

# EU Capital Markets

## Lecture 8

25 November 2024

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- 2 Definitions and Key Concepts
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# The Single European Act of 1986

- The Single European Act of 1986 established a commitment among European Union member states to ensure four fundamental freedoms: the free movement of goods, services, labor, and capital.
- These freedoms were intended to create a unified and efficient economic area.
- While the removal of non-tariff barriers for goods built on the existing tariff-free customs union, the movement of services remained limited due to the non-tradable nature of many service sectors.

# Capital Mobility as a Policy Shift

- The free movement of capital represented a significant policy shift.
- Progress has been slow, particularly for countries that joined the EU in 2004, as barriers to full capital mobility remained.
- These barriers continue to pose challenges for achieving integrated capital markets across the European Union.

# Marginal Productivity of Capital (MPK)

- MPK measures the additional output produced by one more unit of capital, holding other factors constant.
- Formula:  $MPK = \Delta Q / \Delta K$ , where  $\Delta Q$  is the change in output and  $\Delta K$  is the change in capital.
- High MPK: Indicates productive investment opportunities.
- Low MPK: Occurs in capital-abundant economies where additional capital has minimal impact on output.

# Equilibrium in Capital Markets

- Equilibrium occurs where the marginal productivity of capital (MPK) is equalized across countries.
- It ensures efficient allocation of resources by directing capital to its most productive uses.
- In separate markets, equilibrium is country-specific, leading to inefficiencies.
- In integrated markets, capital flows freely until equilibrium is achieved globally.

## Separate Capital Markets: Figure 9.1.a

- The x-axis represents the quantity of capital, while the y-axis represents the rate of return.
- Italy's  $MPK_i$  is a downward-sloping line, reflecting diminishing returns as capital increases.
- Germany's  $MPK_g$  is an upward-sloping line, reflecting increasing returns due to capital scarcity.
- Separate markets prevent the flow of capital between the two countries, leading to inefficiencies and differing rates of return.

# Separate Capital Markets: Figure 9.1.a

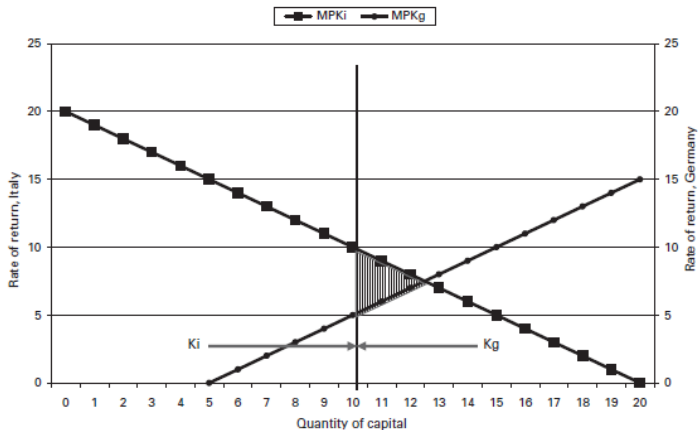


Figure 9.1a Separate capital markets

Figure: 9.1.a Separate Capital Markets



## Figure 9.1a Analysis: Italy

- Italy's  $MPK_i$  starts at a high value, indicating scarcity of capital and high productivity for initial investments.
- As more capital is added, the rate of return diminishes due to the law of diminishing marginal returns.
- Limited capital flows prevent Italy from optimizing its capital allocation globally.

## Figure 9.1a Analysis: Germany

- Germany's MPK<sub>g</sub> starts at a low value due to undercapitalization.
- As more capital is added, productivity increases, highlighting opportunities for higher returns.
- Without integration, Germany's capital scarcity persists, leading to inefficiencies.

## Integrated Capital Markets: Figure 9.1.b

- Capital flows freely between countries, moving from lower MPK (Italy) to higher MPK (Germany).
- The equilibrium point occurs where  $MPK_i$  intersects  $MPK_g$ , equalizing rates of return.
- Efficient allocation of resources maximizes global economic productivity.

# Integrated Capital Markets: Figure 9.1.b

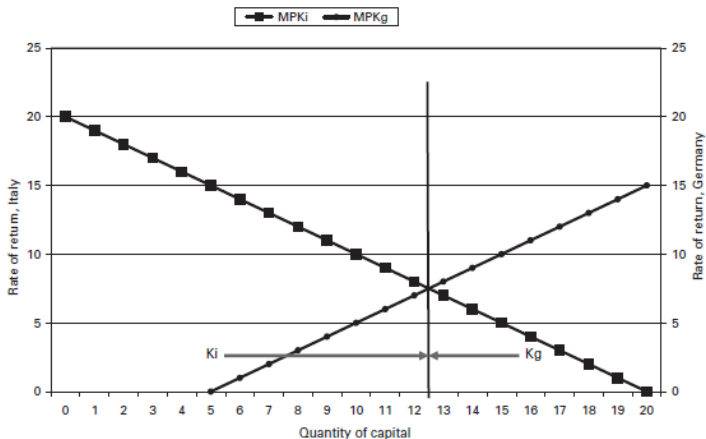


Figure 9.1b Integrated capital markets

Figure: 9.1.b

## Figure 9.1b Analysis: Equilibrium

- Italy's capital stock decreases, raising its rate of return to the equilibrium level.
- Germany's capital stock increases, boosting productivity and lowering its rate of return.
- Integration resolves inefficiencies observed in separate markets, achieving optimal resource allocation.

# Realized Gains from Integration

- The shaded area in Figure 9.1b represents the realized gains from integrating capital markets.
- Italy benefits from higher returns on its remaining capital.
- Germany benefits from increased capital stock and improved productivity.

# Barriers to Capital Mobility in the EU

- Despite decades of effort, barriers to capital mobility persist due to historical success in country-specific capital formation.
- High post-WWII investment-to-GDP ratios supported by:
  - Marshall Plan Aid: Maintained high investment rates.
  - European Payments Union: Sustained investment through the 1950s and 1960s.

- VAT adoption by EEC countries influenced savings and investment:
  - VAT taxed consumption goods but excluded long-lasting capital goods, effectively functioning as a consumption tax.
  - Higher savings rates in EU countries compared to the US.
- Indicative planning reduced uncertainty and encouraged investment through government support.



- The euro reduced government debt servicing costs but had limited impact on private sector debt.
- Investors favored the US stock market, reducing EU competitiveness.
- The European Council tasked a Committee of Wise Men to review and improve EU securities regulation.

- **Integrated Capital Markets:** Enhance overall efficiency and promote long-term growth.
- **Challenges:** Political resistance, regulatory disparities, and redistributive impacts.
- **Key Lesson:** Coordinated policies are essential to unlock the full potential of economic integration.