# Risk Sharing Through Financial Markets in the European Monetary Union

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# Risk Sharing in Monetary Unions

- Risk sharing desirable in general.
- Market failures and externalities?
- Policy interventions?
- Specificity of Monetary Union (MU)?
- Indispensable or can make do with other instruments?
- This talk:
  - general principles of risk sharing in monetary unions,
  - example of Mundellian risk sharing for macro stabilization.
- Broad set of specific proposals in 7+7 report: budget rules, Eurobonds, doom loops, banking union, financial markets union, fiscal union, etc.

# Macro Externalities in MU

- Macro externalities:
  - aggregate demand externalities (Keynesian output gaps),
  - pecuniary externalities (illiquidity, fire sales, systemic runs),
  - fiscal externalities (bailouts, doom loops, monetization).
- Market failure in risk sharing:
  - greater social vs. private risk aversion,
  - wedge private vs. social value of risk sharing.
- More prevalent in MU.

# Ex. Risk-Sharing Implications of Mundell

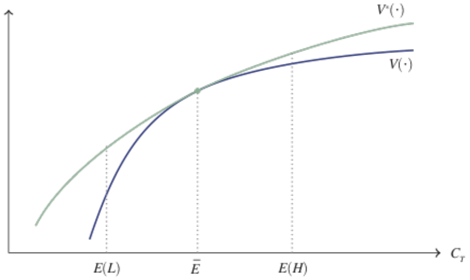
- Build on Farhi-Werning (AER, 2017).
- Fixed exchange rates in MU.
- Nominal rigidities.
- Asymmetric shocks.
- Imperfect macro stabilization.

# Aggregate Demand Externalities

- Agents internalize private income effects of risk sharing...
- ...but not effects of their spending on others' income...
- ...and ultimately on economy activity.
- Aggregate demand externality leads to market failure.
- Privately optimal risk sharing socially suboptimal.
- Only in MU.

# Social vs. Private Risk Sharing in MU

- Social vs. private risk aversion:




- Wedge social vs. private value of transfers (country $i$, state $s$):

$$\tau_D^i(s) = \underbrace{\tau^i(s)}_{\text{need (output gap)}} \times \underbrace{\alpha^i(s)/p^i(s)}_{\text{effectiveness (openness, MPCs, persistence)}}$$

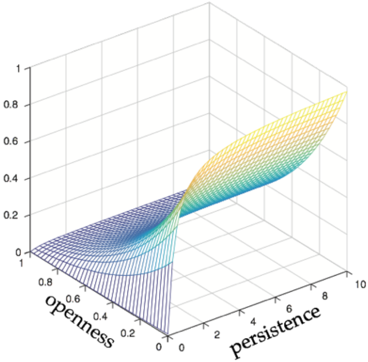
# Completing markets in MU

- Completing markets socially more valuable.
- Additional rationale for government involvement.
- Insufficient private risk sharing even with complete markets.
  (may also lead to risk concentration vs. dispersion)
- Can do better than laissez-faire financial markets unions.

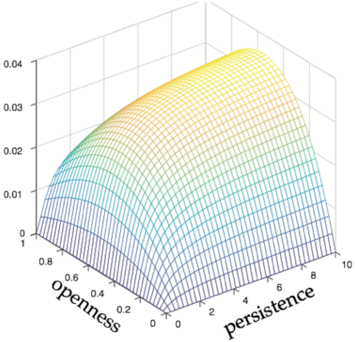
# Optimal Risk Sharing in MU

- Planning problem for optimal risk sharing in MU.
- Dual role of international transfers:
  - private risk sharing,
  - social macro stabilization.
- Second best risk-sharing international transfers:
  - incomplete markets and fiscal transfers (fiscal union),
  - complete markets and macropru (financial markets union).
- Also internal transfers if limited risk sharing within countries.

# Optimal International Fiscal/Financial Transfers...Low MPC



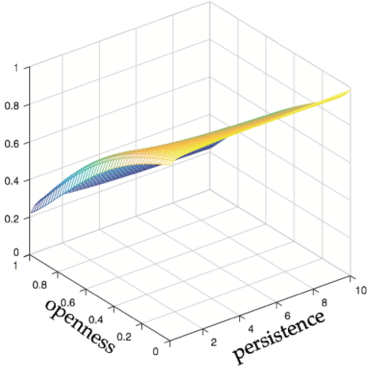

% effectiveness



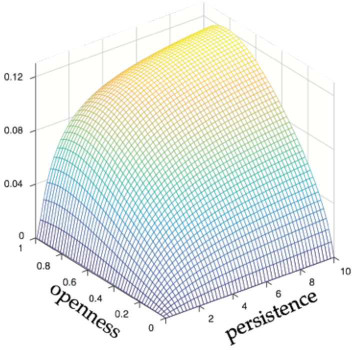

size / GDP

- 5% shock to terms of trade.
- Effectiveness and NPV size of transfers / GDP.

# Optimal International Fiscal/Financial Transfers...High MPC




% effectiveness




size/GDP

- 5% shock to terms of trade.
- Effectiveness and NPV size of transfers / GDP.

# International Financial/Fiscal Transfers vs. Other Tools

| | | PERMANENT | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No HtM agents | | | | | | | HtM agents | | | | | | |
| **NOMINAL RIGIDITIES** | **OPEN-NESS** | *No policy* | *Transfers* | *Capital controls* | *Gov. spending* | *Redistri-bution* | *Deficits* | *Joint fiscal policy* | *No policy* | *Transfers* | *Capital controls* | *Gov. spending* | *Redistri-bution* | *Deficits* | *Joint fiscal policy* |
| **More flexible** | **Open** | 0% | 25% | 67% | 36% | 0% | 0% | 36% | 0% | 63% | 66% | 36% | 58% | 58% | 62% |
| | **Closed** | 0% | 68% | 85% | 36% | 0% | 0% | 36% | 0% | 83% | 85% | 36% | 73% | 73% | 74% |
| **Sticky** | **Open** | 0% | 41% | 65% | 36% | 0% | 0% | 36% | 0% | 66% | 64% | 36% | 55% | 55% | 61% |
| | **Closed** | 0% | 81% | 82% | 36% | 0% | 0% | 36% | 0% | 87% | 82% | 36% | 71% | 71% | 72% |
| **Rigid** | **Open** | 0% | 66% | 0% | 26% | 0% | 0% | 26% | 0% | 66% | 0% | 26% | 0% | 0% | 26% |
| | **Closed** | 0% | 94% | 0% | 26% | 0% | 0% | 26% | 0% | 94% | 0% | 26% | 0% | 0% | 26% |

| | | TRANSITORY | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | No HtM agents | | | | | | | HtM agents | | | | | | |
| **NOMINAL RIGIDITIES** | **OPEN-NESS** | *No policy* | *Transfers* | *Capital controls* | *Gov. spending* | *Redistri-bution* | *Deficits* | *Joint fiscal policy* | *No policy* | *Transfers* | *Capital controls* | *Gov. spending* | *Redistri-bution* | *Deficits* | *Joint fiscal policy* |
| **More flexible** | **Open** | 0% | 21% | 83% | 47% | 0% | 0% | 47% | 0% | 76% | 82% | 47% | 73% | 73% | 78% |
| | **Closed** | 0% | 57% | 96% | 47% | 0% | 0% | 47% | 0% | 91% | 96% | 47% | 88% | 88% | 89% |
| **Sticky** | **Open** | 0% | 29% | 84% | 49% | 0% | 0% | 49% | 0% | 78% | 83% | 49% | 75% | 75% | 80% |
| | **Closed** | 0% | 58% | 97% | 49% | 0% | 0% | 49% | 0% | 92% | 97% | 49% | 89% | 89% | 90% |
| **Rigid** | **Open** | 0% | 10% | 56% | 26% | 0% | 0% | 26% | 0% | 53% | 54% | 26% | 43% | 43% | 53% |
| | **Closed** | 0% | 14% | 79% | 26% | 0% | 0% | 26% | 0% | 81% | 79% | 26% | 67% | 67% | 72% |

- Large gains from improving risk sharing.
- Even more than from national fiscal policy.
- Even if national fiscal policy.

# Moral Hazard

- Moral hazard mitigates but does not eliminate gains.
- Depends on implementation: fiscal vs. financial markets union.
- Must be managed with adequate mechanisms.