CAN EUROPEAN BANKS' COUNTRY-BY-COUNTRY REPORTS REVEAL PROFIT SHIFTING?

AN ANALYSIS OF THE INFORMATION CONTENT OF EU BANKS' DISCLOSURES

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WHAT IS THE EXTENT OF PROFIT SHIFTING? MANY DIFFERENT ANSWERS…

- It’s there but not huge: Tax elasticity between -0.5 and -1.3
  - Based on publicly available firm-level data (Amadeus):
  - Huizinga & Laeven (2008)
  - Dharmapala & Riedel (2013)

- No, **missing data** problem!
  - Up to 40% of US corporate income tax revenue lost:
  - Aggregate data (Torslov, Wier, Zucman, 2020)
  - Bureau of Economic Analysis data (Clausing, 2016)

- No, **double counting** due to equity method of accounting
  - Blouin & Robinson (2019)
  - 2/3rd of foreign profits are reported in at least two countries
  - Only 4%-13% of US corporate income tax revenue lost

THIS PAPER

- Data: Mandatory Country-by-Country Reports of European Banks
  - No missing data
  - No equity method of accounting

- How large was our blind spot when relying on publicly available data (Orbis, Bankfocus)?
  - We miss more than half (and the important stuff…)

- Why that matters: What is the extent of profit shifting based on the complete coverage?
  - 11.4 bn US dollar (Banks headquartered in EU)
  - ~10% of their global profit
  - U.S. revenue loss is on that average
  - Much larger loss for U.K. or France: >40%

WORK ON EFFECTS OF BANKS' CBCRS

- Eberhartinger, Speitmann & Sureth-Sloane, 2020
  - affected EU financial institutions reduced their share of tax haven entities, in particular in Dot Havens and in tax havens with high financial secrecy
- Joshi, Outslay & Persson, 2020
  - Overall, there is a lack of empirical evidence that public CbCR under CRD IV led to a significant change in European banks' tax avoidance, on average.
- Overesch & Wolff, 2021
  - (…) exposed banks increased their tax expense relative to multinational banks with no activities in tax havens to disclose, as well as relative to domestic banks unaffected by the new mandate.

- So there is an effect on some banks, but which countries tend to gain or lose by profit shifting and by how much?
- For that we need to know the global distribution

EXAMPLE OF A REPORT

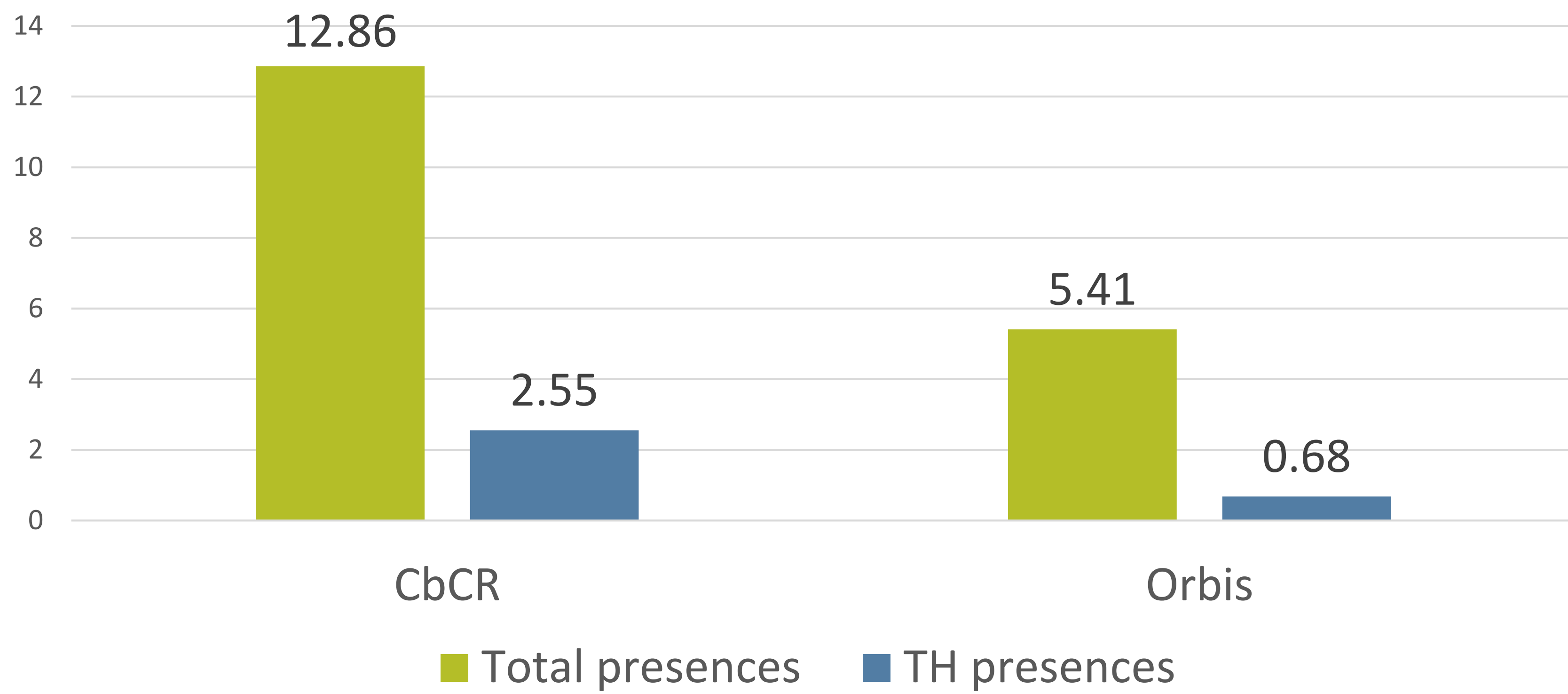
Disclosures in accordance with Section 26a KWG.

1. Country by country disclosure of revenues, profit or loss before tax, income tax expense, employee numbers and public-sector aid.

Country	Revenues in EUR million	Profit/loss before tax in EUR million	Taxes on profit or loss in EUR million	Number of employees
EU countries	**2 650**	**321**	**- 101**	**9 841**
Germany	2 636	348	- 120	9 748
Great Britain	56	24	13	71
Czech Republic	5	2	- 1	9
Luxembourg	- 4	- 8	1	13
Other EU countries	- 43	- 44	5	0
Non-EU countries	**129**	**75**	**- 7**	**164**
United States of America	91	60	- 4	67
Singapore	20	6	0	57
South Korea	7	1	0	15
Mexico	12	8	- 3	21
Other non-EU countries	0	0	0	5

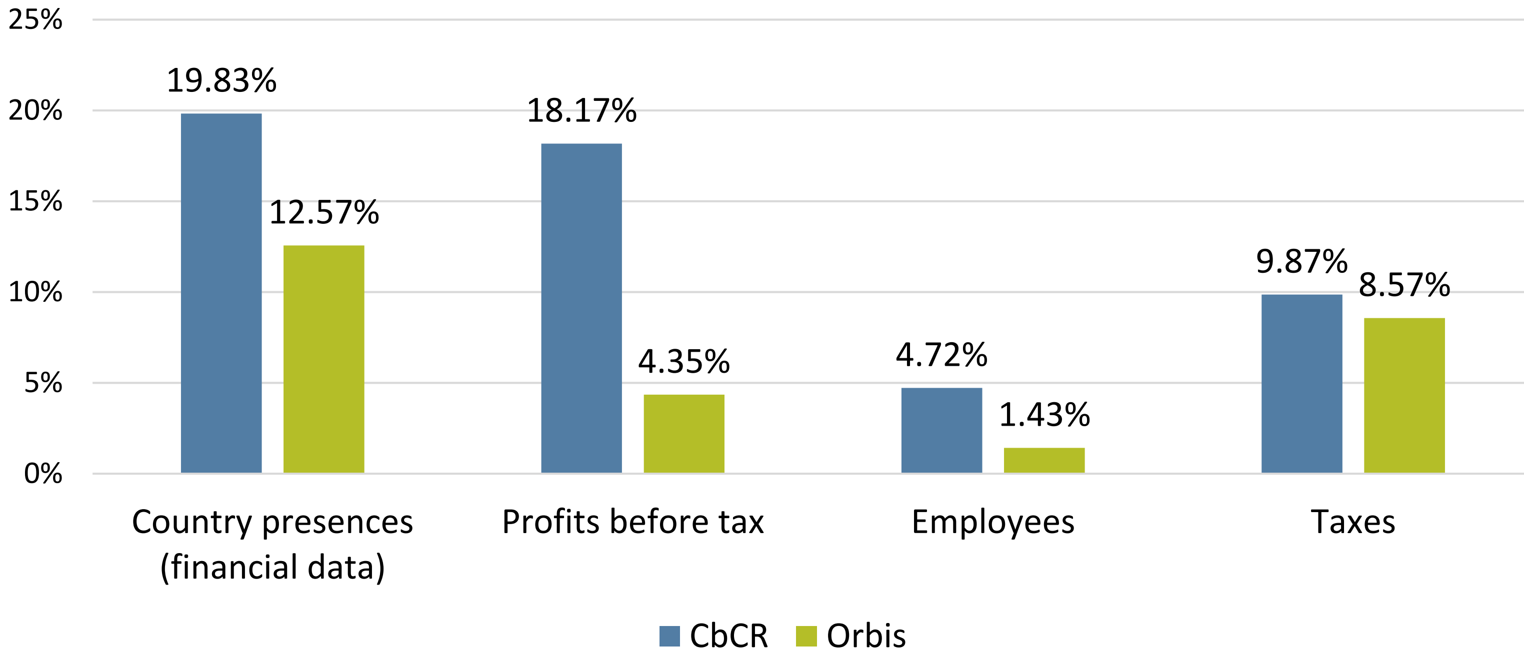
The LBBW Group has received aid under the EUR state aid proceedings. GPBW GmbH & Co. KG, a company owned by the State of Baden-Württemberg (guarantee entity), has granted LBBW a maximum guarantee of EUR 5.5 billion. The purpose of the guarantee is to secure a junior loan granted by LBBW to Sealink Funding Ltd. (Sealink), a non-consolidated structured entity, to which certain risk-exposed structured ABSs were transferred in connection with the acquisition of the former Landesbank Sachsen AG. The loan had a value of EUR 4.0 billion as at 31 December 2015.

BLIND SPOT: # OF COUNTRIES WITH FINANCIAL DATA



- In total: only 42% (of affiliate countries) with financial data
- For tax havens: only 27% (of affiliate havens) with financial data

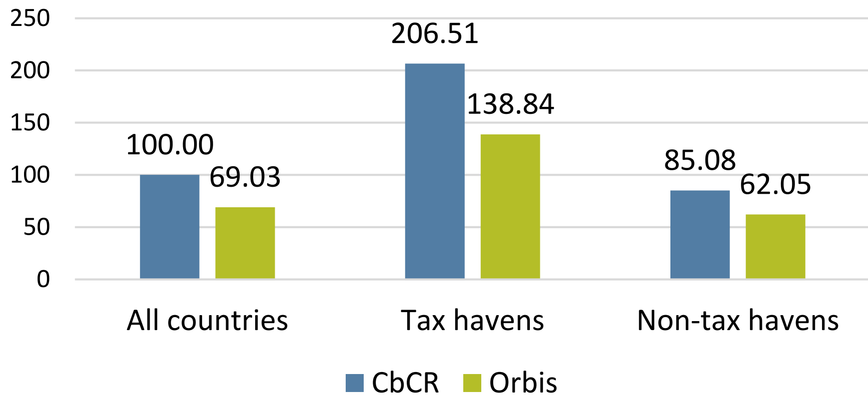
TAX HAVEN SHARE OF MNE



- Profits: Haven share increases by factor 4
- Employees: Haven share increases by factor 3

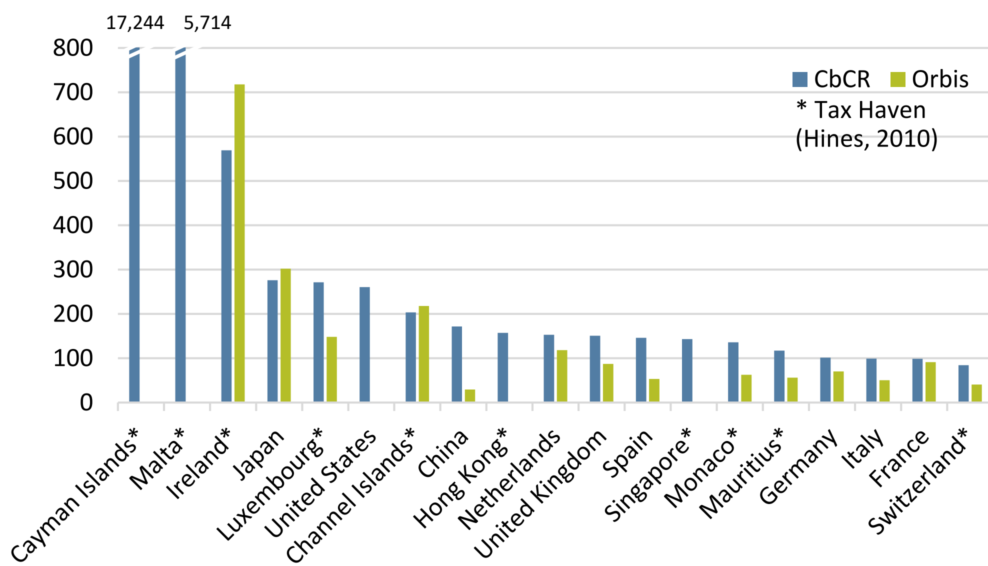
PROFIT PER EMPLOYEE

Profit per employee in tax havens vs. other countries (in th. EUR)



- Reported labor productivity in TH almost 2.5 times as high as in other countries

Profit per employee in selected countries (in th. EUR)



- High for tax havens: KY, MT,…
- Low for EU high-tax countries DE, IT, FR

MAGNITUDE OF PROFIT SHIFTING (1/2)

Approach

* *Weighted by value added per worker (service sector)*

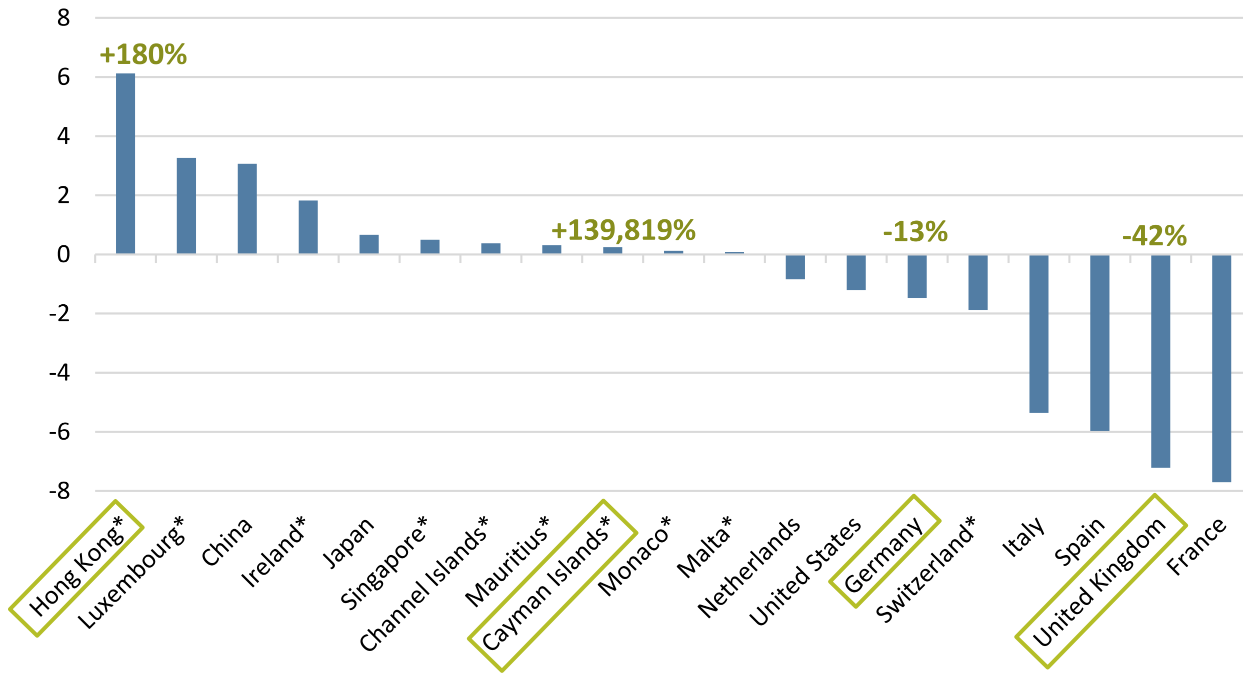
$$\Sigma \text{ of global profits of bank group } k \times \frac{\text{Employees* of bank group } k \text{ in country } j}{\Sigma \text{ of global employees* of bank group } k} = \text{Expected profits of bank group } k \text{ in country } j$$

$$\text{Reported profits of bank group } k \text{ in country } j - \text{Expected profits of bank group } k \text{ in country } j = \text{Profits shifted by bank group } k \text{ into/out of country } j$$

- EU-headquartered banks in our sample shift about EUR 11.4 bn of profits to tax havens annually
- This corresponds to 9.7% of their total global profits (or 13.9% of foreign profits)

MAGNITUDE OF PROFIT SHIFTING (2/2)

Estimates of annual amounts of profits shifted into/out of a country (in billion EUR)



**** Tax Haven (Hines, 2010)***

in % of expected profits

- Largest absolute amounts of excess profits in HK and LU
- EU high tax countries face considerable revenue losses

- This can be compared to prior literature…

EXTENSION: REGRESSION ANALYSIS

- **Baseline CbCR regression**
  - Following e.g. Hines & Rice (1994); Huizinga & Laeven (2008)

$$lnPLBT_{jt} = \beta_0 + \beta_1 STR_{jt} + \beta_2 lnEMPL_{jt} + \beta_3 lnINF_{jt} + \rho_k + \vartheta_t + \varepsilon_{jt}$$

- **Finding: $\boldsymbol{\beta_1^{CbCR} \ll \beta_1^{Orbis}}$**
  - This implies that the semi-elasticity is more than double as large as the Orbis based estimates (-4.6 instead of -2.0)
- **Here is the catch: Without Total Assets $\boldsymbol{\beta_1^{CbCR} < 0}$ not significant**
- **Omitted variable Total Assets is positively correlated with STR_{jt} and ε_{jt}**

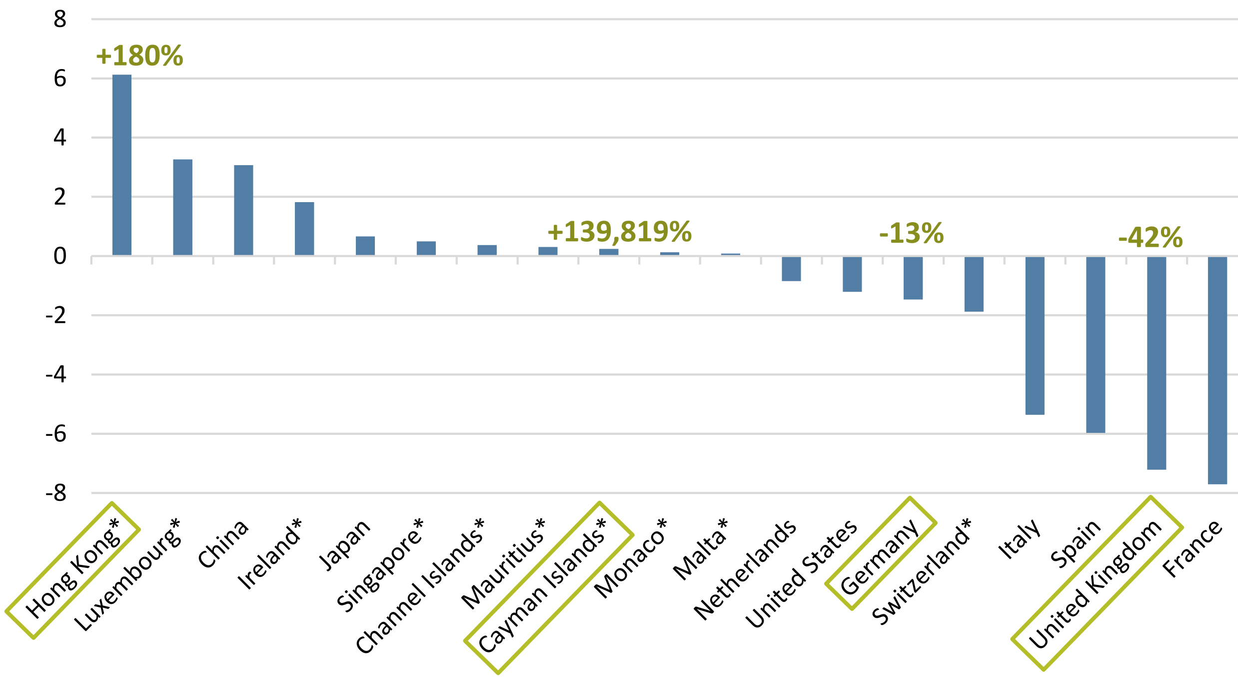
	Dependent variable: *lnPLBT*			
	Baseline		Refined	
	(1)	(2)	(3)	(4)
STR_diff_group_simp	1.884^{**}		-0.341	
	(0.805)		(0.761)	
STR_diff_group_empl		1.992^{**}		-0.051
		(0.770)		(0.756)
Obs.	2,251	2,242	2,227	2,219
Adj. R^2	0.761	0.760	0.706	0.705

Variables	
$PLBT$	Profit before tax
STR	Tax incentive (tax rate difference variables)
$EMPL$	Number of employees
INF	Inflation
$STAFF*$	Staff cost proxy
ε_{jt}	Error term
Fixed effects	
ρ_k	Bank group FE
ϑ_t	Year FE
δ_{kt}	Bank group-year FE
Indices	
k	Bank group
j	Country presence
t	Year

CONCLUSION

- Blind spot: tax haven share of global profits increases by factor 4
- Extent of profit shifting: ~10% of global profits are shifted (see graph).

Estimates of annual amounts of profits shifted into/out of a country (in billion EUR)



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in % of expected profits

Thank you for your attention
and your feedback!