland Europe
- The Bank of England has been independent since 1997 and has gained anti-inflation credibility, so there is little scope for improvement on this score

UK and the Eurozone: costs

- Losing the ability to set interest rates seems likely to be the main cost
- The inability to depreciate the exchange rate may also be costly, since this caused a lot of pain during the ERM episode (1990-92)

Table 2 – Mortgages in selected countries

Country	% Variable-rate mortgages
France	13%
Ireland	86%
UK	70%

Source: FitchRatings (2013)

- What do the OCA criteria tells us about the costs of losing UK monetary policy?

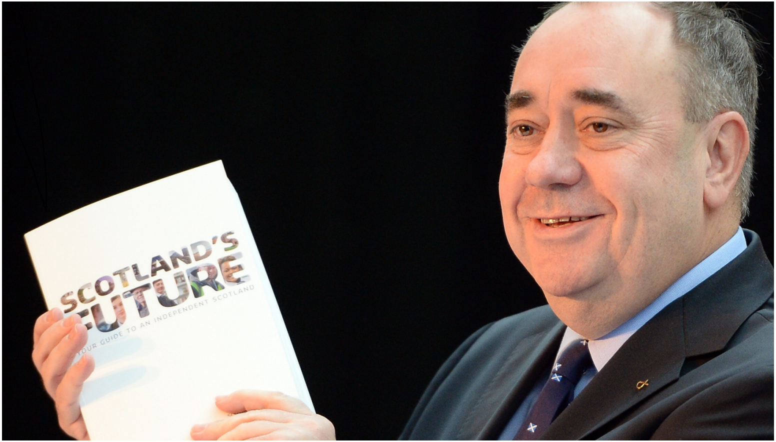
Is the Eurozone an OCA for the UK?

- Labour has the right to move freely in the Eurozone, but labour mobility is far from perfect
- It is not plausible that large numbers of unemployed workers in the UK would move to mainland Europe to escape short-term unemployment
- In general, the Eurozone does not have a system of fiscal transfers – fiscal policy is set at national level by member states
- But the sovereign debt crisis has shown that stronger Eurozone nations may sometimes be required to 'bail out' weaker ones

UK and the Eurozone: summary

- The main potential benefit – increased trade – is highly uncertain
- But the costs of losing independent monetary policy and the exchange rate are likely to be high
- In particular, labour mobility and fiscal policy are unlikely to be good substitutes for UK monetary policy
- Another issue is that the UK might respond differently to changes in Eurozone interest rates to other members
- In summary, the economic benefits do not justify the risks of entry

An independent Scotland and the UK



An independent Scotland and the UK

- The Scottish National Party (SNP) want Scotland to break away from the UK and become an independent country
- Under their plan, Scotland would keep the Pound and monetary policy in Scotland would be set by the Bank of England
- In other words, Scotland and the rest of the UK would enter into a monetary union
- **Is this plausible, and is it a good idea?**

An independent Scotland and the UK cont'd

- The SNP plans to use fiscal policy to attract additional investment to Scotland – eg by cutting the corporation tax rate
- They have argued that this would lead to a "jobs boom". Few economists believe them, but let's suppose it's true.
- The problem we would then encounter is a two-speed currency union, with monetary policy set based on economic outcomes in the rest of the UK
- In other words, if independence does boost Scotland's economic performance, then it is likely that it will need its **own currency**

Summary on monetary union

- Monetary union is a big undertaking since it is **risky but permanent**
- From an economic perspective, the decision to enter or not should be based on a comparison of the **benefits and costs**
- The **OCA criteria** provide useful guidance on the likely costs of giving up an independent monetary policy
- It is crucial to apply economic theory to the circumstances at hand in order to reach the correct decision

Next time...

- Market microstructure approach to exchange rate determination

- We will discuss the main features of this approach

- In addition, we will investigate whether it is useful for understanding real-world movements in exchange rates

- **Advance reading:**

    1. Lyons Ch. 1 (on Moodle)