

# BROOKINGS



## MISSING ASSETS:

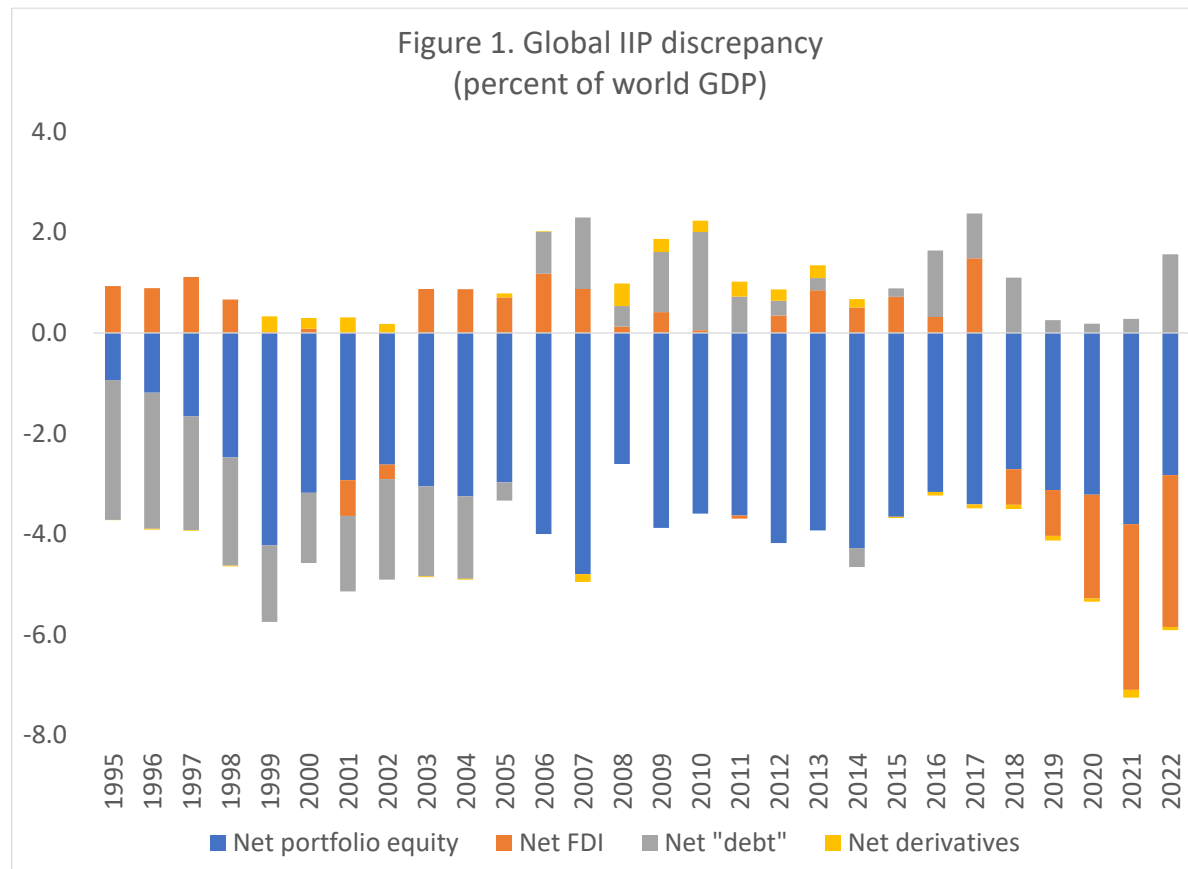
Exploring the source of data gaps in global cross-border holdings of portfolio equity

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# The facts motivating the paper

Global estimates of cross-border portfolio equity holdings show a large and persistent discrepancy between estimated assets and liabilities



# Structure of presentation

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- Data sources
- How to identify missing assets
  - *Comparison of total portfolio equity liabilities reported by destination countries with those derived from investor countries' reports*
  - *Use of additional information on portfolio equity assets not reported to CPIS (countries not participating to survey, or participating only partially)*
  - *Characterization of remaining gap*
- Use of bilateral liability information for the 3 countries accounting for most of the gap between reported and derived liabilities:
  - *United States*
  - *Ireland*
  - *Luxembourg*

# Data sources

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- External Wealth of Nations database
- IMF's BOP and IIP Statistics
- Coordinated Portfolio Investment Survey (geographical allocation of portfolio assets by investor countries)
- National liability surveys (esp. US, Ireland, Luxembourg)

# Related literature

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- Work with Philip Lane on EWN and offshore centers (some of the discrepancies already highlighted in LMF, 2007 JIE).
- Paper in IMF ER on global creditor and debtor positions (2023)
- Zucman (2013) and subsequent work (role of Switzerland and offshore centers in hosting “hidden assets” presumably belonging to European investors)
- Beck, Coppola, Lewis, Maggiori, Schmitz, Schreger (2024) on portfolio investment in the euro area (holders of IF shares in IRE and LUX)

# The approach to identifying “missing assets”


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Use of bilateral data to check sources of the discrepancy

1. Use of Coordinated Portfolio Investment Survey (reported geographical allocation of portfolio assets)
2. Comparison of total portfolio equity liabilities reported by destination countries with those derived from investor country reports
3. Identification of countries accounting for largest differences
4. Corrections for
  - a. *CPIS non-participants*
  - b. *CPIS under-reporters*

# Portfolio equity liabilities and CPIS reporting

*2022, billion US\$*



Global portfolio equity liabilities	43,426
Portfolio equity liabilities derived from CPIS reporting 1/	36,901
Difference	6,524
Of which:	
United States	2,815
Luxembourg	1,805
Ireland	1,659
Other countries (net)	245

# Portfolio equity assets and CPIS reporting

*2022, billion US\$*

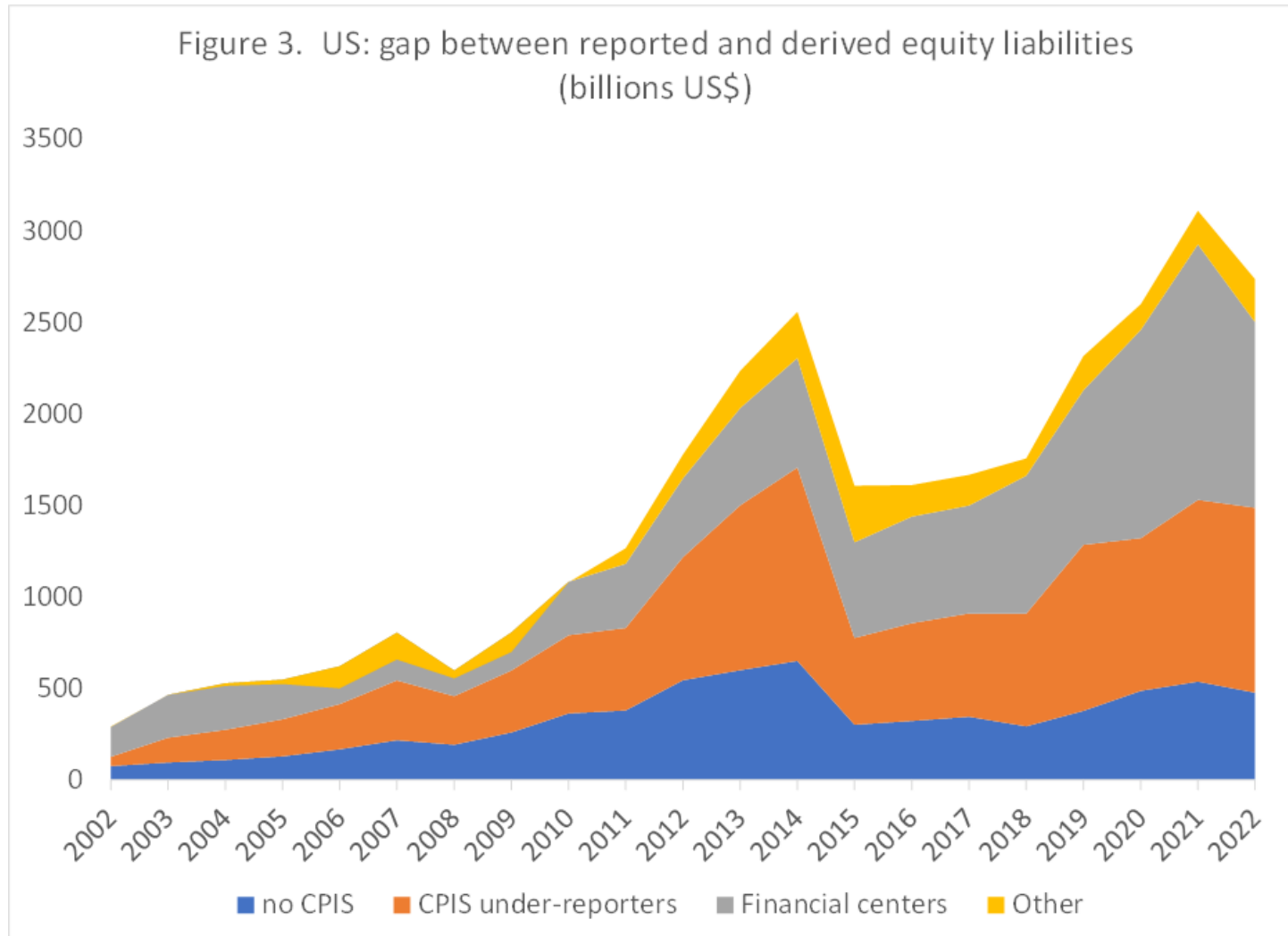


Global portfolio equity assets	40,602
Portfolio equity assets reported in CPIS 2/	37,294
Difference	3,308
CPIS non-reporters	1,622
of which:	
United Arab Emirates	655
Taiwan	319
Qatar	271
British Virgin Islands	141
Gap for CPIS reporters	1,686
of which:	
Cayman Islands	742
Kuwait	423



# Liability surveys: United States

## 2002-2022, billion US\$



# Differences between reported U.S. equity liabilities and CPIS-reported claims on the U.S.

*(2021 and 2022, billion US\$)*



	2021	2022
United Kingdom 1/	595	416
Switzerland	503	351
Canada	262	273
France	204	169
China	158	153
Singapore	125	98
Hong Kong	101	79
Luxembourg	93	72
Bermuda	71	63

# Holdings of portfolio equity by central banks: role of SNB

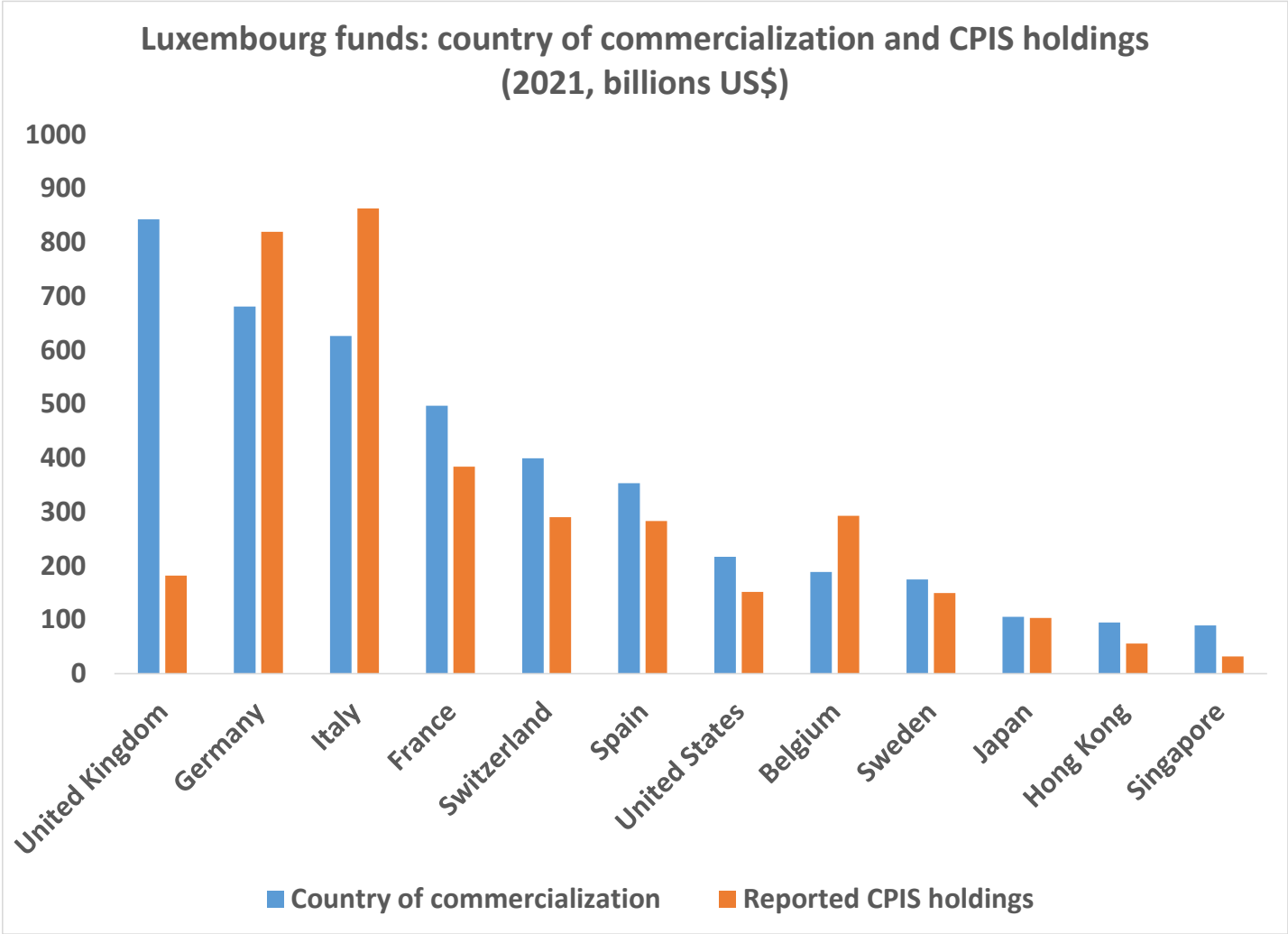
*2019-22, billion US\$*

		2019	2020	2021	2022
<b>Holdings by CBs ad Int. org.</b>	World	351	429	501	408
	U.S.	176	223	285	237
<b>Holdings by Swiss National Bank</b>	World	160	203	238	212
	U.S. (estimated)	80	105	135	123

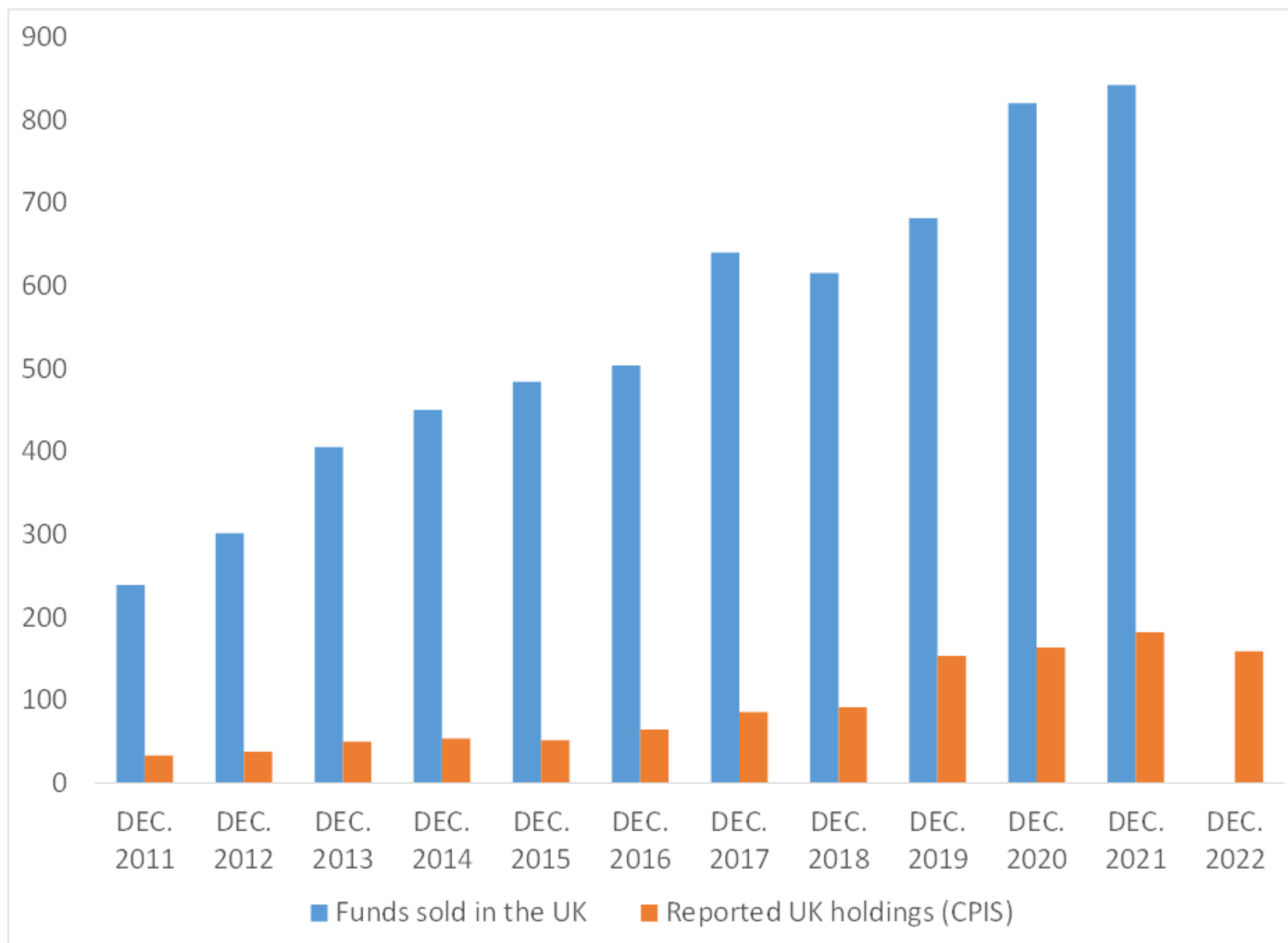
# Non-resident holdings of Irish equity: CPIS and inv. fund surveys on immediate counterparty basis (2022, US\$ billion)

	Investment funds and money market funds	CPIS
United Kingdom	1,726	402
Luxembourg and Netherlands	657	306
United States	207	672
Germany and Italy	223	437
Cayman Islands	96	59
Switzerland	48	115
Other euro area	244	172
Other countries	369	451
<b>Global total</b>	<b>3,561</b>	<b>2,615</b>

# Reported holdings of Luxembourg inv. funds and countries of their commercialization, 2021



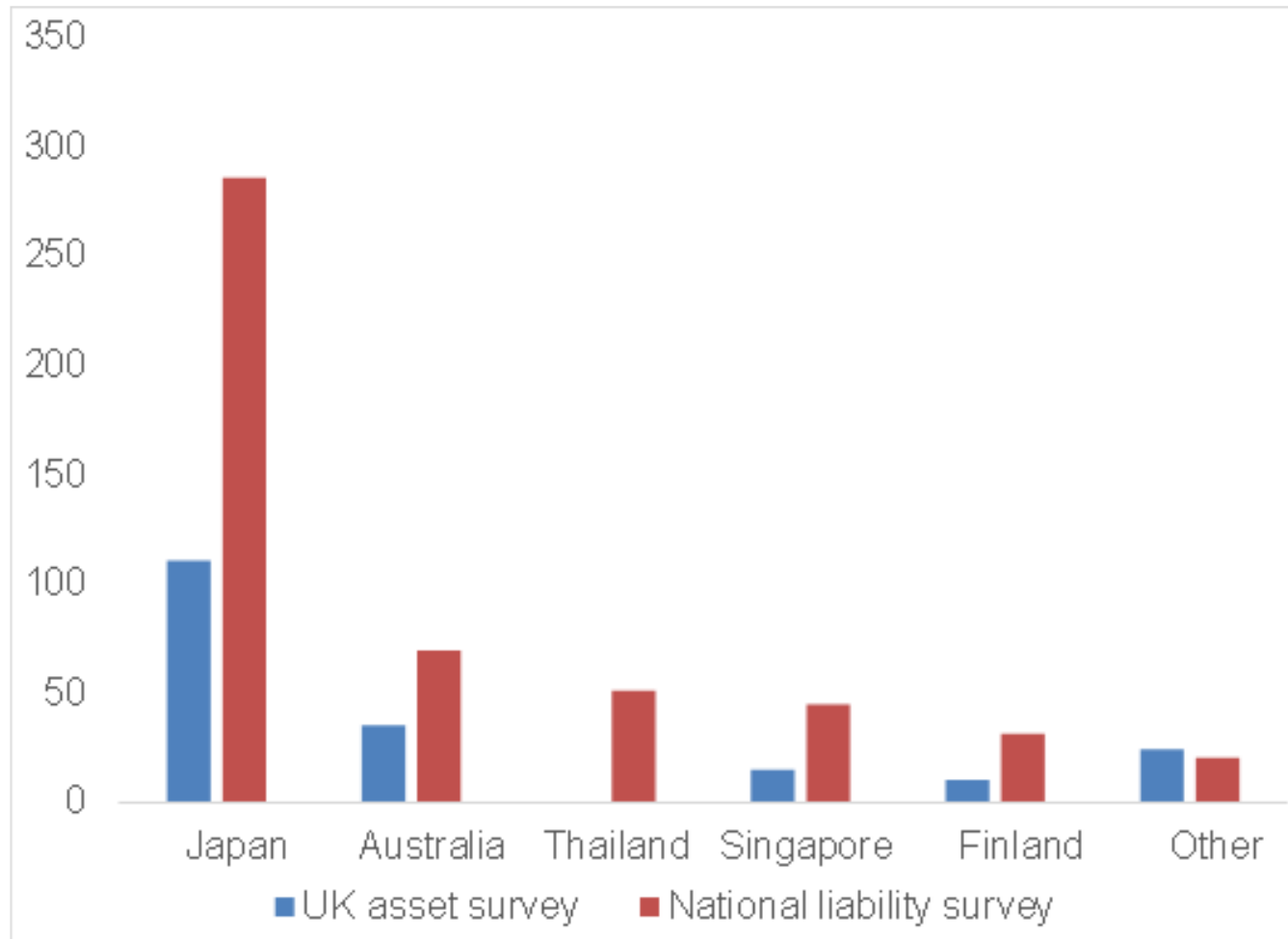
# Luxembourg funds sold in the United Kingdom and UK reported holdings



# Investment through the United Kingdom: U.S., Ireland, and Luxembourg (2021, billion US\$)



# Reported equity liabilities vis-à-vis UK entities and UK reported holdings (other countries, 2021)





# Asset management in the United Kingdom

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- UK plays a key global role in global asset management
- 2<sup>nd</sup> country after the US in terms of funds managed
- Some \$5 trillion dollars in 2022 managed in the UK on behalf of international investors (institutional investors and “retail” investors)
- Key questions:
  - What is the residence of investors with assets managed in the UK?
  - Are those assets likely to be reported in national IIP statistics?
- Dearth of official UK statistics (eg flow of funds data very limited compared to US)
- Useful info in report by the Investment Association (*Investment Management in the UK*)

# Asset management in the UK by type of client



Source: author's calculations based on Investment Association (2023)

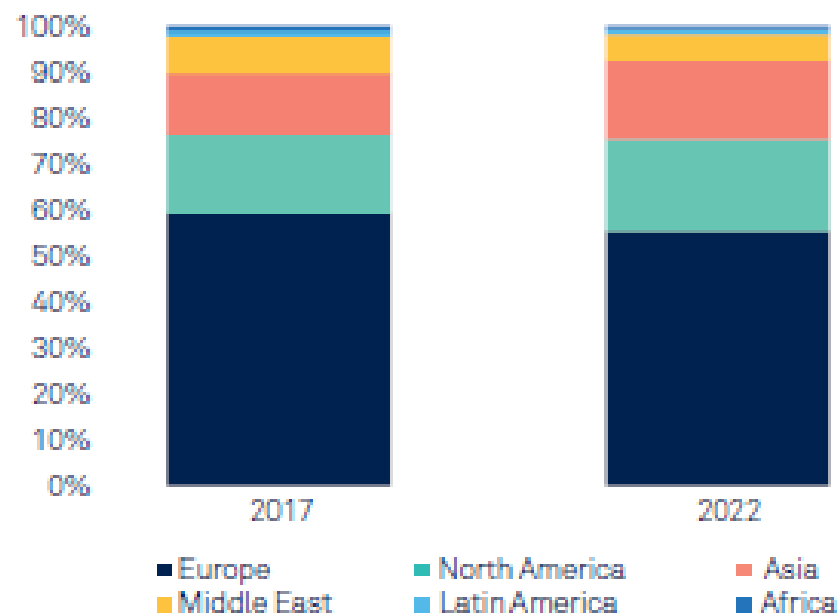
# UK under-reporting of equity claims on Ireland?

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- UK reports holdings of Irish equity of about \$400 billion (*supposedly not including households*)
- ONS (2018) estimates that UK investors held close to \$300 billion in MMF shares at the end of 2016, over 90 percent in overseas funds.
- Irish MMFs report UK holdings on an immediate counterparty basis of a similar amount in 2016, rising to over \$400 billion by end-2022.
- Dunne et al. (2023) find that some \$360 billion of Irish Liability-Driven Investment (LDI) funds were held by UK institutions in the fall of 2022.
- Overall, UK holdings of non-MMF investment funds were over \$1.3 trillion in 2022.
- It is possible that funds denominated in sterling, with a UK manager, and holding UK instruments are not reported as foreign assets.

# Overseas clients of UK asset managers by region (reproduced from *Investment Management in the UK 2022-23*)

CHART 5: OVERSEAS CLIENT ASSETS BY REGION  
(2017-2022)



Source: The Investment Association

# Are nonresident holdings recorded in national IIP statistics?

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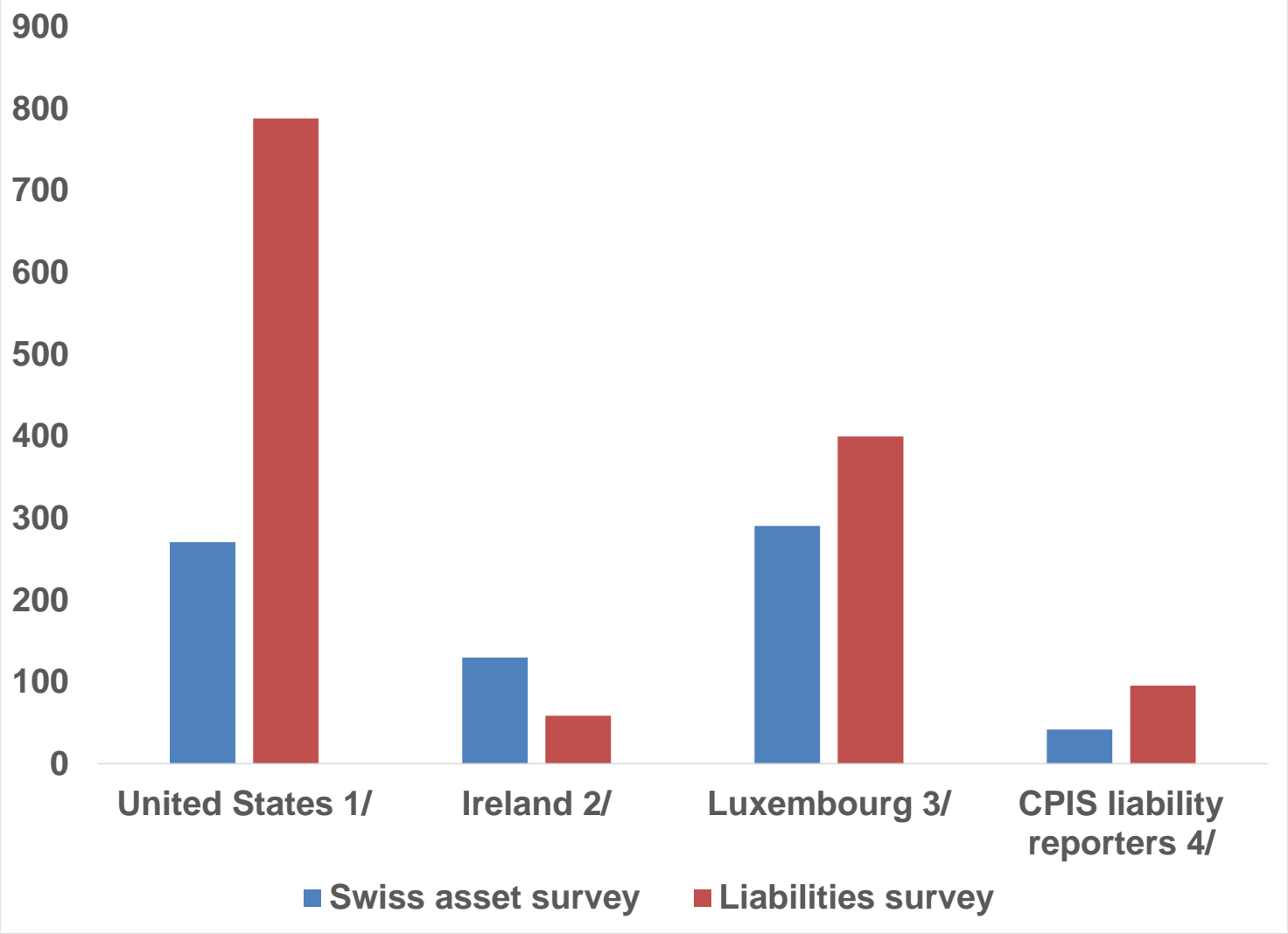
- Majority of assets managed for foreign institutional investors (including SWFs and pension funds). These are likely to be reflected in national IIP statistics (including holdings by euro area institutions given information exchanges)
- But substantial “retail” holdings as well (investment fund shares). Less likely to be captured in national statistics
- No reporting of “third party holdings” by domestic custodians (nonresident holdings of securities issued by nonresidents)

# Fund-level evidence on holdings in Ireland and Luxembourg

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- Recent paper by Beck et al. (2024) on portfolio investment in the euro area.
- It documents the substantial holdings of Irish and Lux fund shares by non-euro area investors (residual after netting out holdings by euro area investors identified in the euro area SHS database)
- Funds held by euro area investors appear to have different characteristics, for instance in terms of currency of denomination.
  - For instance, Irish funds not held by EA investors have hold substantial GBP-denominated bonds, while funds held by euro area investors do not (consistent with evidence on Irish LDI funds and money market funds)
  - Funds held by euro area investors mostly use the euro as base currency. Those held by the ROW mostly use the USD and other currencies
- Conclusions: assets in the UK likely to reflect (some) under-reported UK resident holdings and (mostly) holdings from non-euro area countries

# Evidence on Switzerland



# Switzerland:

## Intermediation activity on behalf of nonresidents

- Important role of custody accounts (securities managed by Swiss banks on behalf of nonresidents or held in custody for them).
- Several breakdowns available but no geographical one on the country of nonresident holdings.
- Focus on securities issued outside Switzerland
  - Shares: \$830 billion in 2021 (of which \$365 billion in US\$)
  - Investment fund shares: \$1.1 trillion in 2021
  - Most holdings are institutional. Private holdings higher for IF shares (26%)
  - Large decline in private holdings over time



# Conclusions

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- Large and persistent discrepancy in global equity holdings
- Centered on investment in the US, Ireland, and Luxembourg not captured by portfolio equity data in asset holding countries
- A large share of these claims appear to be intermediated by entities based in the United Kingdom.
- Likely to reflect in part holdings by UK residents, but also from ROW
- Some intermediation in Switzerland as well (falling over time)
- Addressing these discrepancies would require financial centers to collect and disclose data on “third party” securities’ holdings through domestic custodians