The under-reporting of households' financial assets in Italy

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Joint Project

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Project goal

- To propose a method to correct SHIW micro estimates of household financial wealth for the problem of under-reporting

Under-reporting in survey data

Two forms

- incorrect statements about the ownership of a specific asset or liability (non-reporting)
- errors in the declared amount owned (under-reporting on amounts)

Motivation

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- Aggregate information is not enough. Microeconomic data allow researchers to take into account household heterogeneity (monitoring of particular segments of the overall distribution, policy evaluation, enhancing cross-country comparisons, monetary policy implementation,..)

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- The distribution of financial wealth is highly concentrated in the hands of affluent households
- ..unfortunately affluent households have: 1) lower propensity to partecipate to the survey 2) higher under-reporting

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- SHIW total financial assets are about 1/3 of macro estimate.
- SHIW financial liabilities are about 1/2 half of macro figure.

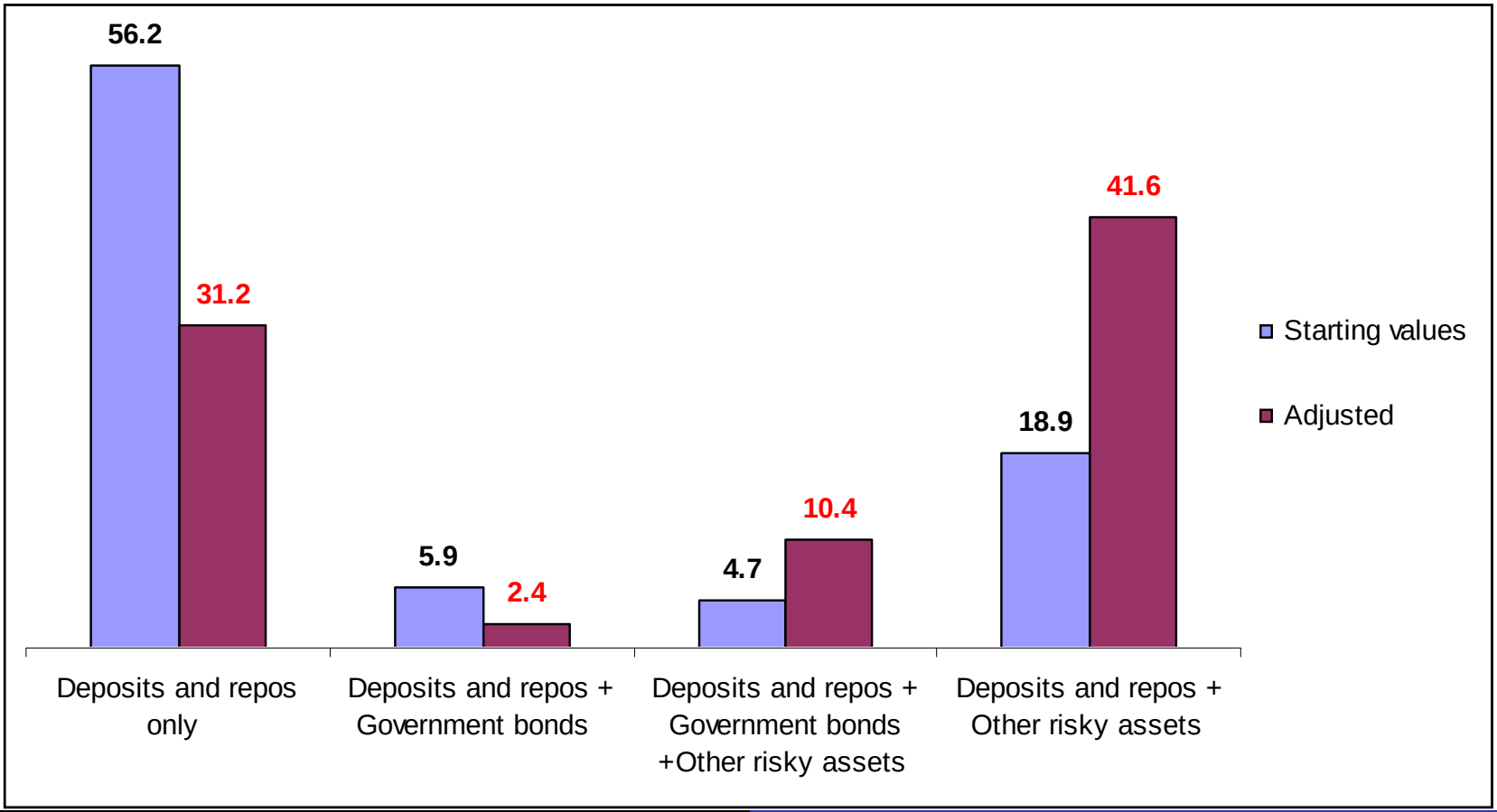
Results: micro-macro gap

Assets(*)	Starting values	Adjusted values	National Financial accounts (**)
	(index. Financial accounts=100)		*Billions of Euro*
Deposits and repos	55.5	76.5	421
Government bonds	28.7	57.4	213
Private bonds	11.2	103.1	382
Shares	31.1	59.6	131
Mutual funds	25.5	73.8	306
Total financial assets	**31.4**	**84.7**	**1.453**
Financial liabilities	**46.6**	**64.9**	**290**

(*) Financial accounts do not produce a separate figure for managed savings. The relative sample estimate has been accordingly attributed to the other assets, using external information on the portfolio composition of financial intermediaries (published in the Statistical Bulletin of the Bank of Italy).

(**) The following assets are not included: Currencies. Insurance technical reserves and Postal deposits.

Results: household portfolio composition



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- Sampling data are linked with administrative information
- For the same household both survey data and administrative records on financial wealth are available (six categories of assets and financial liabilities)

First step

- Estimation of the probability of under-reporting on the ownership (non-reporting) using external survey

$$\lambda_j(D,Z)=\Pr(T = t|\ D = d, Z) \quad \text{for each asset } j \in \{1,..,6\}$$

$T = \{0,1\}$ dummy for effective ownership (administrative data)
$D = \{0,1\}$ dummy for declared ownership (sampling data)

Second step

- Estimation of under-reporting on the amount held (conditional on effective holding) using external survey

$$R_j = \frac{\text{effective amount}}{\text{declared amount}} \qquad \text{for each asset } j \in \{1, .., 6\}$$

$$\log(R_j) = f(D, Z) \qquad \text{for each asset } j \in \{1, .., 6\}$$

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- We extrapolate to SHIW data the coefficients estimated using the external data:
- First, for every Italian household a probability of ownership of a given asset is fitted. Then, a random experiment is used to assign (or to delete) the ownership
- Second, reported (or imputed) values are increased (or decreased) using the estimates of under-reporting on amounts

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- Under-reporting is higher for elderly, retired, and low-educated. Self-employed show a higher reticence in declaring shares and private bonds
- A full understanding of the financial wealth distribution would require an ad hoc analysis of the wealthiest households (over 2.5 million Euros)