Who Owns Europe's Firms?

Implications for Risk Sharing and Capital Markets Union

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Motivation

How integrated is Europe?

- An open question.
- Due to data limitations:
  - Hard to measure ownership of capital.
  - Hard to measure foreign direct investment (FDI).
- According to Draghi report, trade measures—being easier to quantify—show that barriers to trade between European countries remain higher than those between the EU and the ROW.

Our Paper: Measuring Cross-Border Capital Ownership

- We measure both **direct** (immediate) and **ultimate** (controlling) ownership of European firms' capital by domestic and foreign investors.
- Using a global firm-level dataset, we construct **country-level measures** of foreign ownership, aggregated by investor region.
- We distinguish between:
  - **FDI capital** — based on immediate ownership links.
  - **Real capital** — based on ultimate control of productive assets.
- These ownership-based measures provide a clearer view of **capital market integration and risk sharing**, key goals of the **Capital Markets Union**, than traditional flow-based metrics (bonds and loans).

Research Questions

- **Measurement:** How do conventional, residency-based FDI statistics differ from an ownership-based view of foreign investment? Are official statistics misallocating the foreign capital in Europe?
- **Ultimate Ownership:** Who are the ultimate owners of Europe's firms? In particular, what share of Europe's foreign investment is ultimately controlled by investors from outside Europe (e.g., North America) as opposed to European investors?
- **Risk Sharing:** Do countries with greater foreign ownership experience better consumption risk sharing? In other words, does having more ultimate foreign investors cushion domestic economic shocks?
- **Policy Implications:** What do these findings imply for European financial integration and the Capital Markets Union? How should policy and data reporting adapt (e.g., adopting ultimate-investor-based metrics) to improve risk sharing and financial stability?

Data and Methodology

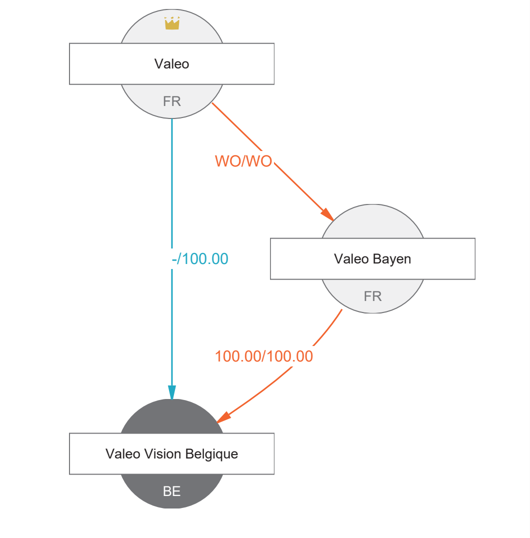
Data: Orbis Ownership Database

- **Dataset:** Moody's *Orbis/AMADEUS* firm-level database, covering 39 European countries over 1999–2023. Contains firm financials and detailed ownership linkages.

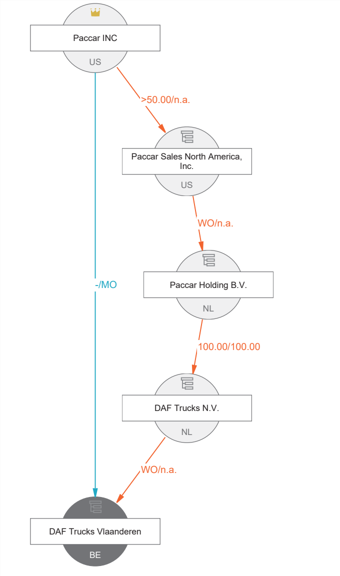
- **Coverage:** The data is representative of the real economy:
  - Includes both private and public firms.
  - Aggregating firm sales cover $70+\%$ of gross output in many countries.

- **Direct vs Ultimate Owners:** Global coverage: For each firm, Orbis identifies:
  - ***Direct (Immediate) Foreign Investor***: an entity holding $\geq 10\%$ equity stake (standard FDI threshold in BOP statistics).
  - ***Global Ultimate Owner (GUO)***: the top controlling entity ($> 50\%$ stake) after tracing ownership links through all tiers. This investor bears the ultimate risk.

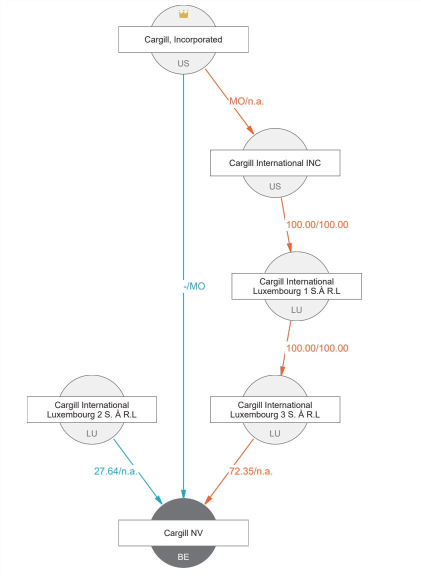
Ownership Example: Valeo



Ownership Example: DAFT



Ownership Example: Cargill



Residency vs Nationality of the Foreign Owner?

- **Foreign Investment Measures – Residency vs Ownership:** We compute two sets of foreign investment statistics:
  - *Immediate (Residency-based)*: the identity of the investor is based on their country of legal residence (matches official residency-based FDI data used in official statistics like IMF, OECD, and national central banks).
  - *Ultimate (Ownership-based)*: based on the final controlling investor, not the immediate legal entity. This corrects for pass-through via tax havens or financial hubs and better reflects true origin of control and risk-bearing.

Comparing the two measures highlights discrepancies caused by financial hubs, shell or holding companies, for tax evasion, as argued elsewhere (OECD; Coppola, Maggiori, Neiman, Schreger (QJE, 2021))...

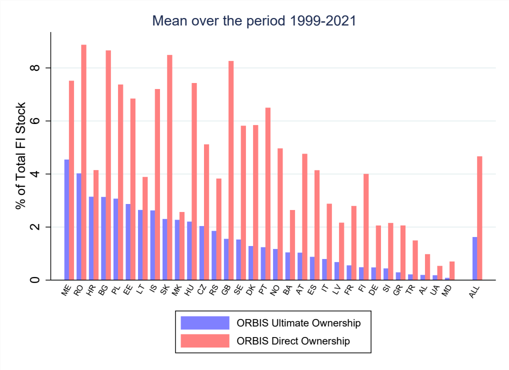
...but more importantly, the ultimate ownership based FDI gives the true allocation of foreign capital across Europe.

Comparison to OECD Data (BMD4)

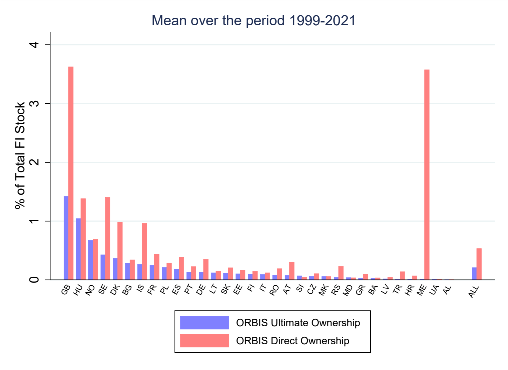
- We compare our measures to OECD FDI data:
  - OECD's *FDI Positions by Counterpart Area* under BMD4 (4th ed., 2015).
  - Based on residency standards of BOP-BPM6 (IMF) and BMD4 (OECD) standards.
  - Distinguishes between inward/outward FDI using the directional principle.
- BMD4 defines FDI based on ownership of $\geq$10% of voting power.
  - We focus on *inward equity positions* from BMD4 to come close to our data.
  - These OECD inward FDI positions are net of reverse investments and include reinvested earnings.
- OECD encourages reporting by *ultimate investing country*.
  - However, not all countries report ultimate positions.
- To calculate the share of capital owned by foreigners we use country-level capital stocks from PWT 10.01.

Key Findings

Orbis: Residency-based vs Ownership-based FDI into Europe by Investor Region



(a) From Western Europe

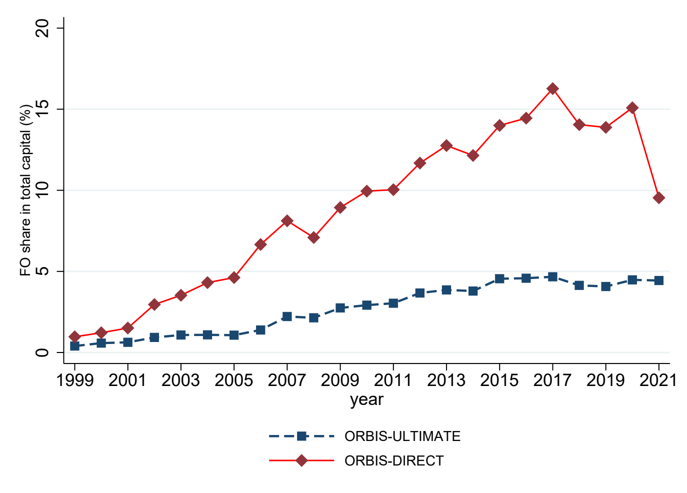


(b) From North America

- Residency-based measure shows much higher foreign investment irrespective where it comes from.
- Ownership-based measures show more foreign investment into Europe from America.

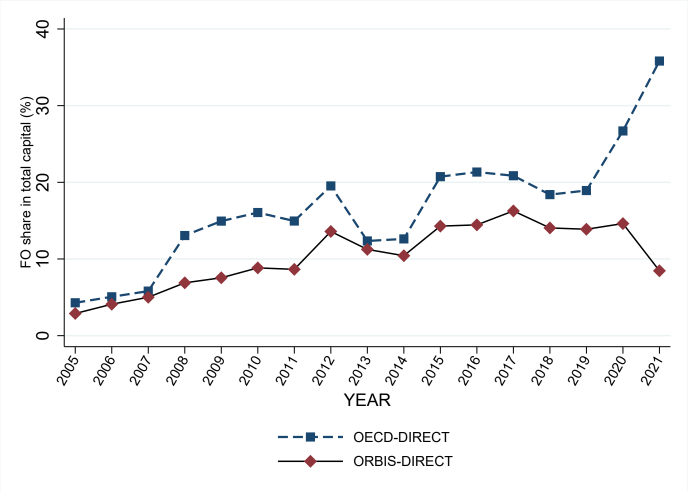
Foreign Investment to Europe Over Time is Much Less Than Previously Thought Based on Residency Based Data

All countries – Orbis data, 1999–2021

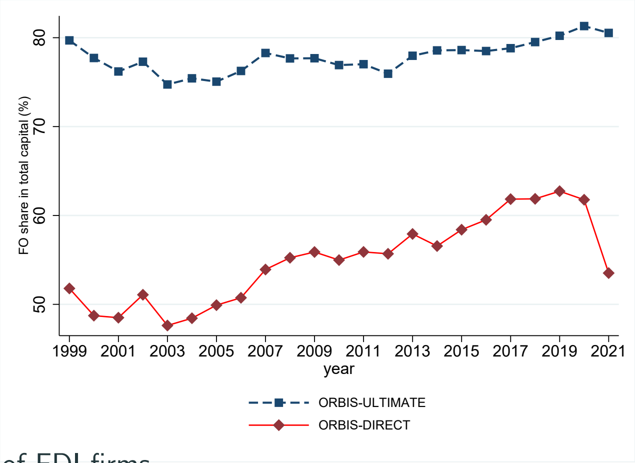


This result is not due to Orbis since residency based measures match each other in OECD and Orbis (last 2 years COVID outliers).

Direct investors – Orbis vs. OECD comparison



As a share of firms' own capital (equity), foreign investment from ultimate owners is most important



- Total equity of FDI firms.
- Total equity of ultimately-owned firms.

Implications for Risk Sharing

Risk-Sharing and Financial Integration

- In a fully integrated financial system:
  - Idiosyncratic output shocks are **fully insured** internationally: Cross-border ownership of assets enables agents to spread risk.
  - This means domestic consumption becomes detached from domestic output.
  - Consumption should respond only to global—not local—shocks that affect all countries and thus cannot be insured away.

Empirical Strategy: Idiosyncratic Risk Sharing and Financial Integration

Step 1: Baseline Risk Sharing Regression

$$\Delta \tilde{c}_{c,t} = \alpha_c + \beta \Delta \tilde{y}_{c,t} + \varepsilon_{it}$$

- $\beta = 0$: full international insurance
- $\beta \approx 1$: no risk sharing

Step 2: Does Financial Integration Improve Risk Sharing?

$$\Delta \tilde{c}_{c,t} = \alpha_c + \beta_1 \Delta \tilde{y}_{c,t} + \beta_2 (\Delta \tilde{y}_{c,t} \times \mathrm{FI}_c^R) + \varepsilon_{it}$$

- FI_c^R: log of median foreign investment share from region R (Europe or North-America) into country c (1999–2023).
- Two variants:
  - Direct investors ("immediate–residency based")
  - Ultimate investors ("ownership control")
- $\beta_2 < 0$: stronger financial ties = more effective smoothing of local shocks

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Risk Sharing and Foreign Ownership

Dependent variable: Idiosyncratic Consumption Growth

Country Sample	ALL	ALL	ALL	ALL	Euro12
	(1)	(2)	(3)	(4)	(6)
GDP Shocks	0.672***	0.668***	0.661***	0.665***	0.510***
	(0.029)	(0.029)	(0.028)	(0.028)	(0.044)
DIRECT from Europe × GDP		0.175		0.410	2.525***
		(0.340)		(0.396)	(0.792)
DIRECT from N. America × GDP		-0.803		0.325	-2.613**
		(0.957)		(1.342)	(1.075)
ULTIMATE from Europe × GDP			-0.506	-0.755^{+}	-2.268**
			(0.443)	(0.464)	(0.817)
ULTIMATE from N. America × GDP			-1.029**	-1.238**	-1.351**
			(0.466)	(0.495)	(0.539)
Observations	1070	1070	1070	1070	336
Adj. R^2	0.66	0.66	0.66	0.66	0.66
Marg. Eff. ygr @ mean FI	0.672	0.658	0.637	0.63	0.536
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Policy Implications & Conclusion

Policy Implications (I)

- **Capital Markets Union (CMU):** Europe's capital markets are more globally integrated and less truly unified internally than headline FDI figures suggest. This implies that the CMU's goal of fostering cross-border investment within the EU is still far from complete. Risk sharing in Europe currently relies considerably on extra-EU investors (e.g. U.S. capital).
- **Strategic Considerations:** The fact that non-EU owners (North America) play a key role in smoothing European shocks can be a double-edged sword. It helps stability, but also means Europe is reliant on foreign capital for risk sharing. EU policymakers may weigh this in discussions of "open strategic autonomy."

Policy Implications (II)

- **Need for Better Data:** The OECD's move to require reporting of ultimate investor origins (BMD4 framework) is a step in the right direction. Policymakers should insist on transparency in ownership structures. Having accurate ownership-based statistics will inform better policy – e.g., distinguishing genuine integration from just conduit flows.
- **Reducing Barriers:** To achieve more genuine risk sharing within Europe, barriers to cross-border equity ownership among EU countries should be lowered. This includes harmonizing regulations, improving investor protection, and perhaps creating incentives for European investors to diversify within Europe (so that ultimate ownership isn't overwhelmingly coming from outside).
- **Monitoring OFCs:** Regulators should monitor the role of offshore financial centers and SPEs. The large misalignment in FDI data due to these suggests that closing loopholes and ensuring investments are routed transparently would help in assessing true financial integration.

Appendix

Sample of European Countries

Table 1: List of Countries and Their Abbreviations

Albania (AL)	Germany (DE)[EZ]	Lithuania (LT)	Serbia (RS)
Austria (AT)[EZ]	Denmark (DK)	Luxembourg (LU)[EZ]	Sweden (SE)
Bosnia and Herzegovina (BA)	Estonia (EE)	Latvia (LV)[EZ]	Slovenia (SI)
Belgium (BE)[EZ, OFC]	Spain (ES)[EZ]	Moldova (MD)	Slovakia (SK)
Bulgaria (BG)	Finland (FI)[EZ]	Montenegro (ME)	Türkiye (TR)
Switzerland (CH)[OFC]	France (FR)[EZ]	North Macedonia (MK)	Ukraine (UA)
Cyprus (CY)[OFC]	United Kingdom (GB)	Malta (MT)[OFC]	Czech Republic (CZ)
Greece (GR)[EZ]	Netherlands (NL)[EZ, OFC]	Ireland (IE)[EZ, OFC]	Croatia (HR)
Norway (NO)	Iceland (IS)	Hungary (HU)	Poland (PL)
Italy (IT)[EZ]	Portugal (PT)[EZ]	Romania (RO)	

Notes: Eurozone countries are marked ‘EZ’. Offshore Financial Centers are marked ‘OFC’. The Eurozone group includes the 11 founding members (1999) plus Greece (joined in 2001).