PROFIT
Financial Awareness and Stability
Financial literacy and Economic Behaviour

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GMW last year

A new economic landscape

- Individuals are increasingly in charge of their financial well-being
  - Changes in the pension landscape
    - More choice and more individual accounts
  - Changes in the labor markets
    - Increased mobility
  - Changes in the financial markets
    - Increased complexity
    - More opportunities to borrow
  - Changes in the political sphere
    - Tighter government budgets
    - Political choices
      - Austerity, crisis, distrust
      - Referendums, devolution, public finance
Global Findex 2014: Saving for Old Age
(Demirguc-Kunt, Klapper and Panos, 2016)

Financial Literacy

- It is the ability to use knowledge and skills to effectively manage financial resources at a personal-level.
  - It is a form of “human capital”
  - In perfect alignment with the client protection target

- It is NOT “numeracy”. Numeracy is the ability to use mathematics and arithmetic in a practical manner at a personal-level.
  - Expectation is that the two are correlated?

- “The US President’s Advisory Council on Financial Literacy defines personal financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being”

- Lusardi and Mitchell (2014): “…peoples’ ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt and pensions”
Recent evidence from several countries

- Low levels of financial literacy
- Lower levels at less developed countries
- Financial illiteracy more severe for some key demographic groups
  - Baby boomers, females, less educated, low income, minorities etc.

- Literature now big enough for JEL paper
  - Lusardi and Mitchell (2014)

Financial literacy measurement

Q1: Numeracy
Suppose you had €100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

(1) ☐ More than €102
(2) ☐ Exactly €102
(3) ☐ Less than €102
(4) ☐ I can not tell, not even approximately
### Financial literacy measurement

#### Q2: Inflation
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>More than today</td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>Exactly the same</td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>Less than today</td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>I can not tell, not even approximately</td>
<td></td>
</tr>
</tbody>
</table>

#### Q3: Risk
Which is the riskier asset to invest in?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Shares in a single company stock</td>
<td></td>
</tr>
<tr>
<td>(2)</td>
<td>Shares in a unit/mutual fund</td>
<td></td>
</tr>
<tr>
<td>(3)</td>
<td>Risks are identical in both cases</td>
<td></td>
</tr>
<tr>
<td>(4)</td>
<td>Don’t know</td>
<td></td>
</tr>
</tbody>
</table>
Recent evidence from several countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Survey year</th>
<th>Interest rate</th>
<th>Inflation</th>
<th>Risk</th>
<th>All 3 correct</th>
<th>At least 1 &quot;Don't know&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Britain</td>
<td>2014</td>
<td>81.3%</td>
<td>69.1%</td>
<td>48.7%</td>
<td>40.2%</td>
<td>28.3%</td>
</tr>
<tr>
<td>England</td>
<td>2014</td>
<td>81.3%</td>
<td>69.0%</td>
<td>48.6%</td>
<td>40.2%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Scotland</td>
<td>2014</td>
<td>85.6%</td>
<td>70.0%</td>
<td>52.0%</td>
<td>43.3%</td>
<td>27.6%</td>
</tr>
<tr>
<td>Wales</td>
<td>2014</td>
<td>78.4%</td>
<td>82.5%</td>
<td>49.6%</td>
<td>44.8%</td>
<td>21.2%</td>
</tr>
<tr>
<td>USA</td>
<td>2009</td>
<td>64.9%</td>
<td>64.3%</td>
<td>51.8%</td>
<td>30.2%</td>
<td>42.4%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2010</td>
<td>84.8%</td>
<td>76.9%</td>
<td>51.9%</td>
<td>44.8%</td>
<td>37.6%</td>
</tr>
<tr>
<td>Germany</td>
<td>2009</td>
<td>82.4%</td>
<td>78.4%</td>
<td>61.8%</td>
<td>53.2%</td>
<td>37.0%</td>
</tr>
<tr>
<td>Japan</td>
<td>2010</td>
<td>70.5%</td>
<td>58.8%</td>
<td>39.5%</td>
<td>27.0%</td>
<td>61.5%</td>
</tr>
<tr>
<td>Australia</td>
<td>2012</td>
<td>83.1%</td>
<td>69.3%</td>
<td>54.7%</td>
<td>42.7%</td>
<td>41.3%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>2009</td>
<td>86.0%</td>
<td>81.0%</td>
<td>49.0%</td>
<td>24.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>2011</td>
<td>79.3%</td>
<td>78.4%</td>
<td>73.5%*</td>
<td>50.1%*</td>
<td>16.9%*</td>
</tr>
<tr>
<td>Italy</td>
<td>2007</td>
<td>40.0%*</td>
<td>59.3%*</td>
<td>52.2%*</td>
<td>24.9%*</td>
<td>44.9%*</td>
</tr>
<tr>
<td>Sweden</td>
<td>2010</td>
<td>35.2%*</td>
<td>59.5%</td>
<td>68.4%</td>
<td>21.4%*</td>
<td>34.7%*</td>
</tr>
<tr>
<td>France</td>
<td>2011</td>
<td>48.0%*</td>
<td>61.2%</td>
<td>66.8%*</td>
<td>30.9%*</td>
<td>33.4%*</td>
</tr>
<tr>
<td>Russia</td>
<td>2009</td>
<td>36.3%*</td>
<td>50.8%*</td>
<td>12.8%*</td>
<td>3.7%*</td>
<td>53.7%*</td>
</tr>
<tr>
<td>Romania</td>
<td>2011</td>
<td>41.3%</td>
<td>31.8%*</td>
<td>14.7%</td>
<td>3.8%*</td>
<td>75.5%*</td>
</tr>
</tbody>
</table>

Notes: Figures for Great Britain and its countries are weighted averages from the British Election Survey. The figures from the remaining countries are from the literature review in Lusardi and Mitchell (2014).

- Also UK, Australia, Ireland, Korea, Mexico, Indonesia, Chile

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Financial Literacy and Financial Stability

- Informed financial decisions critical to *sound personal finance* (Bernheim, 1995, Lusardi & Mitchell, 2014; 2007a; 2007b; and 2008a; 2011; Lusardi & Tufano, 2008; Lusardi, 2009; Cole & Shastry, 2008)
  - More efficient *allocation* of financial *resources*
  - Greater financial *stability*, less *fragility* (*e.g.* loan losses)
  - *Retirement planning decisions* (*JPEF*-volume)
  - *Stock market* participation (van Rooij, et al., 2011 and many others)
  - Demand for *banking services* in Indonesia (Cole, et al., 2008)
  - *Returns* to long-term saving (Stango & Zinman, 2008)
  - Increased *saving rates & lending* to poorest & vulnerable (Cole & Zia, 2010)
  - *Entrepreneurship* (Klapper, Lusardi and Panos, 2015)
  - *Public attitudes* (Series of papers by Panos et al., 2015a, b, c, d, e)

- In terms of RBF-targets, critical aspect of *client protection*
  - Also often overlapping with important *social performance targets*
### PROFIT: New relevant literature

- **Lusardi, Michaud and Mitchell (2016):**
  - Financial knowledge enables individuals to better allocate resources over their lifetimes in a world of uncertainty and imperfect insurance
  - 30 - 40% of US wealth inequality can be accounted for by financial knowledge
- **Montagnoli, Moro, Panos and Wright (2016):** FL are 15-25% less in favour of income redistribution interventions
- **Panos and Wright (2016a):** FL are 15-20% more likely to see a beneficial impact of immigration on local economies
- **Panos and Wright (2016b):** FL are less likely to be in favour of devolution in the Scottish and BRexit referendums
- **Lusardi, Klapper and Panos (2016):** FL are more likely to become entrepreneurs and perform better while in business

### Responsible Banking & Finance

- **Responsible banking & finance (RBF) involves offering financial services in an accountable, transparent and ethical manner**
- **RBF focuses on financial service providers (their practices, what they do or do not do) and on clients (mainly aimed at improving their capacities to access and use high-quality financial services)**
- **RBF is clearly essential for the longer-term success of any financial-service business, also aiming to cater to the lowest-income and most vulnerable parts of the population**
- **RBF is an end-state vision, with a pragmatic focus on client protection and social performance management**
Principles on financial consumer protection

**BOX 1. HIGH-LEVEL PRINCIPLES ON FINANCIAL CONSUMER PROTECTION ENDORSED BY THE G20**

1. Legal, Regulatory and Supervisory Framework
2. Role of Oversight Bodies
3. Equitable and Fair Treatment of Consumers
4. Disclosure and Transparency
5. Financial Education and Awareness
6. Responsible Business Conduct of Financial Services Providers and Authorized Agents
7. Protection of Consumer Assets against Fraud and Misuse
8. Protection of Consumer Data and Privacy
9. Complaints Handling and Redress
10. Competition

Responsible Digital Finance

**7 key consumer risk areas in RDF**

1. Inability to transact due to network/service downtime
2. Insufficient agent liquidity or float, which also affects ability to transact
3. User interfaces that many find complex and confusing
4. Poor customer recourse
5. Nontransparent fees and other terms
6. Fraud that targets customers
7. Inadequate data privacy and protection
Private banking offers exclusive wealth-related services to high net worth individuals
- “Private” refers to the *more personalized and exclusive* nature of the service
  - e.g. Swiss business model

Tools used: Risk profiler, i.e. a questionnaire that assesses the client's *risk ability, risk preferences, and risk awareness* in a systematic way
- Assessing clients' preferences and restrictions in a risk profiler is essential for providing *customized advice*
- Using a risk profiler has some important advantages, one of which is that it allows financial advisors to improve the conformability of their services with the requirements of the European Markets in Financial Instruments Directive (MiFID)
  - For financial advisors (at least in the EU), the new directive aims at *improving the service quality*, in particular in terms of *matching the bank’s recommendation and the client’s needs*

Not aiming for paternalism...

Robo advice can never exterminate the UK’s financial frailty

Robots. They’re driving our cars, starring in Hollywood blockbusters, and now they appear to be the future of financial advice.

Just before the Budget, a half-inch thick report into the UK’s so-called advice gap offered hope that robots — or more accurately “robo advice” — could be used to provide low-cost financial guidance to millions of Britons who aren’t hugely wealthy and can’t afford to pay thousands in fees. Could robots really close the advice gap? Computer says... maybe.

￼
Phase I: Financial literacy matters
- For a great number of financial and open democracy outcomes
- For economic stability

Phase II: How do we deliver it in practice
- Narratives, visuals, videos, games?
- Implementation: Who delivers it?
  - Educators, financial institutions, individuals
  - The role of experts
  - Liberalism vs. Paternalism

PROFIT: Via an all-inclusive user–interactive online platform

Phase II: Insights from the literature (1)
- Lusardi et al. (2015, JPEF) evaluate the effectiveness of 4 educational programs, using a representative sample of individuals aged 20+ from the RAND American Life Panel (ALP)
  - An informational brochure, a visual interactive tool, a written narrative, and a video narrative were used
  - The programs were designed to inform people about risk diversification, an essential concept for financial decision-making.
  - Videos were most effective at improving financial literacy scores and increasing levels of confidence in financial knowledge
  - The visual tool increased confidence in financial knowledge, but did not appear to have an effect on financial literacy scores
  - Participants who were exposed to a video had significantly higher financial literacy scores than those who were exposed to a written narrative
  - All of the treatments were effective at increasing self–efficacy
Heinberg et al. (2014, OREP) design and field a low-cost, easily-replicable financial education programme called ‘Five Steps’, covering five basic financial planning concepts that relate to retirement

- They conduct a field experiment to evaluate the overall impact of Five Steps on a probability sample of the American population
- Treatments with video and narrative formats
- Short videos and narratives (each takes about 3 minutes) have sizeable short-run effects on objective measures of respondent knowledge
- Moreover, keeping informational content relatively constant, format has significant effects on other psychological levers of behavioural change: effects on self-efficacy are significantly higher when videos are used, which ultimately influences knowledge acquisition
- Follow-up tests 8 months after the interventions suggest that between one-quarter and one-third of the knowledge gain and about one-fifth of the self-efficacy gain persist

Hospido et al. (2015, IZA) estimate the impact on objective measures of financial literacy of a 10-hours financial education program among 15-year old students in compulsory secondary schooling

- They use a matched sample of students and teachers in Madrid and two different estimation strategies
- The program increased treated students’ financial knowledge by between one fourth and one third of a standard deviation
- They uncover heterogeneous effects, as students in private schools did not increase their knowledge much, possibly due to a less intensive implementation of the program
- They address selection bias issues by reweighting estimators, and effects largely persist
Collins & Urban (2015, WP) conduct a field study where individuals within 45 credit unions across Wisconsin had randomized access to a 10-hour online financial education on savings and debt management.

- Employees at the credit unions that offered the program in the 1st half of the study constitute the treatment group and employees at the those that offered it in the 2nd half constitute the 'control' group.
- All employees completed a 48-question survey concerning their self-assessed financial knowledge and behavior at 3 points in time, before any education, after half of sites had access and after all had access.
- The results show an increase in knowledge regarding interest, loans, credit scores, stocks and bonds, and retirement investment.
- They also show that the education is associated with greater retirement plan participation, more frequent emergency savings, and more instances of creating a budget or financial plan.
- These findings are corroborated with actual retirement plan contribution accounts.

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**FL in practice (1): Oxigen in India**

**OXIGEN SOLUTIONS**

- Technology: Various solutions such as secure biometric authentication and EMV card support.
- Delivery Mechanism: Safe & Secure: Ensuring transaction security.
- Financial Literacy: Programs for financial literacy and customer education.
- Accessibility: Footprint in deep unbanked areas, bringing banking to the unbanked.

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FL in practice (2): Danske Bank

Financial Literacy

FL in practice (3): NYSE

Date: April 13, 2011
Contact: Paul Golden 303-224-3514, pdg@nene.org

NEW YORK—Representatives from the National Endowment for Financial Education (NEFE), the creators of the Workplace Financial Fitness Toolkit, and contributing experts gathered at the New York Stock Exchange (NYSE Euronext) Tuesday, April 12, to highlight the new Toolkit as part of its Financial Literacy Week with the ringing of The Opening BellSM.

Getting financial education into more workplaces benefits employers as well as employees," says Ted Beck, president and CEO of the Denver-based NEFE. "It can be very difficult for workers who are stressed about their personal finances to fully focus on the performance of their jobs. And new hires often have numerous decisions to make about company benefits that will impact their financial stability long into the future. It makes good business sense for companies to provide these tools to their employees."

The Web-based Workplace Financial Fitness Toolkit provides employers with practical, ready-to-use tools to build or improve their workplace financial programs, including a wide range of tools to help educate, motivate and empower employees. The creation of the Toolkit, which was funded by the NYSE Euronext Foundation, was led by Anamaria Lusardi, Ph.D., director of the RAND Financial Literacy Center, with Panam Keller, Ph.D., professor at the Tuck School of Business at Dartmouth College, with input from NEFE and...
FL in practice (4): VISA and FIFA

Conclusions

- Despite the proliferation of websites devoted to personal financial matters, the inquiry into the practice of personal finance training is still an open issue
  - Much relevant to the public communication of science
  - Open to new directions, e.g. public finance, entrepreneurship
  - Open to new techniques and methods of communication, following technological developments

- Online financial education is an important area of inquiry
  - Much larger audience and at a lower cost per participant than face-to-face delivery
  - Reaching people who would not otherwise attend financial education, attracting people who would not be interested in or able to attend workshops or classes
  - Giving people the freedom and privacy to explore financial issues that they would shy away from in other settings

- PROFIT as an innovator & benchmark setter in FL II agenda
Our financial-literacy literature I


Our financial-literacy literature II