Applying method #5

Some additional aspects

Bojan NASTAV

TAX AND COMMERCIAL
ILLICIT FINANCIAL FLOWS

Additional aspects

- What data/results would make sense?
  - Data availability, volatility, etc.
  - Reporting on holding wealth
  - Exchange rates
- MSCI world price index
- Gravity model

What data/results would make sense?

- Assumption:
  internationally reported > reported to national authorities

$$\phi_i = \sum_j \beta_{j,i} - \alpha_i$$

ϕ_i … undeclared assets of citizens of country i

$\beta_{j,i}$ … the sum of assets of citizens of country i reported as being held in country j

α_i … the sum of assets declared by citizens of country i as being held in other countries $j=1, …, n$, where $j \neq i$

What data/results would make sense?

- Assumption:
  internationally reported $>$ reported to national authorities

$$\phi_i = \sum_j \beta_{j,i} - \boxed{\alpha_i}$$

National Tax
Authority

What data/results would make sense?

- Assumption:

  internationally reported > reported to national authorities

$$\phi_i = \sum_j \beta_{j,i} - \alpha_i$$

BIS LS
OECD CRS

National Tax
Authority

BIS Statistics, experiences

- The **time-series is long enough** (2014-) to analyse changes.

- **Odd peaks** in Q3/2018 - Q2/2019 and Q3-Q4/2020.

- It is hard to believe that Finns have doubled their cross-border assets.
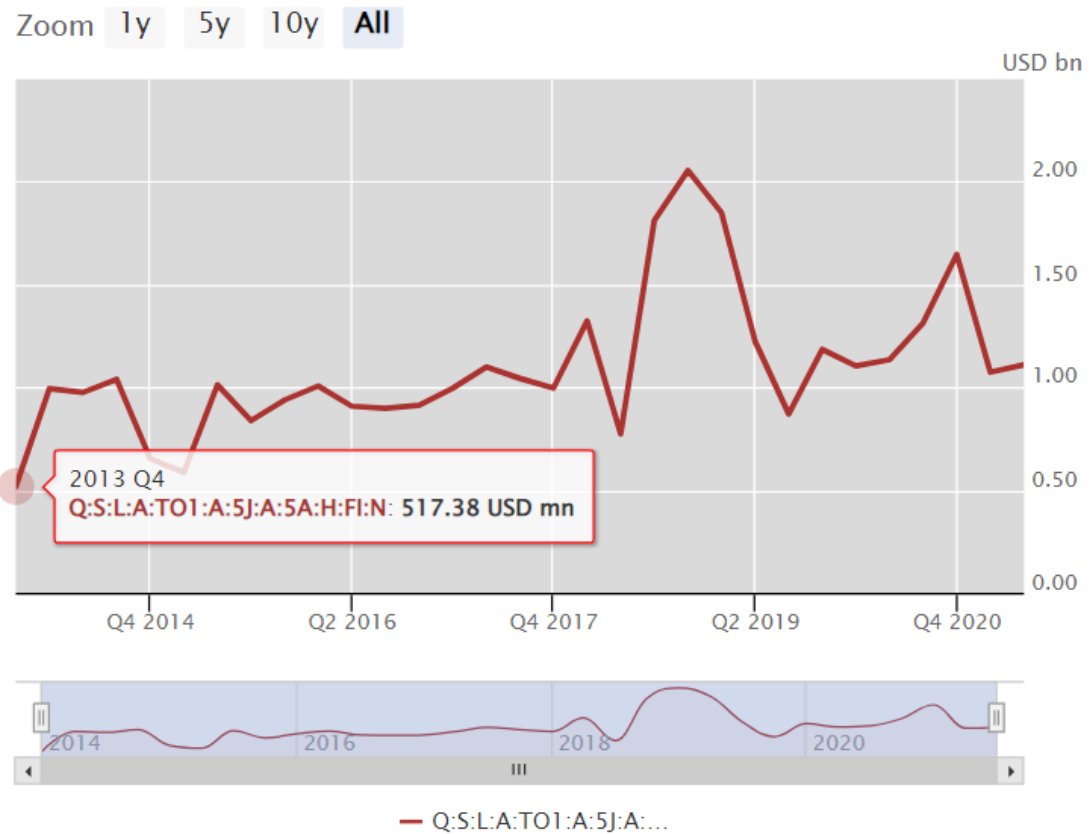

Source: BIS

BIS Statistics, experiences

- Value of assets have been in range 1bn to 2 bn dollar.

- According to Households assets statistic (Source: Statistics Finland) total financial wealth of households was about 200 bn €.

- Data include not only households but also NPISHs (Non-profit institutions serving households).

- Not available at reporting country level.

Dimension	Code	Description
Frequency	Q	Quarterly
Measure 1/4	S	Amounts outstanding / Stocks
Balance sheet position 1/2	L	Total liabilities
Type of instruments 1/5	A	All instruments
Currency denomination 1/8	TO1	All currencies
Currency type of reporting country	A	All currencies (=D+F+U)
Parent country	5J	All countries (total)
Type of reporting institutions	A	All reporting banks/institutions (domestic, foreign, consortium and unclassified)
Reporting country	5A	All reporting countries
Counterparty sector 1/10	H	Households and NPISHs
Counterparty country 1/236	FI	Finland
Position type	N	Cross-border

Zoom 1y 5y 10y All

USD bn

2013 Q4
Q:S:L:A:TO1:A:5J:A:5A:H:FI:N: 517.38 USD mn

Q4 2014   Q2 2016   Q4 2017   Q2 2019   Q4 2020

2014   2016   2018   2020

— Q:S:L:A:TO1:A:5J:A:...

Source: BIS

Chart type line column stacked col area

BIS Statistics:
https://stats.bis.org/statx/srs/tseries/LBS_D_PUB/Q.S.L.A.TO1.A.5J.A.5A.H.FI.N?t=a6.1&c=FI&m=S&p=20211&i=1.12

Tax data, experiences

- No mandatory declaration of assets (no wealth tax).
- BIS Statistic were compared to CRS data.
- Value of assets in CRS data was about 10 times higher than BIS statistics.

- CRS data also include people who are not taxed in Finland. It is difficult to interpret whose assets should be included in the estimation.
- Available at reporting country level.

Some additional considerations

- Not required to report

- Exchange rates

- Capital consumption

- Capital gains

$$flow_{i,t} = \phi_{i,t} - \phi_{i,t-1}(1 + v_t)$$

MSCI world pride index

- Global equity index
- Performance of stocks

- Suitability?
- Alternatives?

MSCI world pride index

MSCI ACWI INDEX DAILY PERFORMANCE

Gravity model

- Traditionally: estimate bilateral trade flows

$$F_{ijt} = G \times \frac{M_{it} M_{jt}}{D_{ij}}$$

F_{ijt} ... trade flows from country *i* to country *j* at time *t,*

M_{it} and M_{jt} ... the economic sizes of countries *i* and *j*

D_{ij} ... the distance between countries *i* and *j*.

Gravity model

- Econometric modelling:

$$\log F_{ijt} = g + \beta_1 \log M_{it} + \beta_2 \log M_{jt} - \beta_3 \log D_{ij} + \epsilon_{ijt}$$

  - Additional parameters, e.g., corruption, secrecy, language …

Gravity model

⊕ Strengths

- Data requirements
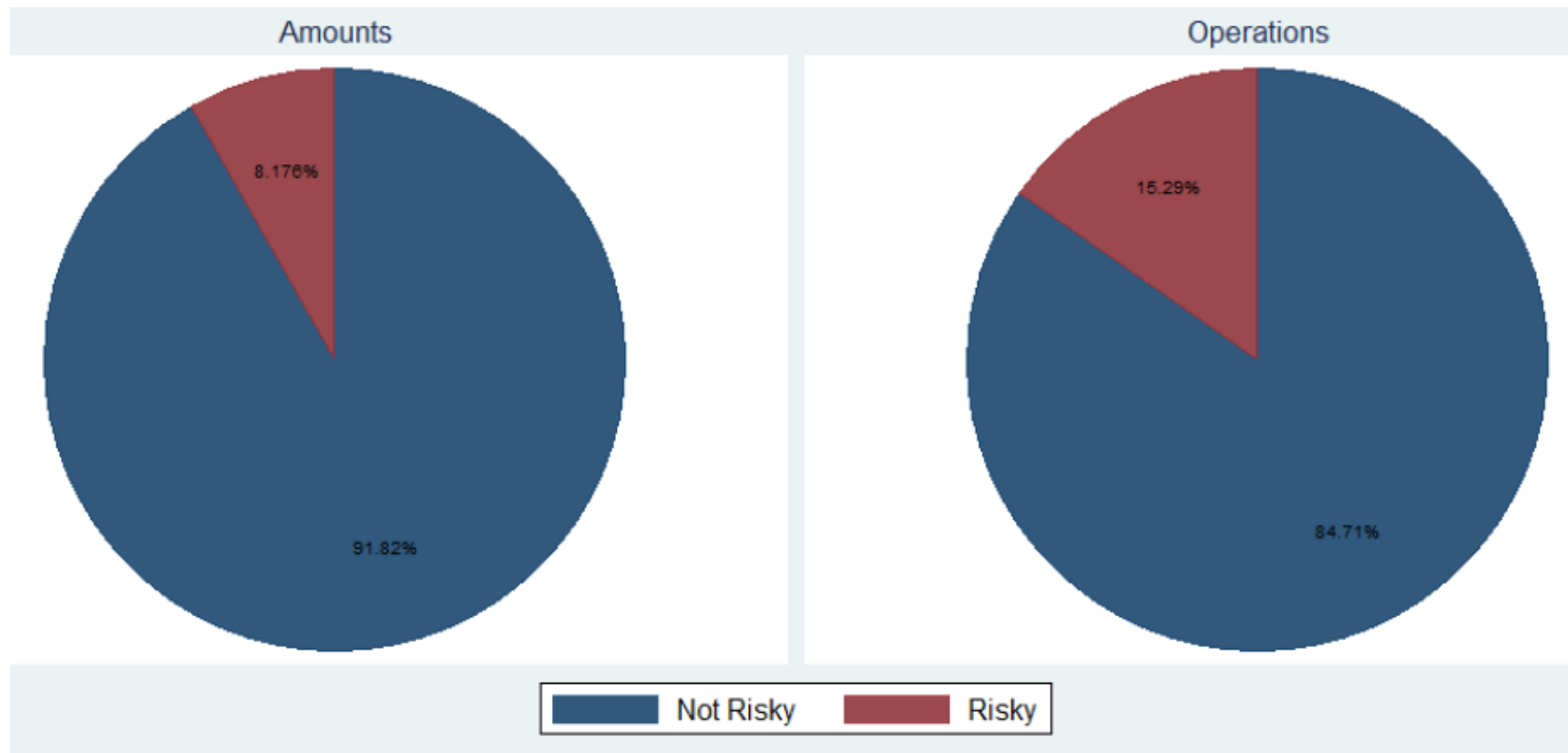- Starting point in IFFs measurement

⊖ Limitations

- Outputs estimated
- Macro-level flows

Gravity model

- Application: Italian cross-border bank transfers

Destinations of cross-border financial flows

https://stats.unctad.org/iffs

TAX AND COMMERCIAL
ILLICIT FINANCIAL FLOWS