The Missing Wealth of Nations:
Evidence From Switzerland, 1945-2008

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## Share of Foreign Assets in Household Wealth

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A: Equities, bonds, mutual funds</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households' foreign portfolio assets</td>
<td>39,8</td>
<td>27,7</td>
</tr>
<tr>
<td>Total (domestic + foreign) households' portfolio assets</td>
<td>706,0</td>
<td>828,0</td>
</tr>
<tr>
<td><strong>Share Foreign [2]/[9]</strong></td>
<td>5,6%</td>
<td>3,3%</td>
</tr>
<tr>
<td><strong>Panel B: Bank Deposits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households' foreign bank deposits</td>
<td>27,0</td>
<td>28,0</td>
</tr>
<tr>
<td>Households' total (domestic + foreign) bank deposits</td>
<td>834,8</td>
<td>1 071,8</td>
</tr>
<tr>
<td><strong>Share foreign [11]/[12]</strong></td>
<td>3,2%</td>
<td>2,6%</td>
</tr>
<tr>
<td><strong>Panel C: Total Financial Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households' other financial assets (mainly life-insurance)</td>
<td>911,5</td>
<td>1 554,9</td>
</tr>
<tr>
<td>Households' gross financial assets</td>
<td>2 452,4</td>
<td>3 454,7</td>
</tr>
<tr>
<td><strong>Foreign assets in households' net financial wealth ([2]+[11])/([16]-[17])</strong></td>
<td><strong>3,9%</strong></td>
<td><strong>2,5%</strong></td>
</tr>
</tbody>
</table>

Source: France's Financial Accounts, Banque de France; Unpublished "Qui A Qui" Financial Accounts; CPIS.
All figures in bn of euros unless otherwise stated.
Observed Dynamics of Foreign Assets

French Households' Foreign Securities / Net Financial Wealth
Question

- Has cross-border banking made foreign financial wealth unobservable and untaxable?
What This Paper Does

Presents two different measures of unrecorded offshore wealth:

1. In Switzerland (1945-2008), using detailed Swiss banks data, broken down by country
2. At the global level (2000s), using discrepancies in the balance of payments / international investment positions
Results

Both measures show that households’ financial wealth is significantly under-estimated:

1. Globally in 2008, around 6% of households’ financial wealth is missing from national accts

2. Ex: French households’ unrecorded wealth in Switz. $\approx 7\%$ of their total financial assets
Applications and Related Literature

1. Effect of undeclared wealth on top income/wealth shares dynamics: Dell, Piketty & Saez (2007)


3. Efficiency of the EU savings directive: Johannesen (2010)

4. Empirics of external wealth and global imbalances: Lane & Milesi-Ferretti (2007)
I - The Problem
Direct Finance with Domestic Custody

Households

Buy securities (stocks, bonds)
And deposit them in a domestic bank

Corporations, government

Tell who owns what
(wealth tax)

Tell who earns what
(income tax)

Banks
« custodians »

Tax Authority

Tax evasion is impossible

National Accountants

Financial Accounts are accurate
Direct Finance with Cross-Border Custody

Domestic households → Foreign banks

- Buy securities
- And deposit them abroad

Foreign or domestic corporations, govt → Foreign banks

Don’t exchange information with domestic tax authorities (tax havens)

Don’t exchange information with domestic national accountants

Domestic National Accounts underestimate household wealth

Tax evasion is possible
Consequences of Cross-Border Custody

In countries where taxpayers have their wealth managed offshore:

- National accounts under-estimate households’ financial wealth
- International investment positions under-estimate net foreign asset position
- Tax data under-estimate top income/wealth shares
II - Foreign Wealth in Switzerland
Portfolio Wealth Managed by Swiss Banks

Securities Managed by Swiss Banks / World Households' Financial Wealth
Data sources

1. Swiss National Bank public data:
   - Custody survey (1998-)
   - “Banks in Switzerland” (1907-); e.g. commission and fee income, by category of bank
   - Capital market statistics (bond and stock market capitalizations)

2. Swiss Banks’ private archives:
   - Paul Volcker’s commission: comprehensive data for 1945
   - Pierre Bergier’s commission: securities deposits in 6 of the 7 big banks of the twentieth century (1919-1971)

3. Global household wealth
   - Davies et al. (2009)
   - Ongoing work on the world distribution of wealth
What’s in Swiss Banks?

Securities owned by Swiss residents

Swiss Securities

Foreign Securities

Securities owned by Foreign residents

Swiss Securities

Foreign Securities
What’s Potentially Missing?

- All Swiss securities are subject to a 35% advance tax, difficult to avoid
- So potential missing wealth = mostly foreign securities held by foreigners
- Also, special kind of untaxed bank-accounts: ”Fiduciary Deposits”
Foreigners’ Holdings of Foreign Assets

- Foreigners' (Foreign Securities Deposited in Switzerland + Fiduciary Bank Accounts) / World Households' Financial Wealth
- Foreigners' Foreign Securities Deposited in Switzerland / World Households' Financial Wealth
Country Breakdown

- 1945: Historical sources from Bergier’s commission
- After: full geographical breakdown of fiduciary deposits since 1976
- However, country breakdown are increasingly difficult to interpret
- Key factor of uncertainty: shell corporations set up in tax havens
<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Swiss holdings</strong></td>
<td>64.0%</td>
</tr>
<tr>
<td><strong>Foreigners' holdings</strong></td>
<td>36.0%</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>17.6%</td>
</tr>
<tr>
<td>Italy</td>
<td>3.2%</td>
</tr>
<tr>
<td>Spain</td>
<td>3.0%</td>
</tr>
<tr>
<td>Germany and Austria</td>
<td>1.9%</td>
</tr>
<tr>
<td>Belgium</td>
<td>1.4%</td>
</tr>
<tr>
<td>Balkans</td>
<td>1.0%</td>
</tr>
<tr>
<td>Great-Britain</td>
<td>0.8%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.7%</td>
</tr>
<tr>
<td>United States</td>
<td>2.3%</td>
</tr>
<tr>
<td>South America</td>
<td>1.7%</td>
</tr>
<tr>
<td>Other Countries</td>
<td>2.4%</td>
</tr>
<tr>
<td><strong>Total Credit Suisse</strong></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Memo: Credit Suisse / Total Swiss Banks 16.6%
Geographical Breakdown of Fiduciary Deps

- Tax Havens
- Europe
- Middle East
- Latin and South America
- Asia
- Africa
- North America
Strategy to Make Tax Havens Transparent

- Impossible to look through shell corporations/trusts
- But strong suspicion that this is mainly European wealth
- I attribute 100% of tax havens’ deposits to European countries
## Country Breakdown 1976 and 2000

<table>
<thead>
<tr>
<th></th>
<th>1976</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe</strong></td>
<td><strong>69,8%</strong></td>
<td><strong>71,2%</strong></td>
</tr>
<tr>
<td>Italy</td>
<td>26,2%</td>
<td>14,5%</td>
</tr>
<tr>
<td>France</td>
<td>14,2%</td>
<td>11,4%</td>
</tr>
<tr>
<td>Germany</td>
<td>5,6%</td>
<td>8,4%</td>
</tr>
<tr>
<td>Belgium</td>
<td>5,2%</td>
<td>6,3%</td>
</tr>
<tr>
<td>United Kingdom (est.)</td>
<td>4,9%</td>
<td>8,0%</td>
</tr>
<tr>
<td>Spain</td>
<td>2,7%</td>
<td>6,4%</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Middle East</strong></td>
<td><strong>13,4%</strong></td>
<td><strong>10,1%</strong></td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Other countries</strong></td>
<td><strong>16,8%</strong></td>
<td><strong>18,7%</strong></td>
</tr>
<tr>
<td>United States</td>
<td>2,0%</td>
<td>2,2%</td>
</tr>
<tr>
<td>Brazil</td>
<td>n.a.</td>
<td>2,1%</td>
</tr>
<tr>
<td>Turkey</td>
<td>n.a.</td>
<td>1,5%</td>
</tr>
<tr>
<td>Argentina</td>
<td>1,1%</td>
<td>1,5%</td>
</tr>
<tr>
<td>Israel</td>
<td>1,0%</td>
<td>1,5%</td>
</tr>
<tr>
<td>Canada</td>
<td>0,9%</td>
<td>0,8%</td>
</tr>
<tr>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Application to French Wealth

French Wealth in Switzerland as a % of French Households' Net Financial Wealth
III - The Global Missing Wealth
Global Discrepancies in BoP/IIP

- Well-known discrepancies in world balance of payments
  - World current account $< 0$ until 2004, $> 0$ since
  - Consistently $< 0$ net global portfolio income since 1970s (i.e. apparently more dividends and interests paid than received)

- Similar global discrepancies in world IIP

- LMF database (2009 update) covering a set $\mathcal{I}$ of 178 countries:

\[
\sum_{j \in \mathcal{I}} A_j + \sum_{j \in \mathcal{I}} R_j < \sum_{j \in \mathcal{I}} L_j
\]

- $\sum_{j \in \mathcal{I}} A_j$: Equity + Debt Assets
- $\sum_{j \in \mathcal{I}} R_j$: Reserve
- $\sum_{j \in \mathcal{I}} L_j$: Equity + Debt Liab
Questions Raised by The Discrepancy

We focus on the portfolio income discrepancy (trade balance discrepancy = different issues)

1. Where does it come from?
2. Is it important, or just a statistical scoria?
3. How does it change our knowledge of global imbalances?
Our Answers

1. It comes mainly from cross-border wealth management: National accountants are unable to capture portfolio holdings of domestic households abroad

2. Assets managed offshore $\approx 6\%$ of global household financial wealth

3. Consequence: Many NFAs might be underestimated
Offshore Wealth Management Creates Discrep

If households from country \( A \) have their wealth managed by banks located in \( B \) and invest in \( C \):

- \( C \) records a foreign liability / \( B \)
- \( A \) does not record any foreign asset (no asset survey of households)
- \( B \) does not record any cross-border position (third-party holdings)
Other Factors Causing the Discrepancy

- Partial coverage, data deficiencies, heterogeneity in compiling practices. How to sort those out?
- Use highest quality dataset on cross-border assets: IMF CPIS
  - Launched to bring answers to current account discrepancies
  - High level of harmonization
  - Extensive documentation, allowing to fill the gaps

- Supplemented by US TIC survey to estimate foreign assets of non-CPIS reporting countries
The CPIS

Basic fact: $\forall j \in \mathcal{I}$,

$$\sum_{i \in \mathcal{C}} A_{ij} + \sum_{i \in \mathcal{S}} R_{ij} < \sum_{i \in \mathcal{W}} L_{ij}$$

Assets reported by CPIS + SEFER < Liabilities reported by $j$

New findings = inequality robust to:

- adding estimates of $\sum_{i \in \mathcal{W} \setminus \mathcal{C}} A_{ij}$ (Cayman Islands mutual funds, oil countries...)
- adding estimates of $\sum_{i \in \mathcal{W} \setminus \mathcal{S}} R_{ij}$ (China...)
The CPIS (2)

Conclusion: \( \forall j \in \mathcal{I}, \)

\[
\sum_{i \in \mathcal{W}} A_{ij} + \sum_{i \in \mathcal{W}} R_{ij} < \sum_{i \in \mathcal{W}} L_{ij}
\]

And consequently:

\[
\sum_{j \in \mathcal{I}} \sum_{i \in \mathcal{W}} A_{ij} + \sum_{j \in \mathcal{I}} \sum_{i \in \mathcal{W}} R_{ij} < \sum_{j \in \mathcal{I}} \sum_{i \in \mathcal{W}} L_{ij}
\]

Only remaining explanation of the gap = Inability to capture households’ foreign holdings abroad
Global Portfolio Missing Wealth

Missing Portfolio Wealth, bn of US$ (l.h.s.)

Missing Portfolio Wealth as a % of Global Portfolio Liabilities (r.h.s.)
Financial Wealth Held Offshore

Households' Financial Wealth Held Offshore / Global Households' Net Financial Wealth
Conclusion

- Around 6% of global household wealth managed offshore
- This explains the global portfolio income discrepancy
- For some EU countries, up to 10% of households’ financial wealth managed in Swiss banks
- Much bigger figure for some developing and oil countries
- Offshore financial wealth = key challenge to financial accounts and distribution studies
These Figures Are Lower-Bounds

Not all missing wealth translates into world portfolio discrepancies or is recorded as foreign by Swiss banks:

- Fake addresses
- Shell corporations
- Use of other domestic intermediaries
Future Work

Why do rich individuals relocate their wealth abroad?

- Positive model of cross-border tax evasion
- To be tested with panel data on fiduciary bank accounts