

# OECD-Bank of Italy Symposium on Financial Literacy and Empowerment

*Data, policies and  
evaluation*

*17 November 2023*

*Rome, Italy*



# Session 1

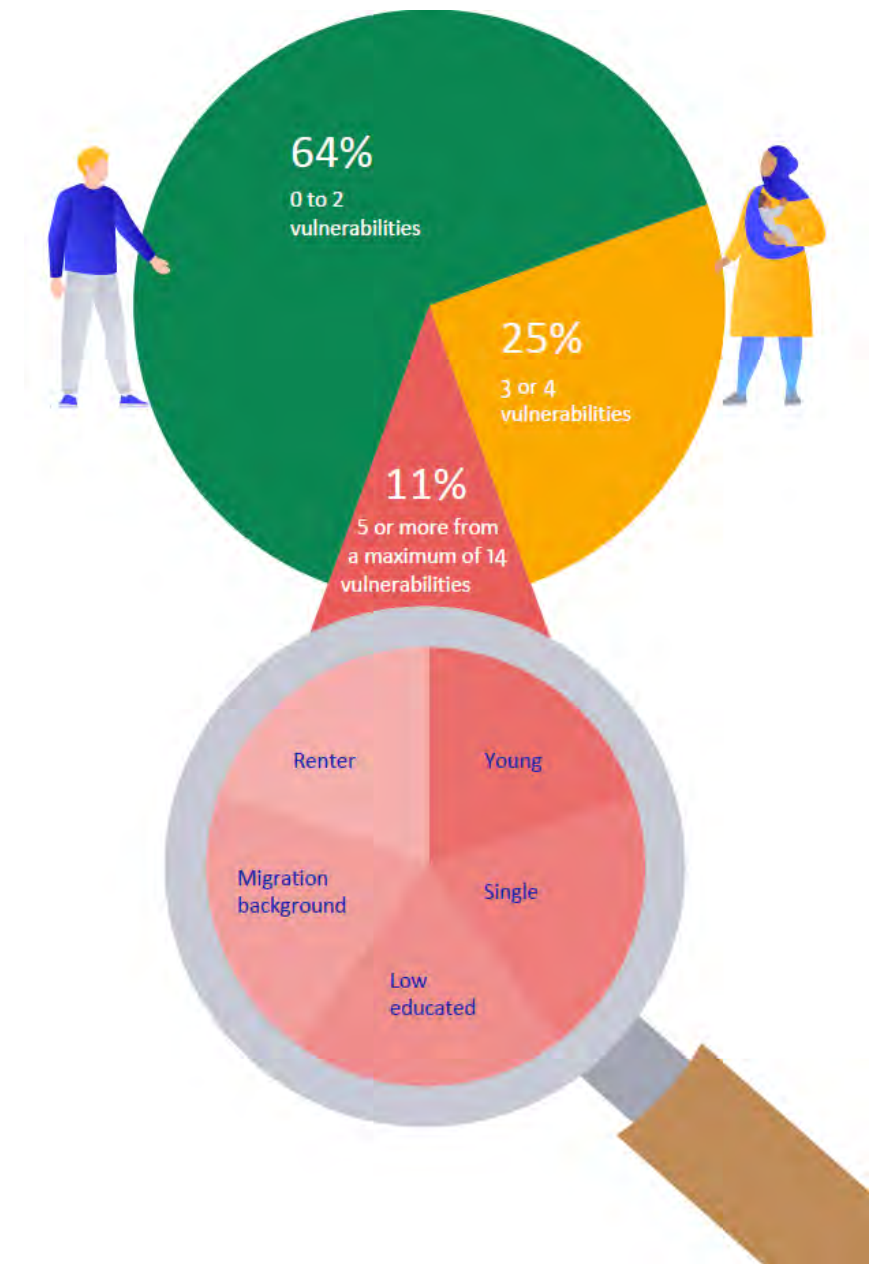
Christian Meijer, Head of Money Wise, Ministry of Finance of the Netherlands

# Research based on microdata

➤ Indicators of vulnerability in terms of broad prosperity:

- work and income (non-working/insecure income/low income)
- assets and debt (low savings, problematic debt)
- living (high housing costs)
- climate (risk of flooding, heat stress)
- energy (high energy costs, poor isolation)

Dutch Central Bank, 2023 (see: [Many Dutch are doing well, but for some, vulnerabilities are accumulating \(dnb.nl\)](#))



# Money worries change over time...

## ➤ National Money Worries Monitor (quarterly):

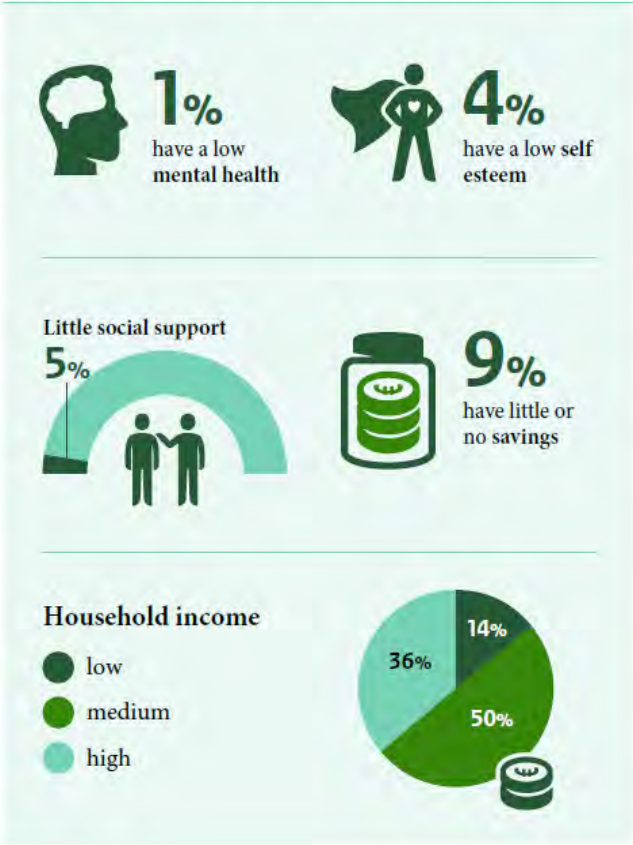
- what money matters are people worried about?
- how much financial stress do they experience?
- how financially resilient are they?
- differences between income groups?
- Scale of worries that people experience



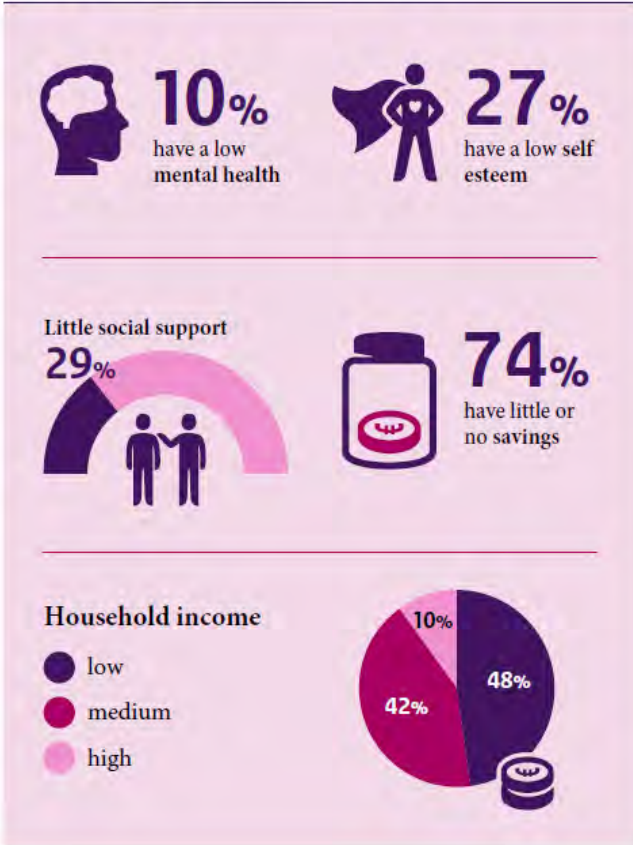
Money worries in last four quarters, see: [www.wijzingeldzaken.nl/Nationale-Monitor-Geldzorgen/](http://www.wijzingeldzaken.nl/Nationale-Monitor-Geldzorgen/)

# ...and correlate with financial stress

People *without* financial stress



People *with* financial stress



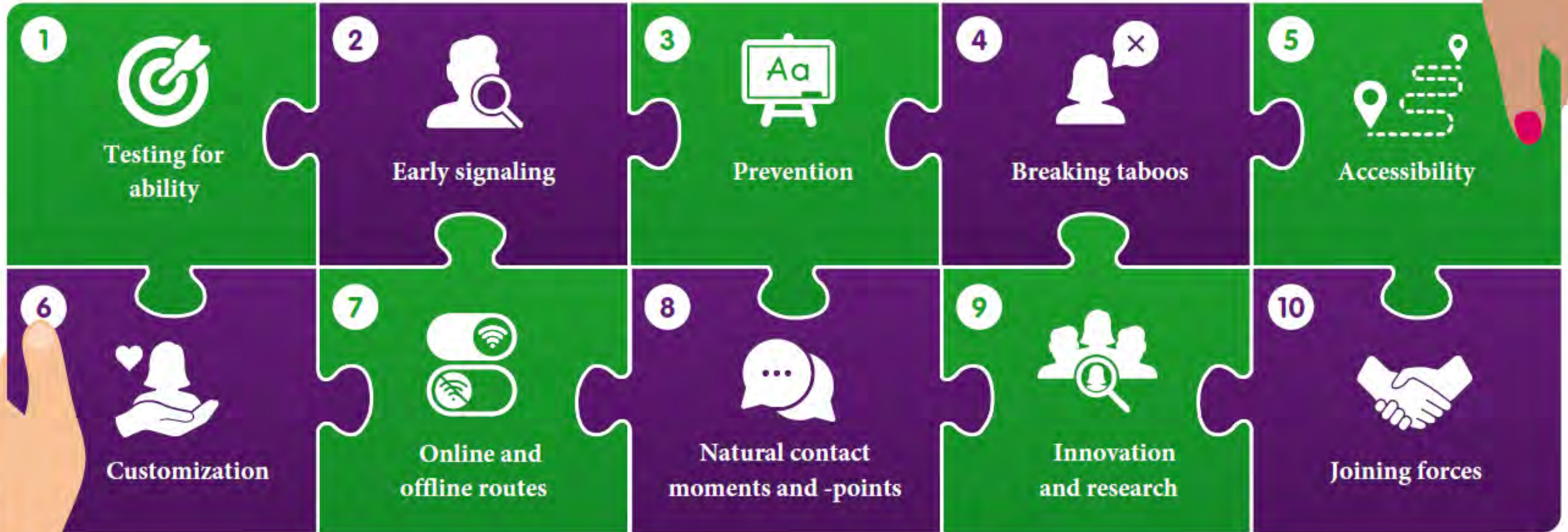
# Learn from vulnerable groups themselves

- More than 100 money talks
- On savings, pensions, the lack of use of social benefits, etc.
- Investigating:
  - the information need
  - psychological barriers to information
  - the best channels to reach people
  - the psychology of money worries



# 10 building blocks

The following ten building blocks serve as a framework for a joint approach to reach and help financially vulnerable groups:



# Activate the financial sector to aid vulnerable groups

- 27 behavioral real-life experiments by 50 financial institutions and academics
- Aimed at (among others):
  - ✓ improving saving rates for people with low savings
    - by a proposal from the bank to start 'residual-saving'
  - ✓ start paying off mortgages
    - by adding a neutral party to messages sent to clients
  - ✓ lowering barriers to ask help
    - by changing the tone of voice, preserving one's autonomy





# Session 2

- Panu Kalmi, Professor of Economics, School of Accounting and Finance, University of Vaasa, Finland
- Dora Li, General Manager, Investor and Financial Education Council, Hong Kong, China
- Riccardo De Bonis, Head of Financial Education Directorate, Bank of Italy

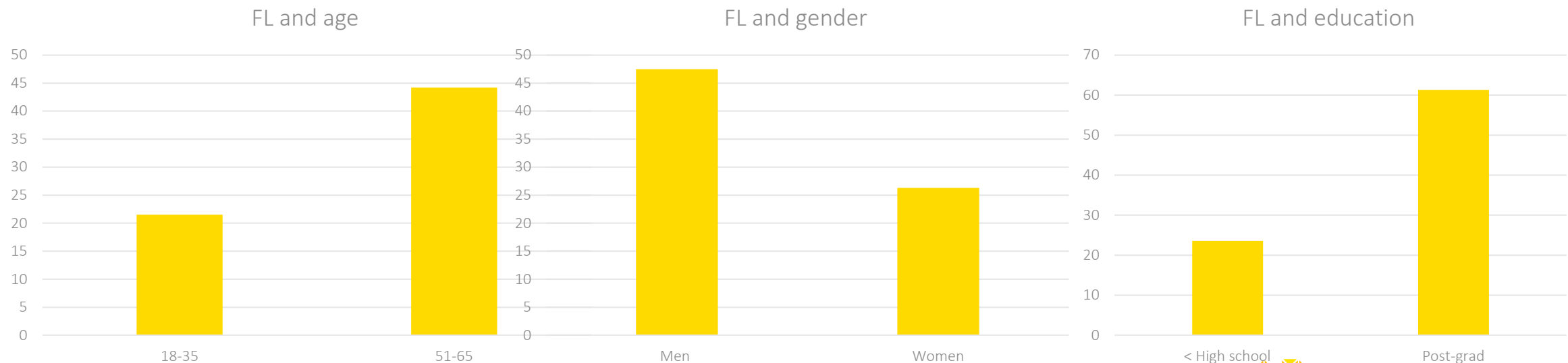
# **Financial literacy in Finland: Evidence from the OECD surveys**

Panu Kalmi

OECD / INFE symposium in Rome, November 17,2023

# Financial knowledge in Finland

- ▶ Generally regarded to be at a high level
- ▶ In recent study, performance generally close to the OECD average rather than top; change in measurement approach
- ▶ Considerable heterogeneity: Big 3 all correct:



# ... but things change with OECD definition

- ▶ Including also behavior and attitudes:
- ▶ Women score higher in behavior and attitudes than men
- ▶ The youngest have highest scores in behavior
- ▶ The oldest have highest scores in attitudes
- ▶ Education is positively correlated with FL in all dimensions
- ▶ Even though the three components of FL are correlated at the individual level, the rankings of different group depend heavily on the component measured
- ▶ Sources: Vaahtoniemi, S., Buturak, G., Kalmi, P., Ruuskanen, O.-P. (2023): Financial Literacy and Its Determinants and Consequences: New Survey Evidence from Finland, Journal of Financial Literacy and Wellbeing
- ▶ Kalmi, P., Vaahtoniemi, S., Raijas, A., Ranta, M., Ruuskanen, O.-P., Buturak, G. (2023): Suomalaisten talousosaaminen tarkastelussa (Financial Literacy of Finns Under Investigation), Kansantaloudellinen aikakauskirja 3/23

An aerial photograph of Hong Kong's skyline, showing a dense cluster of skyscrapers and buildings along the coast, with the Victoria Harbour in the background. The water is a deep blue, and several boats are visible. The sky is clear and blue.

# OECD/INFE 2023 International Survey of Adult Financial Literacy Results for Hong Kong

Dora Li

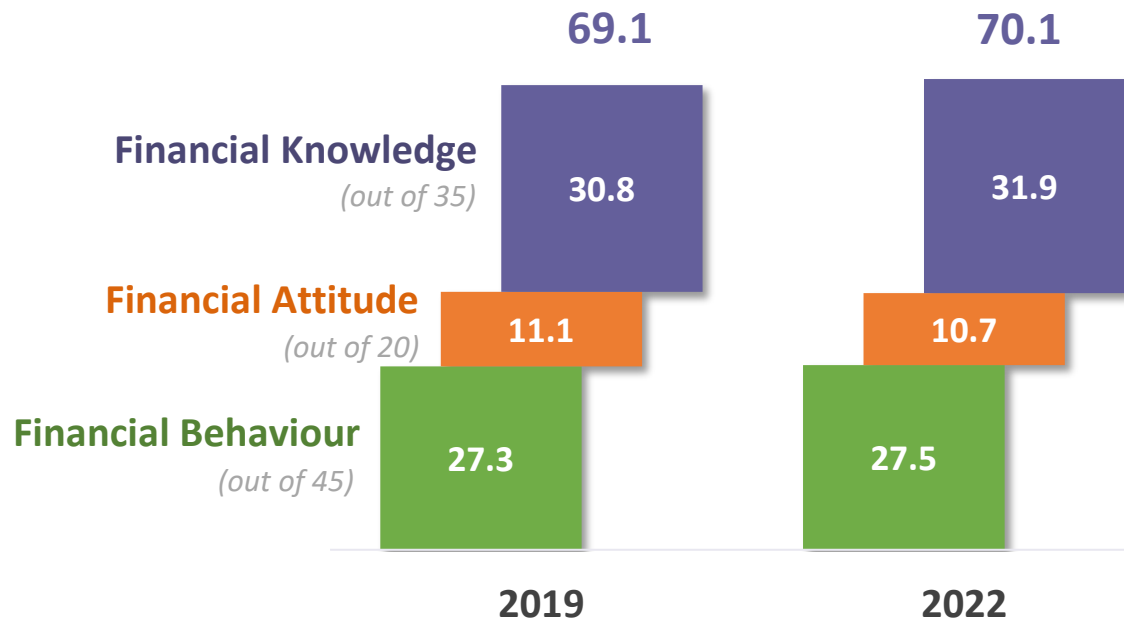
General Manager, Investor and Financial Education Council

17 November 2023



投資者及理財教育委員會  
Investor and Financial  
Education Council

## Financial Literacy Score (out of 100)



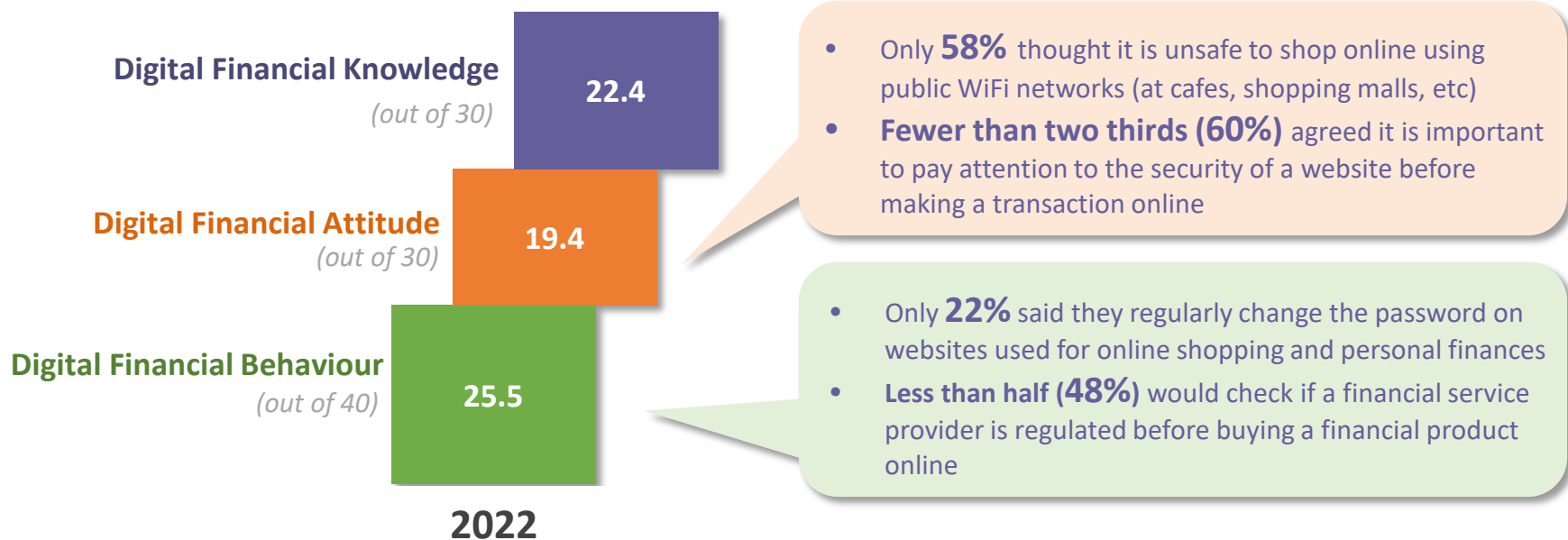
Lower scores among the young and elderly

Tertiary students  64.0

Retirees  62.2

# Digital Financial Literacy Score

(out of a total of 100)



# Thank you!

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BANCA D'ITALIA  
EUROSISTEMA

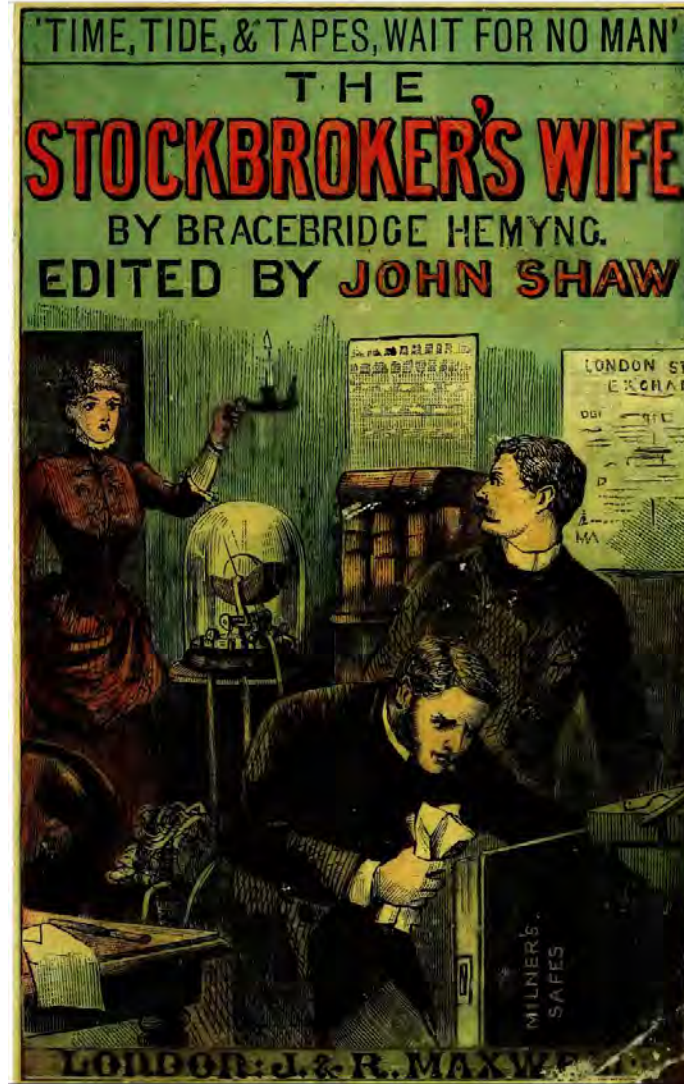
# Financial Literacy in Italy

Riccardo De Bonis

*Head of Financial Education Directorate  
Banca d'Italia*

OECD/INFE-Bank of Italy Symposium  
17 November 2023 Rome, Italy

# Financial education began at the end of the 19° century with the democratization of finance



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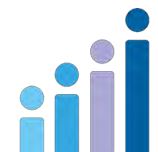
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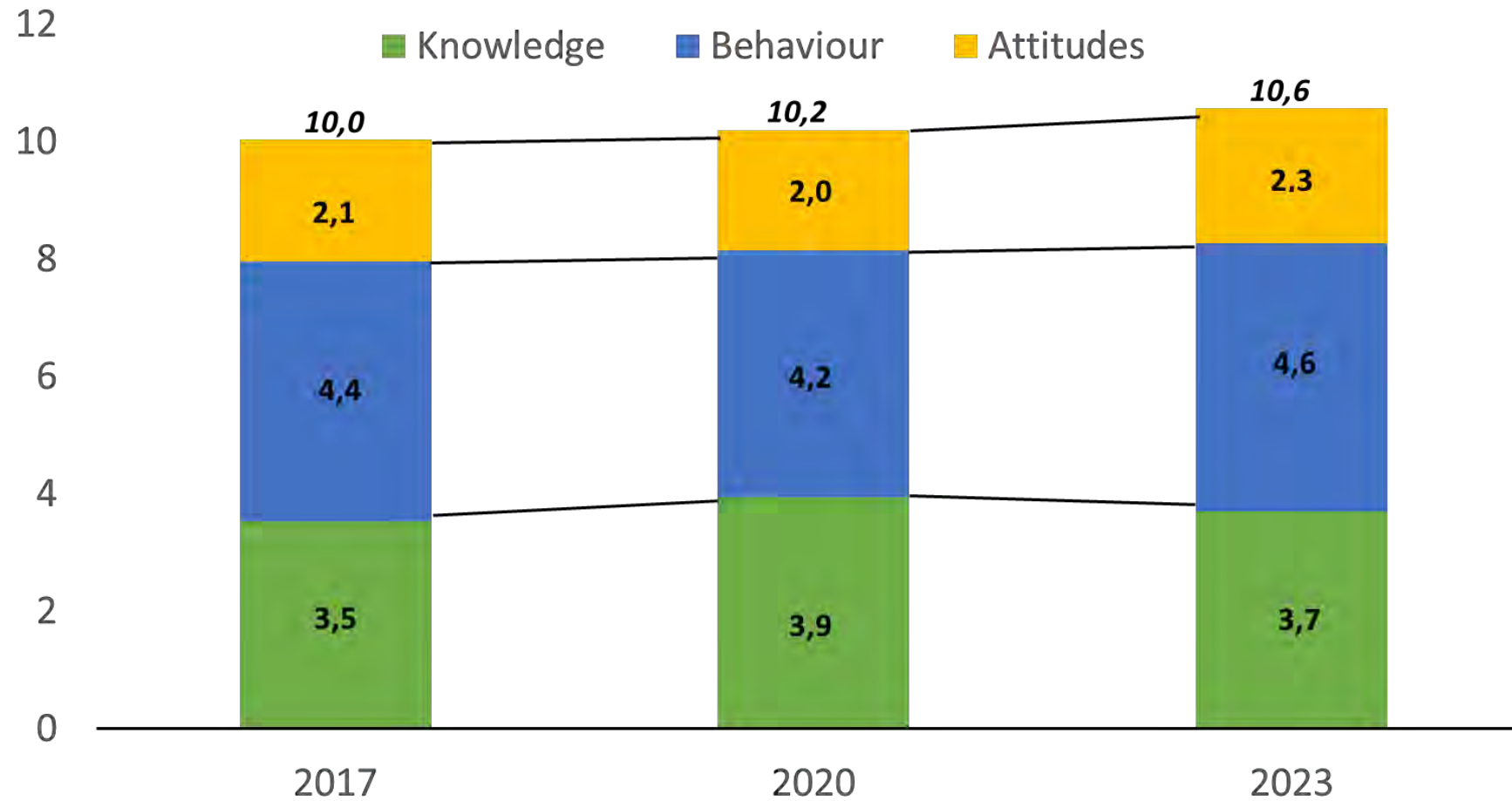
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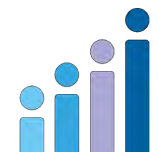
# Financial literacy is increasing in Italy



Note: Average levels. The total score ranges from 0 to 20.

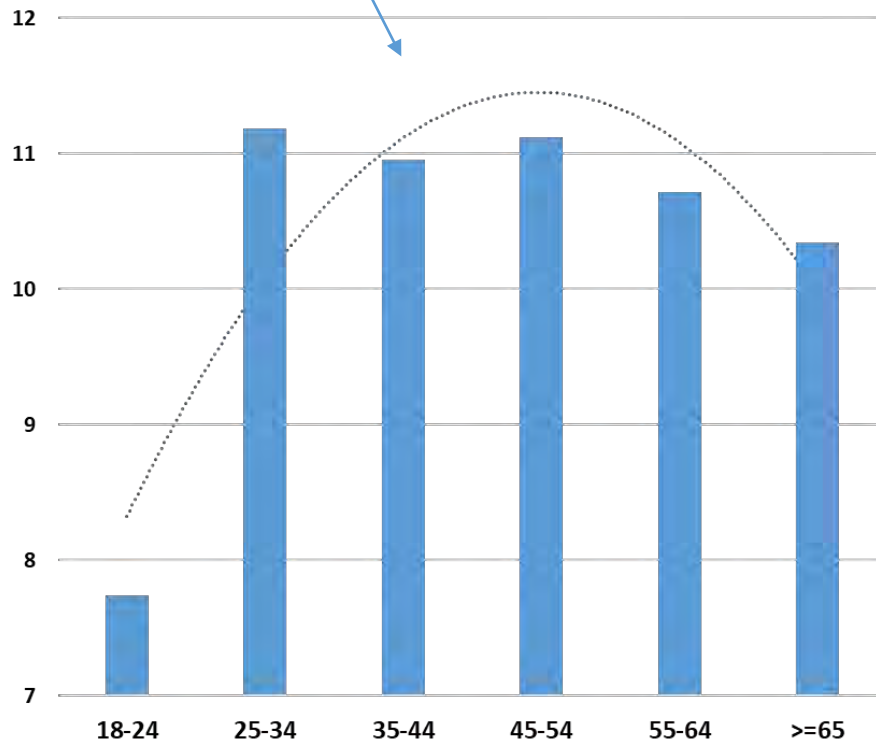
Knowledge: 0-7; Behaviour: 0-9; Attitudes: 0-4.

Source: [Bank of Italy - Financial literacy of Italian adults \(bancaditalia.it\)](https://www.bancaditalia.it/it/temi/educazione-finanziaria)

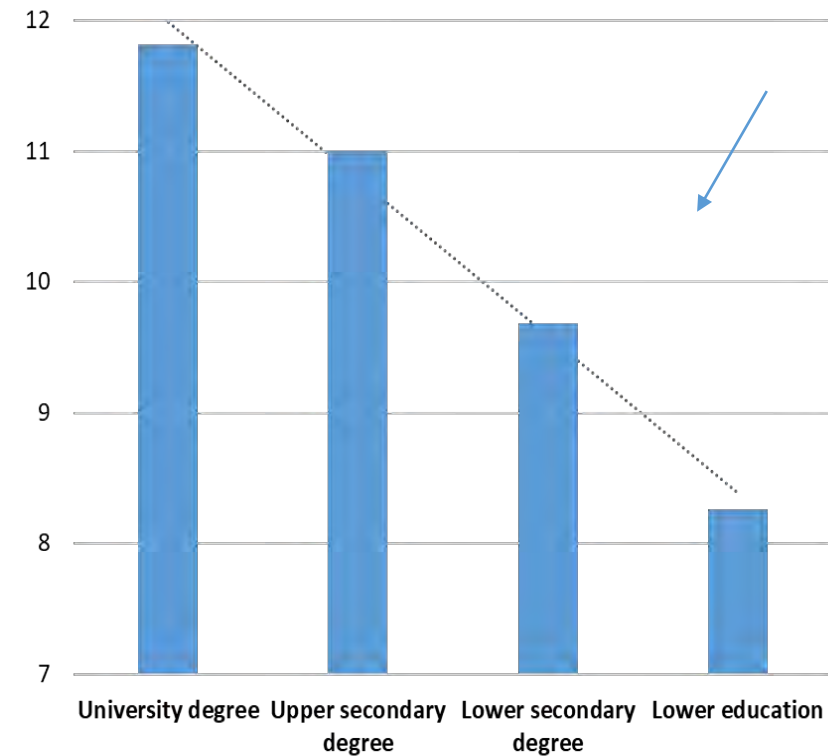


# Financial literacy is linked to age and education

40% of the sample aged 55+

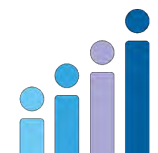


18.5% of the sample hold a university degree  
33% hold a lower secondary diploma

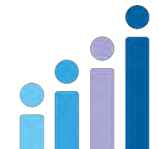
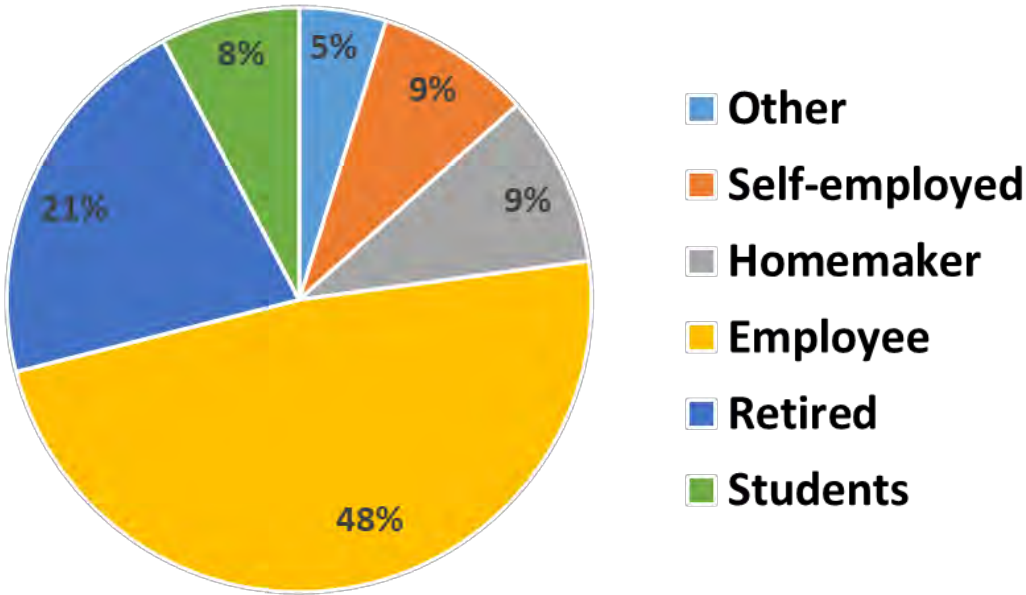
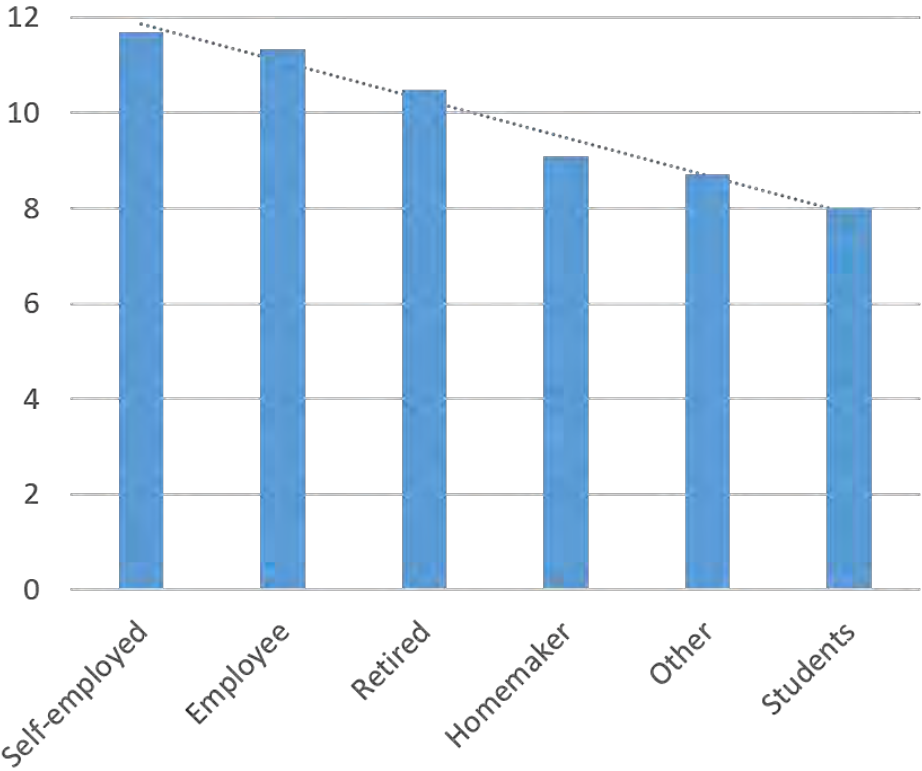


Upper secondary Lower secondary

[Bank of Italy - Financial literacy of Italian adults \(bancaditalia.it\)](http://bancaditalia.it)

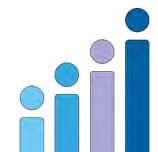


# Financial literacy is also linked to occupational status



# Key messages

- Financial literacy is increasing but Italy still lags behind by international standards
- The main determinants of financial literacy are education and age
- Educational levels are still low in Italy
- The Italian population is aging fast
- Moreover, participation in the labor market is low
- But Italians are not over-confident: they are conscious of their financial ignorance
- Italians make prudent financial choices, as shown by the low ratio of household debt to disposable income



# Session 3

- Tommaso Agasisti, Professor of Public Management, Politecnico of Milan and Associate Dean, International at Politecnico of Milan Graduate School of Management
- Veronica Frisancho, Chief Economist, CAF - Development Bank of Latin America (remote)
- Tabea Bucher-Könen, University of Mannheim and Max Planck Institute, Germany
- Kristof De Witte, Full Professor, Education Economics and Political Economy, Faculty of Economics and Business, KU Leuven, Belgium

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# DISPARITIES IN FINANCIAL LITERACY, PENSION PLANNING, AND SAVING BEHAVIOR

Tabea Bucher-Koenen

*University of Mannheim and ZEW*

**Joint work with**

Andreas Hackethal, Johannes Kasinger, Christine Laudenbach

Bundesbank Conference on Household Finance, Frankfurt, 20.09.23

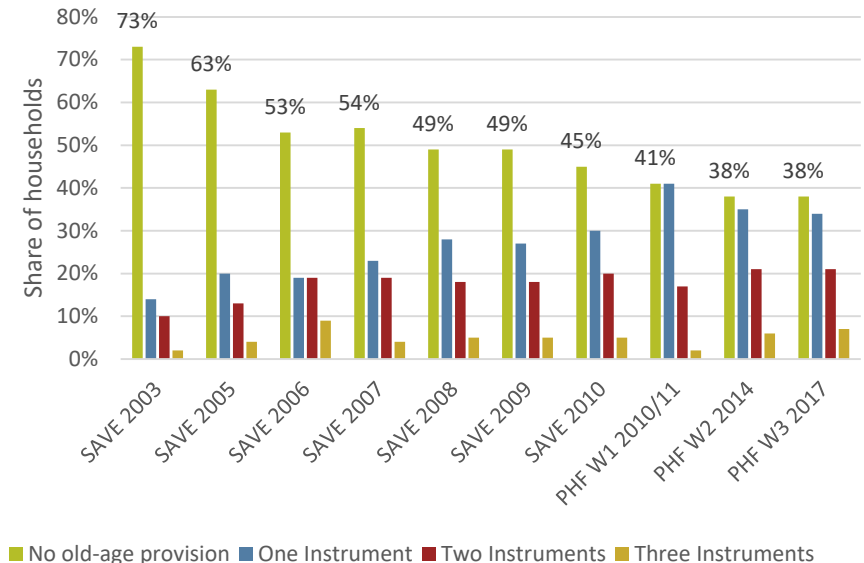


# MOTIVATION

## Recent trends in pensions:

- (1) Shift in responsibility for retirement income to the individual level
- (2) Increased complexity due to pension income from multiple sources

- Pension planning starts with **assessing the status quo** of pension claims, i.e. the retirement income individuals can expect given their current pension plans.
- Determining this status-quo may be a difficult task in a multi-pillar pension system.
- Digitalization is a way to make pension information more accessible.



Share of German households without supplementary old-age provision and by number of additional pensions

# THIS PAPER IN A NUTSHELL

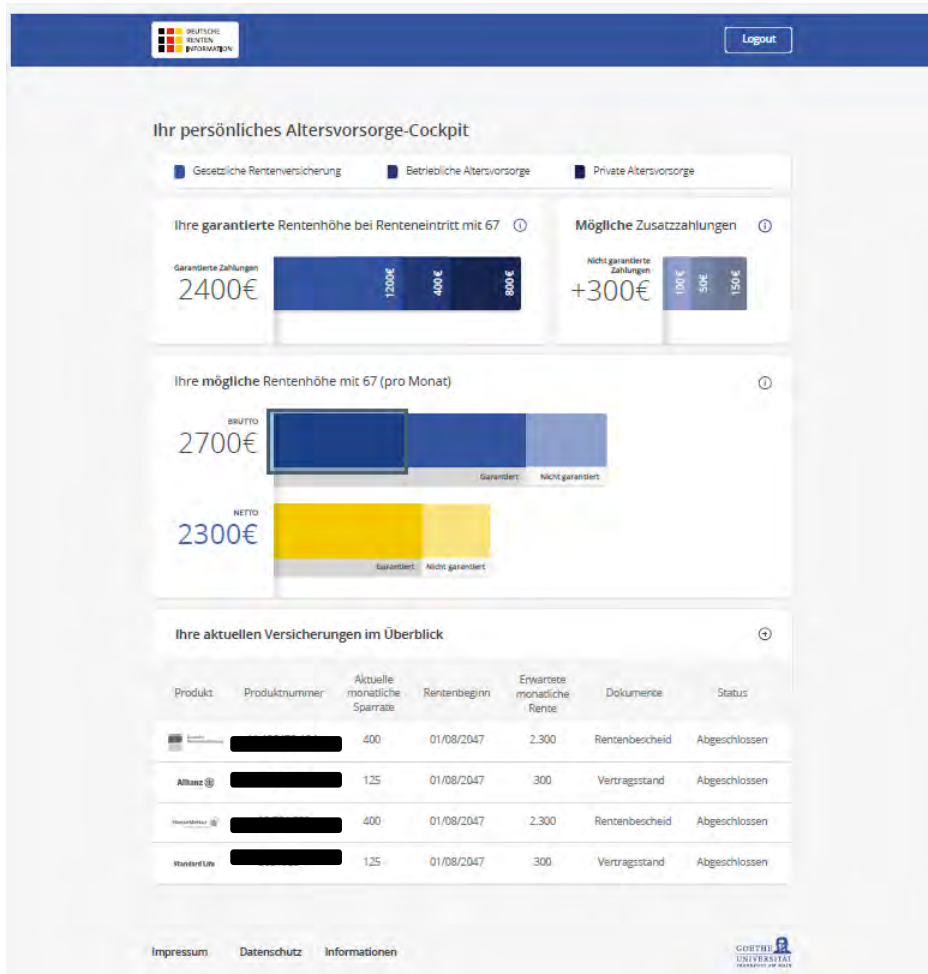
**Goal:** Test the effect of simplifying pension information on retirement planning and saving decisions, in particular for individuals with low financial literacy.

**Treatment:** *Pension Dashboard* – digital application that provides field study participants with an aggregated overview of their accumulated future pension claims across all three pillars of the pension system – public, occupational, and private.

**Approach:** *Field experiment* in cooperation with two large German banks. Combination of unique data from up to three surveys, pension contract data, and administrative panel data on account balances and transactions pre- and post experiment from the cooperating banks.

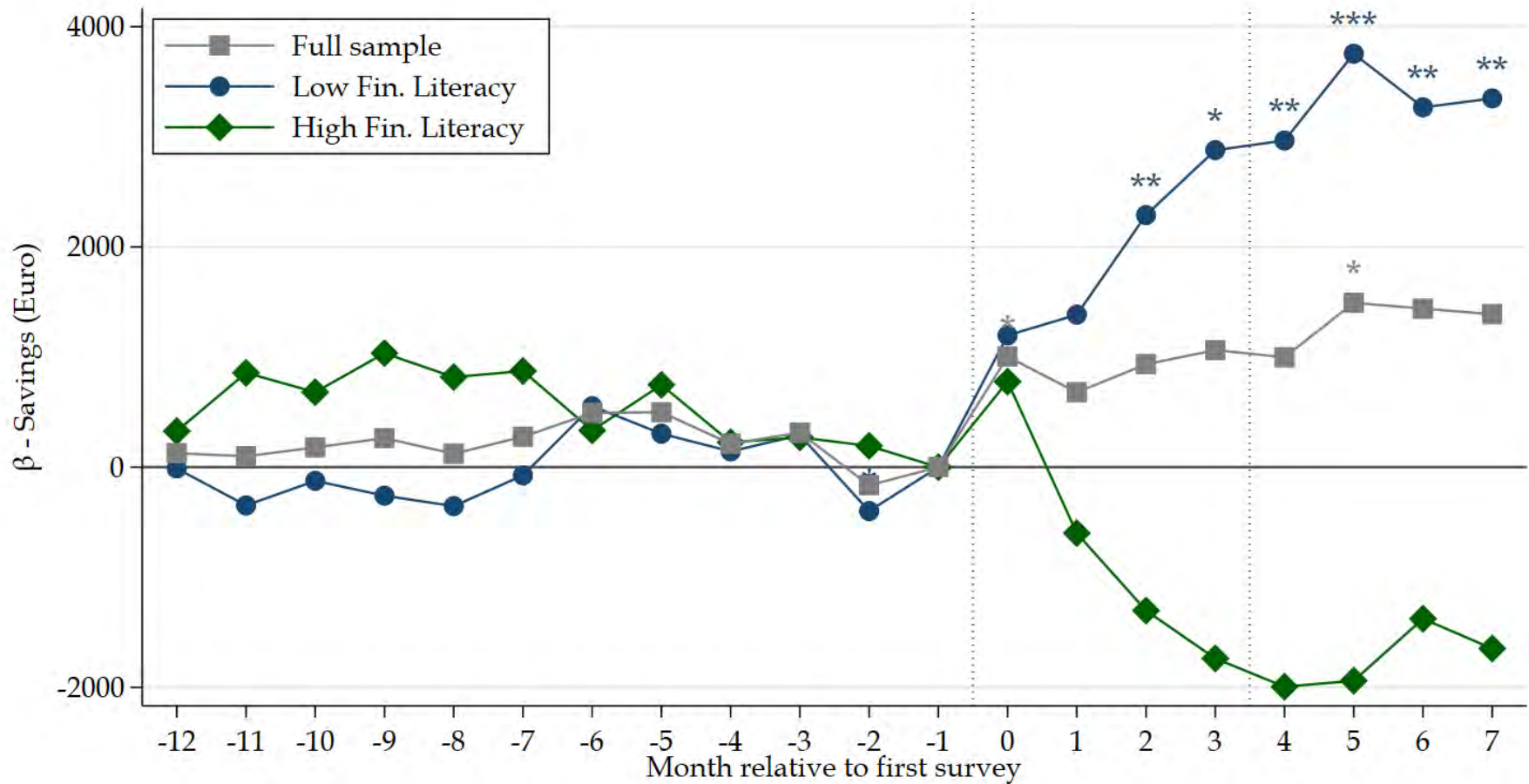
**Main result:** Access to the dashboard decreases self-reported uncertainty about future retirement income and *increases savings activity*, in particular among the low financially literate.

# THE FIELD EXPERIMENT - TREATMENT



- ✓ Personalized information about future pension income from **all three pillars: public, private, occupational**
- ✓ Aggregated overview of all accumulated future pension claims (**gross and net** of taxes)
- ✓ Presentation of **guaranteed pension** and possible **additional income** from profit participation / interest payments / pension increases
- ✓ **Compilation of existing information**
- ✓ Participants uploaded on average 4.5 products
- ✓ Average projected retirement income 3,287 € (std. 1,985 €)
- ✓ Effort: about 24 min per dashboard

# TREATMENT EFFECTS OVER TIME



# CONCLUSION

## Results

1. Access to the pension dashboard decreases uncertainty about future retirement income and increases savings and wealth.
2. Effects are particularly strong among individuals with low financial literacy.

## Caveat “External validity”

- Participants have high financial literacy / complex pension portfolios / high wealth => groups which have a high propensity to plan.
- *Reaching individuals with low financial literacy / low propensity to plan is a major challenge.*

## Conclusion

- Providing better pension information has the potential to mitigate retirement planning disparities.
- More research is necessary in order to understand how to reach hard-to-reach-groups.

ZEW



## Reference:

Bucher-Koenen, Tabea, Andreas Hackethal, Johannes Kasinger und Christine Laudenbach (2022), [Disparities in Financial Literacy, Pension Planning, and Saving Behavior](#), ZEW Discussion Paper No. 22-037, Mannheim

## Contact:

Tabea.bucher-koenen@zew.de



**POLITECNICO**  
MILANO 1863

# Measuring the effectiveness of financial education programs - evidence from recent experiments in schools and universities

Tommaso **Agasisti**

Politecnico di Milano School of Management

[tommaso.agasisti@polimi.it](mailto:tommaso.agasisti@polimi.it)

# Agenda

- ▶ Why evaluate financial education interventions
- ▶ A reference framework
- ▶ Experiments conducted between 2019 and 2021
- ▶ Final thoughts on the effectiveness of financial education interventions





# Why evaluate financial education interventions

- ▶ Proliferation of financial education interventions at all levels + political and institutional attention to the topic - different specific objectives, contents and formats



Comitato per la programmazione e il coordinamento delle attività di educazione finanziaria



- ▶ Multiplying efforts and activities is necessary... but not sufficient
  - ▶ Evidence-based education to concentrate efforts and resources where interventions are most effective

# Theoretical framework

- ▶ Evaluating the effectiveness of financial education interventions – essential elements



What is the process that leads to the best "educational" results in the acquisition of financial knowledge

Mechanisms:

- Prior knowledge (and environment)
- Reasons
- Experiences

What are the main results of Financial Education interventions that can be measured in the short term?

Develop indicators for:

- Knowledge and skills
- Attitudes
- Behaviors

What are the long-term impacts of the interventions?

Intermediate impacts  
Long-term effects

# Experiments between 2019 and 2022

Between 2019 and 2022, a series of experiments were carried out aimed at evaluating the effectiveness of some financial education interventions

EOA – Business Economics BA students (@PoliMi)

High School Manzoni Milano

Adults working at a university – admin staff (@PoliMi)

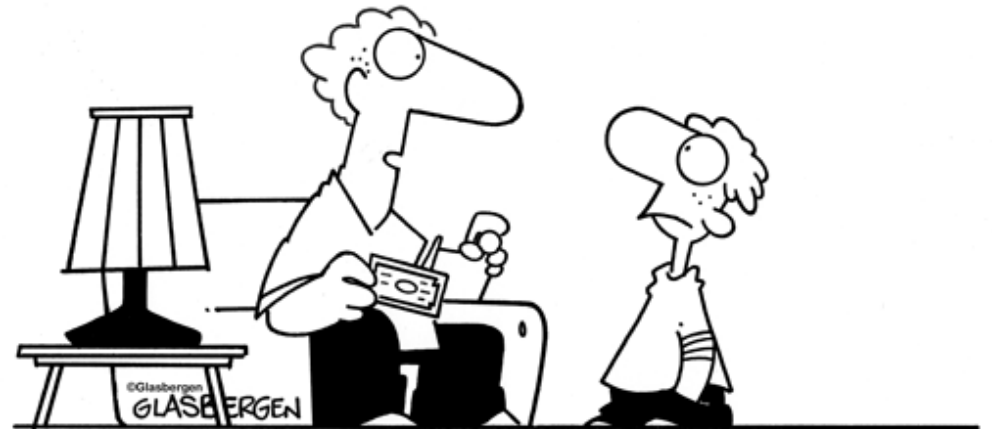
Escape Room for high school students (EUFIN)

Case Study for university students (EUFIN)

Booklets for primary and middle students (Bank of Italy)

# Experiments between 2019 and 2022

- ▶ The implementation of small-scale experiments allows - if adequately designed - to obtain useful evidence for reflecting on effective teaching elements
- ▶ Elements to take into consideration
  - ▶ Specific training objectives and test structure (pre and post)
  - ▶ Teaching methods (duration, teacher training, materials available for content, etc.)
  - ▶ Characteristics of the students involved in the experimentation
  - ▶ Size of the analysis sample



**“I’m giving you \$10 a week allowance. After I deduct part for taxes, your college, your children’s college and your retirement, you get to keep 25¢.”**

# A syntethic map of findings

N	Initiative	Students	# people involved	Intervention	Effect (s.d.)
1	EOA – Business Economics BA students	Politecnico di Milano 1° year students	Treated: 207 Control: 158	1 Class, 3h	NS
2	Liceo Manzoni Milano	Grade 11, Linguistic Liceo	Treated: 67 Control: 108	5 Classes * 2h	0.874***
3	Welfare service for adults	Admin staff @PoliMi	Treated: 66 Control: 70	5 Classes * 3h	0.580***
4	Escape-Room for high school students	11 schools, grades 11-13	Treated: 490 Control: 531	Individual game online (extracurricular)	0.123***
5	Case Study per studenti universitari (EUFIN)	Economics and Management Engineering BA and MA students	Treated: 41 Control: 52	1 Class, 3h	NS
6	Booklet for primary and middle students	Primary and middle schools (30 schools, 3 cities in Italy)	Treated: 1,055 Control: 483	Booklet + training for teachers + classes (A) and booklet alone (B)	0.54*** 0.66***

# Concluding remarks

- ▶ A set of experimental evidence on different types of interventions
  - ▶ Positive effects, in relation to intensity of intervention
- ▶ Evaluation as an essential element to understand whether intervention can/should be "scaled up" - focusing energy on more promising programs
  - ▶ A "system" need to significantly improve skills
- ▶ Broadening the horizon of evaluation - from "skills" to "behaviors"
  - ▶ Develop a Behavioral Analysis Laboratory
- ▶ The next project: evaluation of the effectiveness of Bank of Italy materials for primary and lower secondary school students
  - ▶ Tools and methods for effective transmission of content in the early stages of education

# Evaluating the impact of financial education programmes

Veronica Frisancho (CAF)

OECD-Bank of Italy Symposium on Financial Literacy and  
Empowerment: Data, Policies and Evaluation  
November, 2023

# Financial Education Programmes Targeting Youth

- Key policy questions when targeting youth:
  - Are these programmes effective in the short run? And if so, when?
  - Are their impacts sustained over time?
  - Are there spillover effects on adults around youth?



# Impact of Fin Ed in Schools on Youth

- These programmes effectively improve financial literacy, more so when introduced as mandatory content (0.27 SD vs 0.07 SD)
- Modest immediate changes in downstream financial behavior (financial autonomy and financial savviness)
- Sustained effect on credit outcomes: reduction in arrears

# Impact of Fin Ed in Schools on Adults

- Teachers
  - Knowledge gains even greater than those experienced by students
  - Increased likelihood to save and savings balances
  - No effect on credit outcomes
- Parents
  - HTE: Improved credit outcomes among parents from poorer households (lower default rates and higher credit scores and debt levels)

# Fin Ed for Youth Outside the School Setting

- Low take-up of traditional lecture programmes
- Experiential learning seems more promising:
  - A mobile-app-based behavioral intervention centered around a budget recording tool was effective to improve knowledge and change behavior
  - HTE by previous exposure to Fin Ed shows that the app-based behavioral intervention worked as a substitute to school-based Fin Ed

# Thank you

vfrisancho@caf.com

<https://veronicafrisancho.net/>

# Evaluating the impact of financial education programs

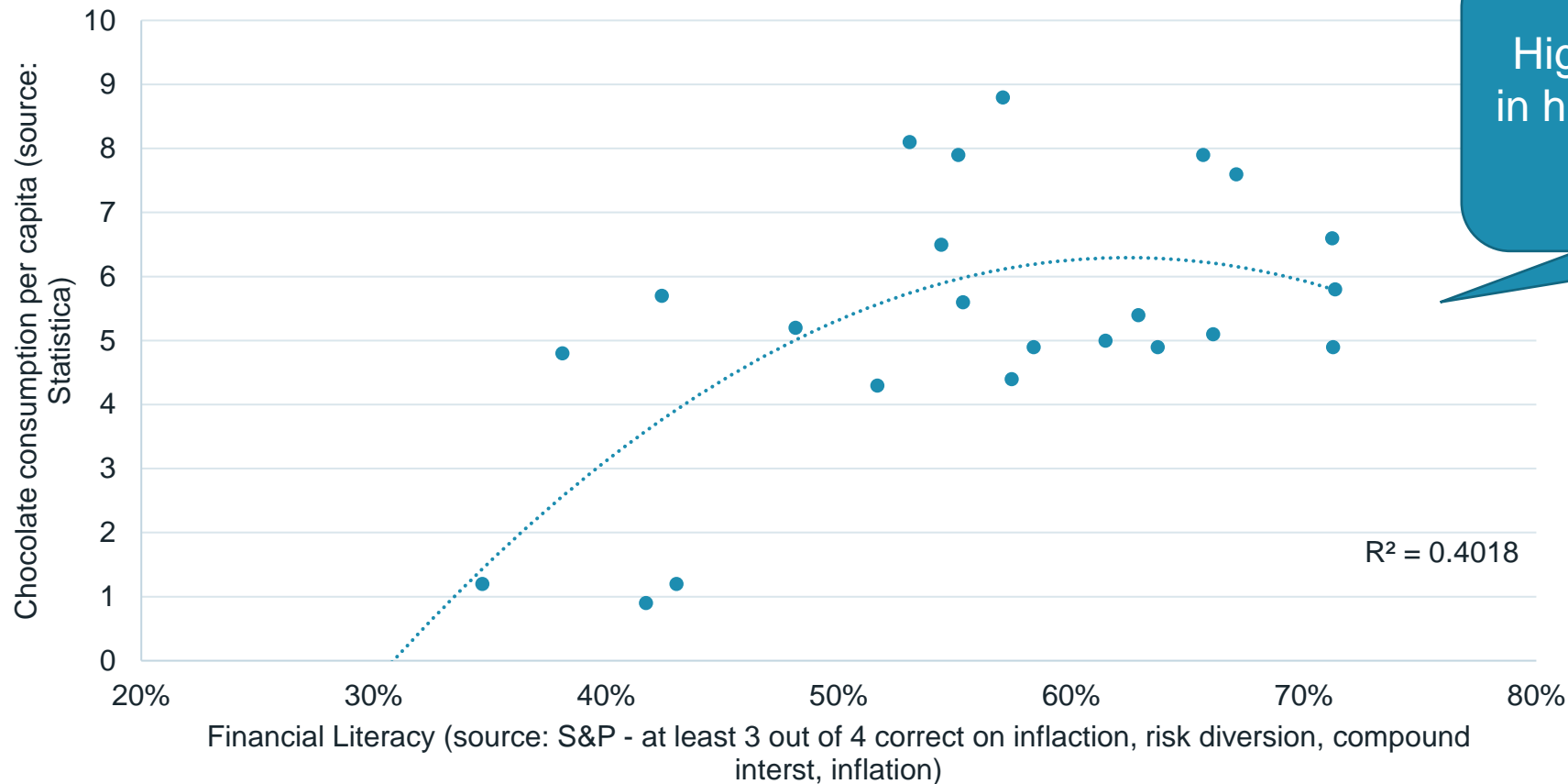
Evidence from randomized controlled trials in financial literacy education.

Kristof De Witte

Leuven Economics of Education Research - KU Leuven

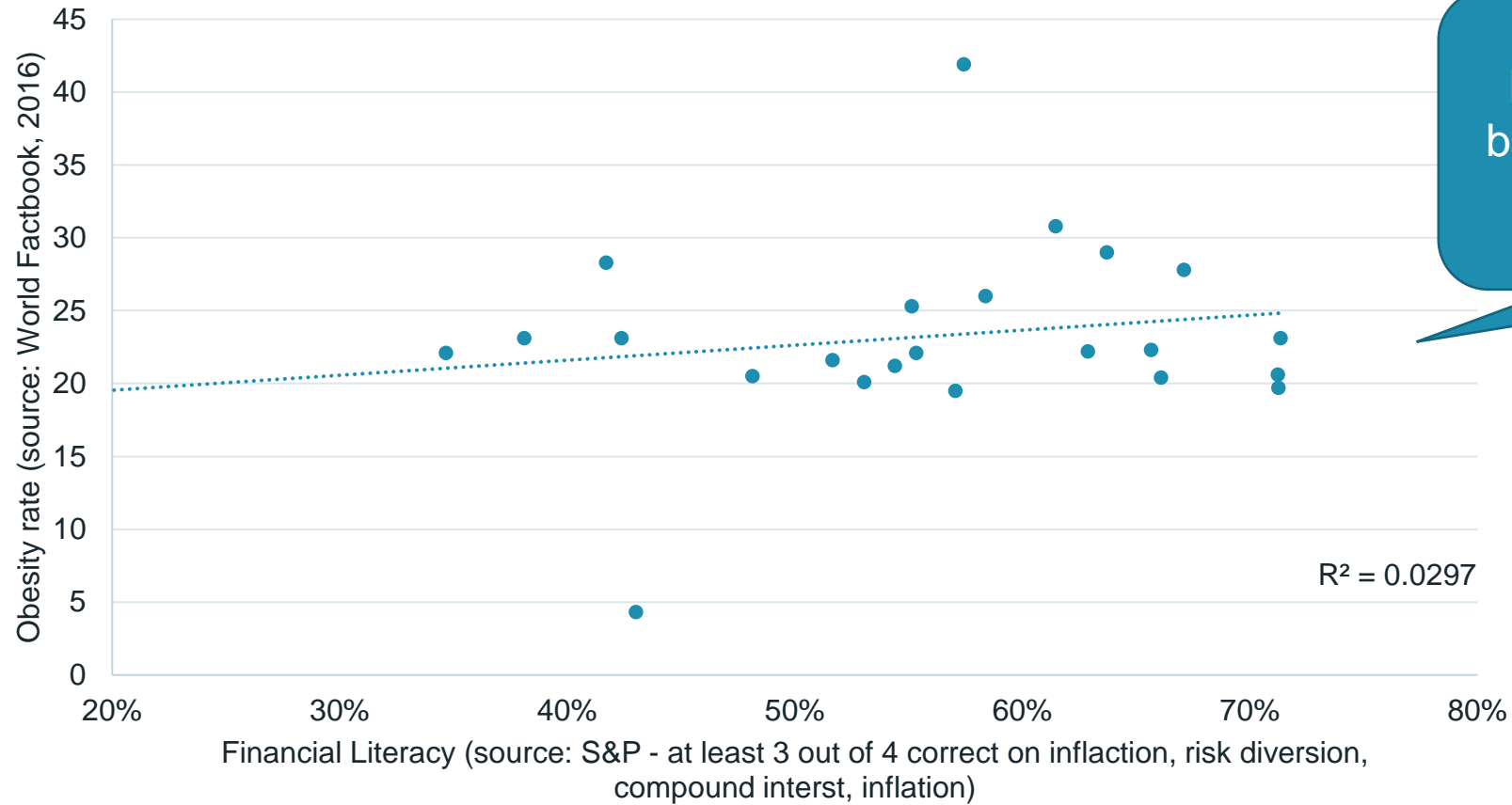
Rome 17-11-2023 - OECD-Bank of Italy Symposium on Financial Literacy and Empowerment

# The broader consequences of financial literacy



Higher financial literacy results in higher chocolate consumption per capita

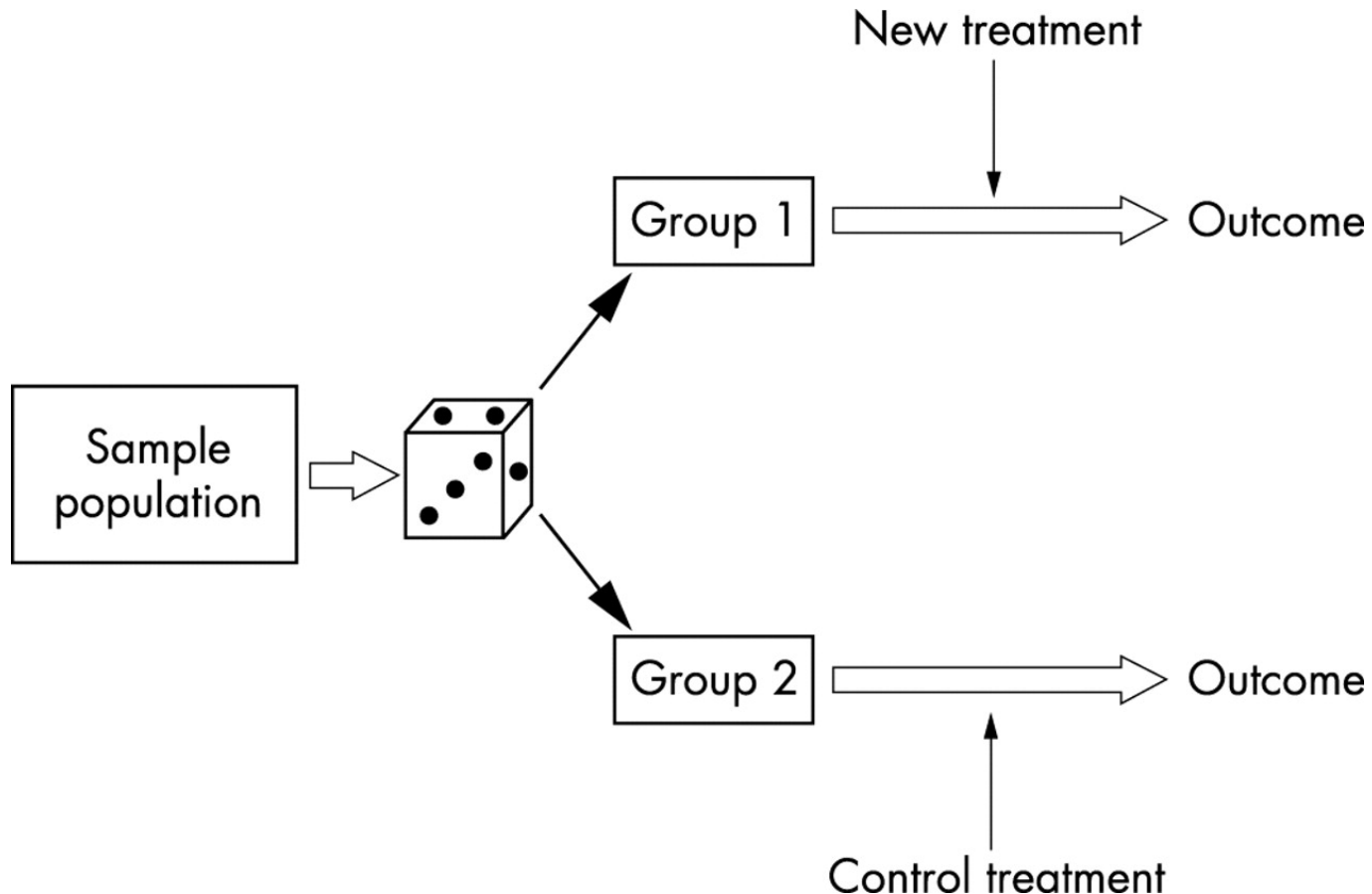
# The broader consequences of financial literacy



Higher financial literacy does barely result in higher obesity rates per capita

# Correlation $\neq$ causation

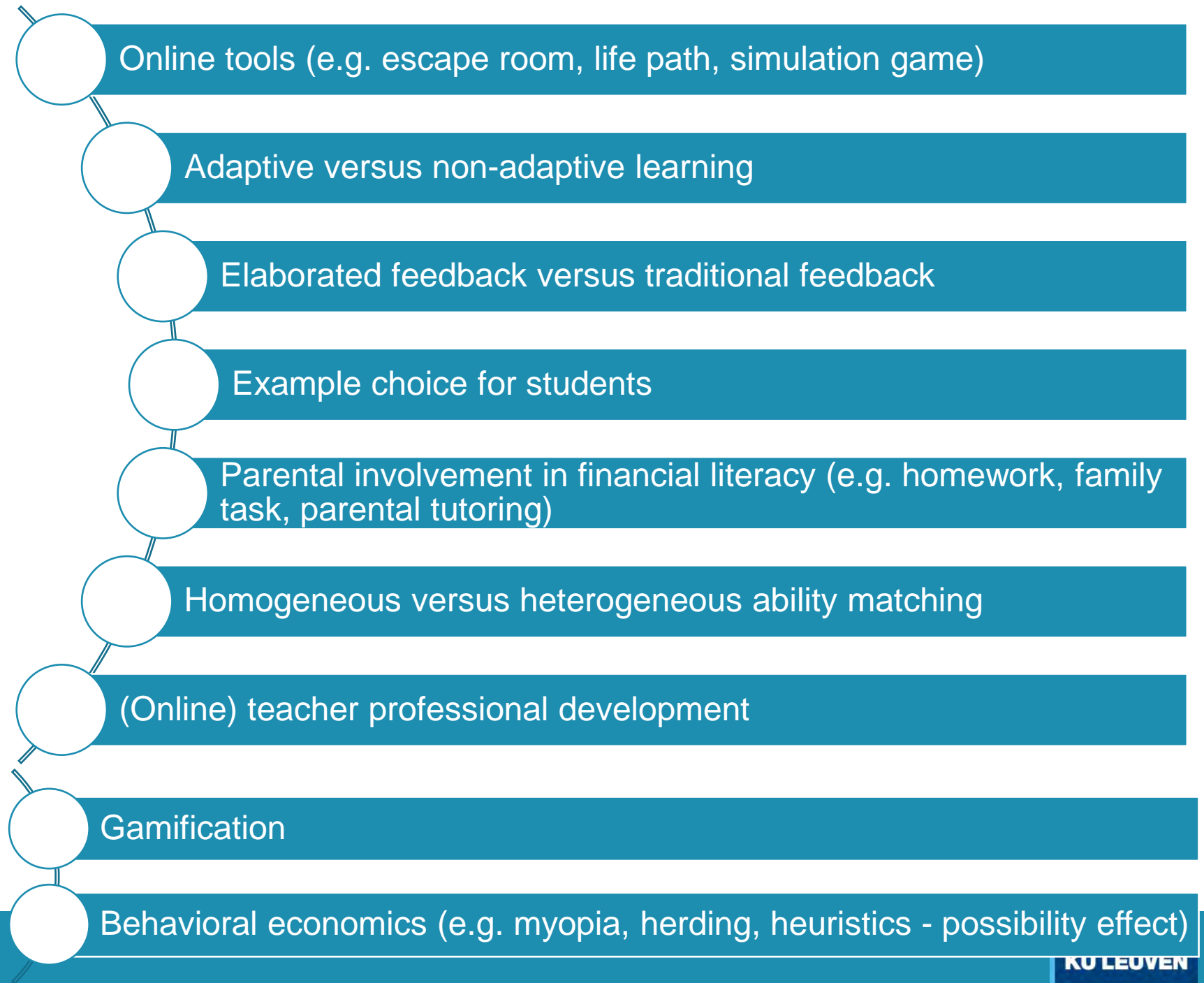
In line with the evidence-based education paradigm, using randomized controlled trials, we test on a small scale educational interventions before implementing them at a larger scale



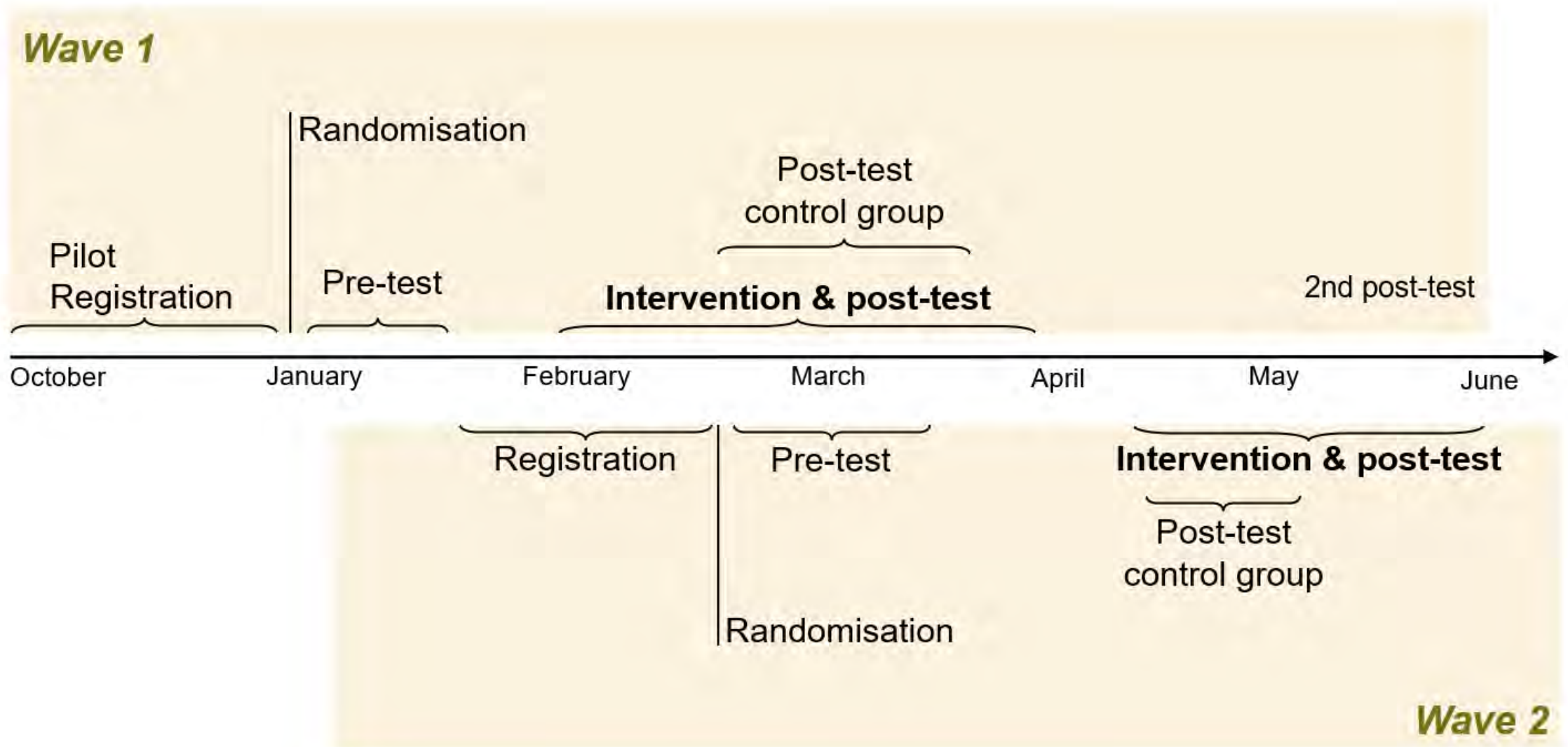


# My research

Focusing on financial literacy, we examine the causal impact of:



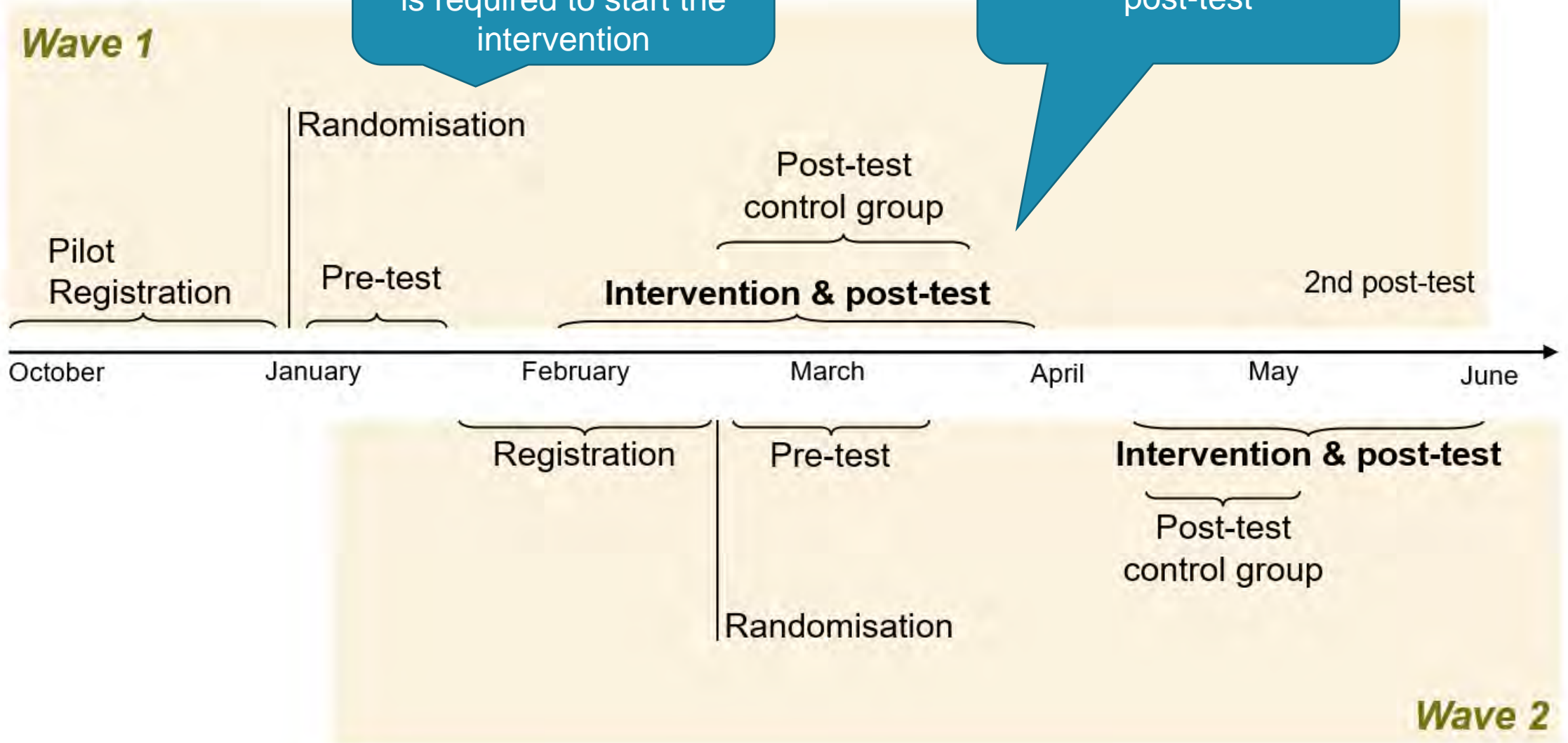
# The design



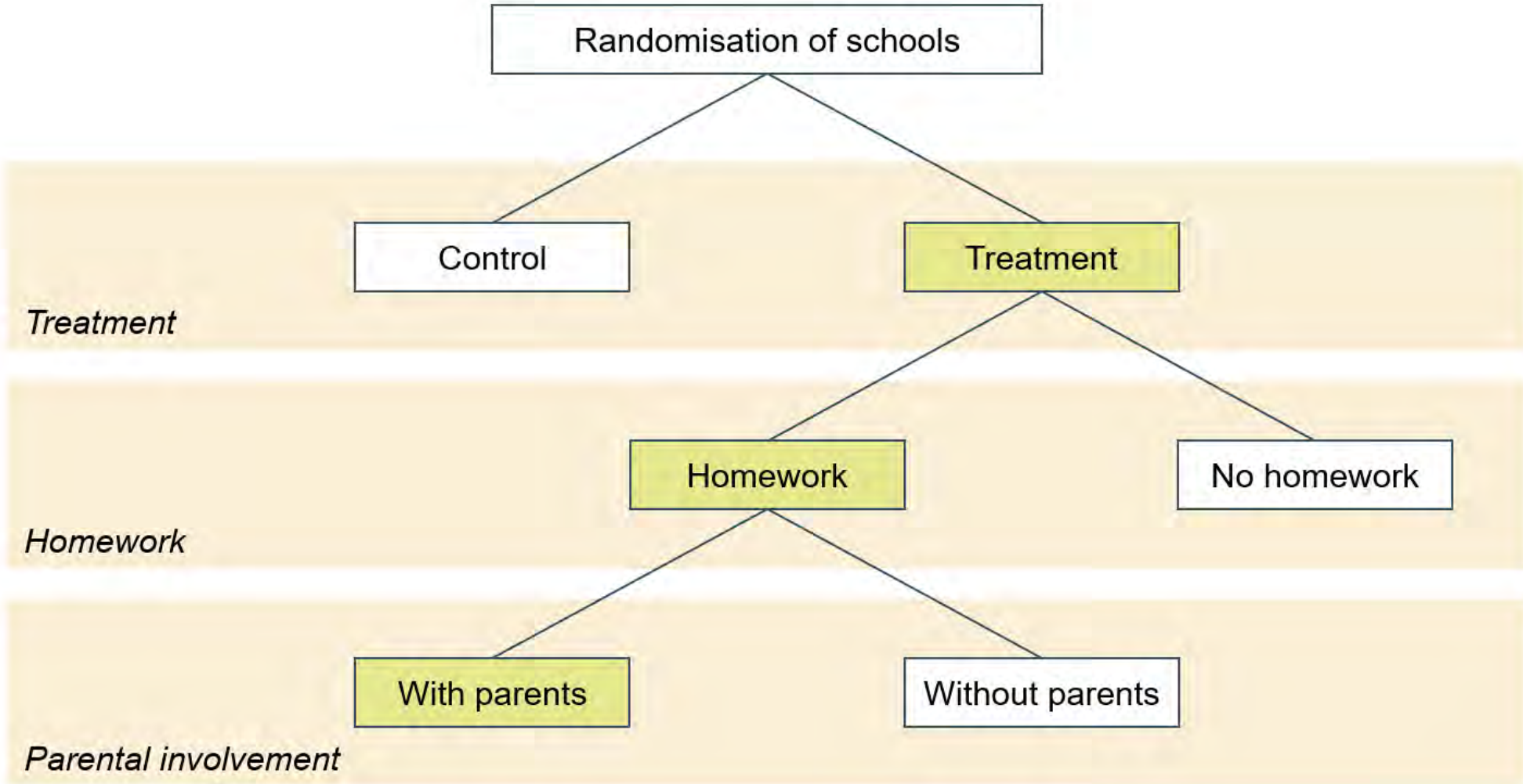
# The design

Tip: receive at the end of the pre-test a code that is required to start the intervention

Tip: provide incentive for post-test



# The design – Multiple treatment arms



# Example: family budget

Click on the holiday that you would like to do, together with a friend



Op safari in Tanzania



Op trektocht in Canada

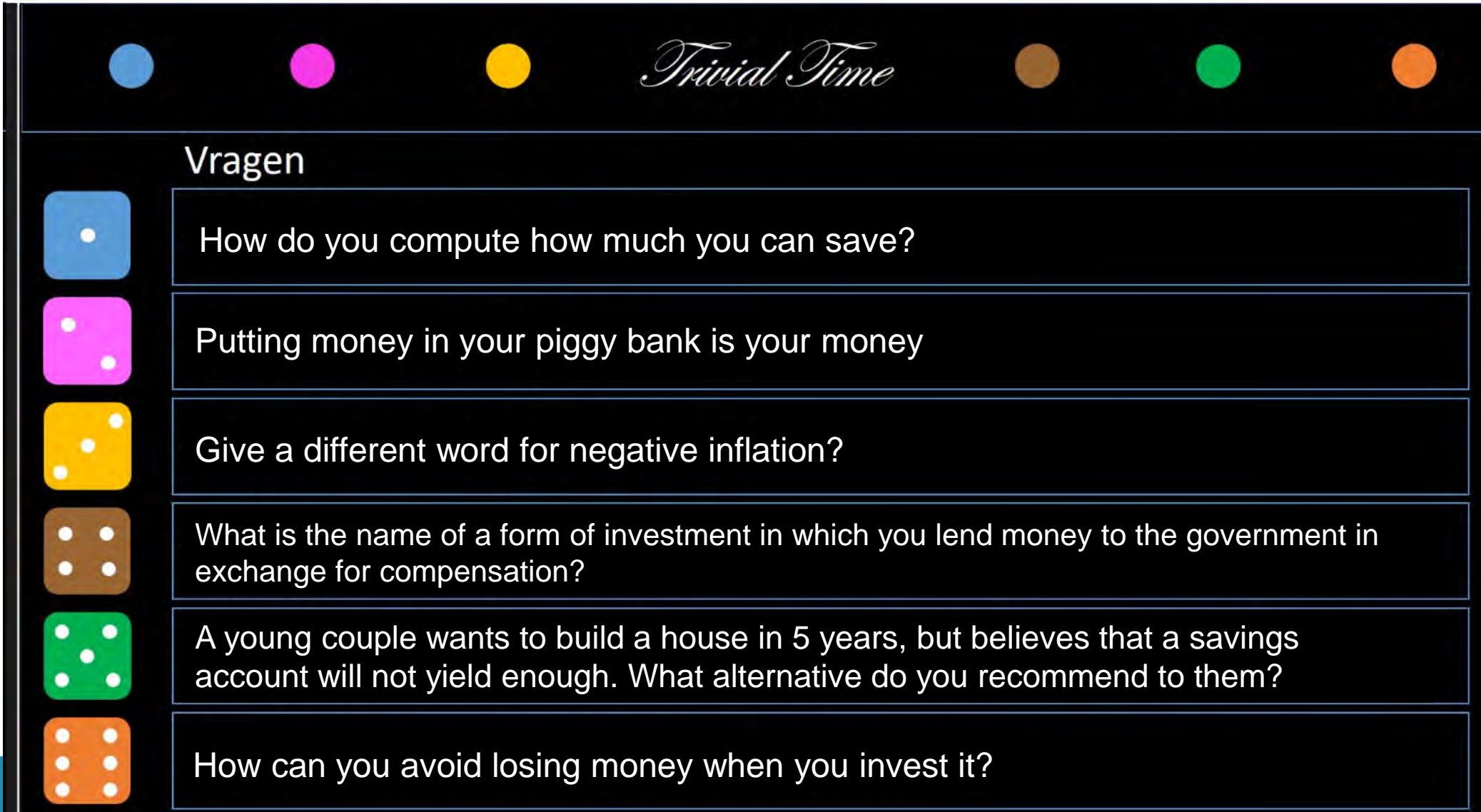


Op ontdekking in Peru



Op avontuur op Bora Bora

# Example: 'Trivial time' on family budget



The screenshot shows a game interface for 'Trivial Time'. At the top, the title 'Trivial Time' is written in a cursive font. Below the title, there are six colored circles: blue, pink, yellow, brown, green, and orange. The main area is titled 'Vragen' (Questions) and contains six questions, each preceded by a colored square icon with a specific number of dots (1, 2, 3, 4, 5, 6).

*Trivial Time*

Vragen

- How do you compute how much you can save?
- Putting money in your piggy bank is your money
- Give a different word for negative inflation?
- What is the name of a form of investment in which you lend money to the government in exchange for compensation?
- A young couple wants to build a house in 5 years, but believes that a savings account will not yield enough. What alternative do you recommend to them?
- How can you avoid losing money when you invest it?

# Example: Personal administration

☹️ Dat klopt. Maar je antwoord is niet helemaal volledig. Je stelt het ruilen of terugbrengen van je aankoop best niet te lang uit. Lees hiervoor het kasticket hiernaast en ga dan terug naar de vraag.

Ga terug

1 / 1 | 59%

Jules  
Ticket 02904600101020

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Pantalon Sportswear  
716744120010 = 45.99 €  
OPRICHTING CLUBKAART  
98005090101 = 0.00 €  
Total 85.98 €

Solden of niet, kleding die niet werd gedragen en niet werd versteld, kan binnen de maand omgeruild of terugbetaald worden na uw aankoop, op eenvoudig vertoon van uw kasticket (Uitgezonderd ondergoed)

www.jules.com  
klantendienst@jules.com

CARTE BANCAIRE  
A0000000043060  
MAESTRO  
le 15/02/19 a 10:48:32  
JULES M1020  
3000 LEUVEN  
6769077  
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# Example: Sample choice on gross / net wage




Je mag zelf kiezen welk onderwerp je wil. Klik op een afbeelding om verder te gaan.




# Example: Digital urban trail on role of government

Goed gedaan. Je hebt de 10 cijfers van het treinnummer helemaal juist ingevuld.  
Het juiste nummer was 2957613433. Schrijf dit nummer op zodat je volgende les meteen aan de Urban Trail kunt beginnen.



Klik dan op 'Ga rechtdoor'.



Wat is een wettelijk minimumloon?



het laagste loon dat een werkgever mag uitbetalen



het laagste loon dat iemand verdient



het loon van een jonge werknemer



# Knowing more?

- [www.feb.kuleuven.be/LEER](http://www.feb.kuleuven.be/LEER)
- [www.financiele-geletterdheid.org](http://www.financiele-geletterdheid.org)

## Upcoming conference (see [www.feb.kuleuven.be/LEER](http://www.feb.kuleuven.be/LEER))

### *Financial literacy, resilience and inclusion*

*High-level conference*

20 February 2024  
Brussels - Web stream available



#FinLit

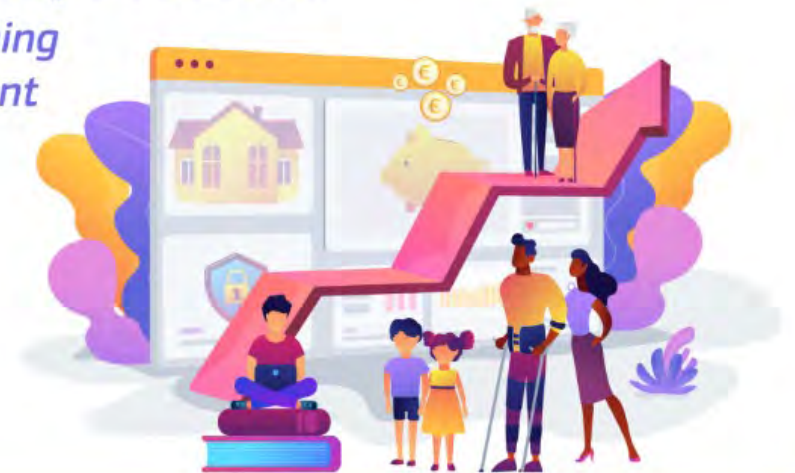


### *Financial literacy research*

*Pathways to becoming financially competent*

*Academic Conference*

21 February 2024  
Brussels



#FinLit

KU LEUVEN



# Evaluating the impact of financial education programs

Evidence from randomized controlled trials in financial literacy education.

Kristof De Witte

Leuven Economics of Education Research - KU Leuven

Rome 17-11-2023 - OECD-Bank of Italy Symposium on Financial Literacy and Empowerment