The Final destination of Household financial wealth*

J. Pavot –Banque de France
Banca d’Italia, November 30th – December 1st, 2017
How financial systems work: evidence from FA

*does not necessarily express the views of the Banque de France
Introduction

• **Several motivations:**
  – Impact of the recent financial crises on household wealth;
  – Use the more detailed available breakdowns in financial accounts (whom-to-whom data) in a cross-country comparison perspective;
  – Current discussions in France on the orientation of financial investments

• **Update Boutillier et al. (2007) findings on final destination of household financial wealth:**
  – The previous study covers DE, ES, FR, IT, NL, UK, US and JP in 1990s and early 2000s;
  – The present study covers DE, ES, FR, IT over 1999Q1-2017Q1
Outlines of the presentation

1 – Methodology and Database

2 – The weight of FI before and after recent crises

3 – Look-through results

4 – Conclusion and way forward
1.1 Financial intermediaries are made transparent

- Consist in a re-allocation of all the intermediated assets initially hold by HH to claims on the non-financial sectors

- A numerical illustration:

<table>
<thead>
<tr>
<th>Initial counterpart composition of HH Financial Assets:</th>
<th>Look-through: 1st Iteration</th>
<th>Look-through: 2nd Iteration</th>
<th>...</th>
<th>Final composition: Last Iteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Financial Corporations (NFC)</td>
<td>163</td>
<td>317</td>
<td>355</td>
<td>368</td>
</tr>
<tr>
<td>Households (HH)</td>
<td>20</td>
<td>174</td>
<td>212</td>
<td>225</td>
</tr>
<tr>
<td>General Government (GG)</td>
<td>25</td>
<td>178</td>
<td>217</td>
<td>229</td>
</tr>
<tr>
<td>Rest of The World (RoW)</td>
<td>24</td>
<td>139</td>
<td>168</td>
<td>178</td>
</tr>
<tr>
<td>Financial Corporation (S12)</td>
<td>769</td>
<td>192</td>
<td>48</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

Structure of S12 assets:

<table>
<thead>
<tr>
<th>NFC</th>
<th>GG</th>
<th>S12</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>20</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HH</th>
<th>RoW</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>15</td>
<td>100</td>
</tr>
</tbody>
</table>
1.2 The structure of database

- HH sector includes Non-profit institutions serving households (NPISH)

- The S12 sector is split into MFIs and non-MFIs

- RoW sector is not made transparent
  \[\Rightarrow\] It is considered as a final non-financial sector although it includes financial intermediaries

- All the type of financial assets are covered but derivatives and other receivables are aggregated

- Full-fledged counterpart (ctp.) information by type of assets is required....
1.3 treatment of missing w-t-w breakdown

- W-t-w partially missing for DE and IT
  - In Bouthillier et al. 2007, when ctp. sector is not available, liability structure side is used:
    \(\Rightarrow\) e.g. if GG issues 20% of debt securities, 20% of HH assets in debt securities are assumed to be vis-à-vis GG

  - This assumption is appropriate for life insurance and pension entitlements but more questionable for unquoted shares and other participations:

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<table>
<thead>
<tr>
<th></th>
<th>France</th>
<th>Spain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share in the Household assets</td>
<td>Share in the whole economy liability</td>
</tr>
<tr>
<td>NFC</td>
<td>72</td>
<td>68</td>
</tr>
<tr>
<td>MFIs</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>NMFI</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>RoW</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>
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\(\Rightarrow\) ES and FR average asset structure is used for DE and IT
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2.1 Intermediation rates at high levels

- IR defined as the share of total HH assets hold vis-à-vis S12
  ⇒ i.e. HH bank bonds or the participations in the mutual bank capital are included in this IR

- IR around 75% in DE-ES-FR, a lower level in IT (below 60%)

- IR picked up in the early stages of the crisis and stabilized afterwards at a higher level:
  - Negative valuation on securities directly hold by HH;
  - Relatively strong flows of on deposits
2.2 IR is stable in the LT perspective

- Comparison with Bouthillier et al. (2007) shows relatively high consistency
- Bouthillier et al. (2007) findings can be extended to the 2000s:

*IR are rather stable in spite of massive transformations within intermediation industry*
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3 – Look-through results
   ⇒ 2 complementary representations:
   – Final allocation in terms of instruments
   – Final allocation in terms of ctp. sectors

4 – Conclusion and way forward
3.1 Final composition in terms of instruments

- After look-through, greater concentration on 3 instruments: debt securities, equity and loans
  ⇒ Still cross-country heterogeneity is not massively reduced with look-through and the ranking can be affected
Equity directly hold by Households
(% of total financial assets)

Equity directly and indirectly hold by HH
(% of total financial assets)
3.1 Final composition in terms of instruments

- Regarding debt securities and loans, cross-country dispersion is smaller today than in the early 2000s.
Debt securities directly and indirectly hold by HH (% of total financial assets)

Loans and other receivable directly and indirectly hold by HH (% of total financial assets)
3.1 Final composition in terms of instruments

- For DE et IT: larger residual shares of investment fund shares and deposit (indirectly owned vis-à-vis the RoW)
Investment fund shares directly and indirectly hold by HH
(% of total financial assets)

Deposits directly and indirectly hold by HH
(% of total financial assets)
3.2 Final composition in terms of ctp. sectors

• Bouthillier *et al.* 2007 did not comment on it
  ⇒ As this study relies on almost comprehensive w-t-w data, results in terms of ctp. sectors are sufficiently reliable

• Look-through ≠ a simple intermediation scheme where economic agents in surplus (mostly HH) are financing, *via* financial intermediaries, agents in deficit (e.g. GG, NFC)
  ⇒ This would be the case in a analysis performed on a net basis and not like here on a gross basis

• The final destination actually depends on investment strategies of the financial intermediaries which can be either resident or non-resident
3.2.1 10 to 25% of HH wealth are claims on GG
3.2.2 Diverse trends in RoW financing

HH direct and indirect claims on RoW (% of total financial assets)

Portfolio Investment assets / Financial corporation debt securities + Equity and investment fund shares or units (%)
3.2.3 but a common declining trend in NFC financing

- Before the financial crisis, NFC indirect financing has significantly picked-up in ES and IT
- Since the crisis a common downward trend in all countries, but more pronounced in ES and IT
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4.1 Conclusion and limitations

• To our knowledge this is first time since Bouthillier et al. (2007) this look-through approach is implemented on other countries than France

• But there are several studies relying on look-through circumscribed to indirect investments (e.g. life insurance, investment funds, MFI deposits being excluded)
  ⇒ e.g. recent works in Banca d’Italia

• Tentative comparisons show our results are consistent ... with stronger caveats here in terms of risk transfer analysis
4.2 Way forward

• This study is still preliminary. The robustness of some finding will have to be cross-checked
  ⇒ For DE and IT part of the ctp. sector breakdown is imputed from ad-hoc assumptions and a sensitivity analysis on the should be performed
  ⇒ As in the original study of Bouthillier et al. (2007), a larger panel of countries would also improve robustness

• This look-through exercise (as former ones) is performed on the market value of HH financial assets which can be massively affected by valuation effect, especially during crisis times
  ⇒ Yet it would be interesting to split transactions and market effects
Thanks for your attention!
Production of backward data when missing

- For Germany whom-to-whom data for debt securities, quoted shares and Investment fund shares is only available for the 2013Q1-2017Q1

- RAS method is used to impute 1999Q1-2012Q4 data: available information on 2013 is used to derive backwards the detailed counterpart structure while being consistent with available information on total sector assets and total liabilities.
### The composition Household financial assets before and after the look-through approach (% end-2014)

**C 2017 : Coletta 2017 and P 2017: Pavot 2017**

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<tbody>
<tr>
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<td>100</td>
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<td>Currency and deposits</td>
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<td>45</td>
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<td>43</td>
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<td>29</td>
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<td>7</td>
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<td>Debt securities</td>
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<td>21</td>
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<td>27</td>
<td>26</td>
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<tr>
<td>Shares and other equity</td>
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<td>26</td>
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<td>32</td>
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<td>11</td>
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<td>10</td>
<td>9</td>
<td>9</td>
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<tr>
<td>Insurance, pension schemes</td>
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<td>12</td>
<td>5</td>
<td>17</td>
<td>2</td>
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<td>37</td>
<td>4</td>
<td>0</td>
<td>21</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Other assets</td>
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<td>2</td>
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<td>41</td>
<td>6</td>
<td>7</td>
<td>29</td>
<td>3</td>
<td>3</td>
<td>28</td>
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