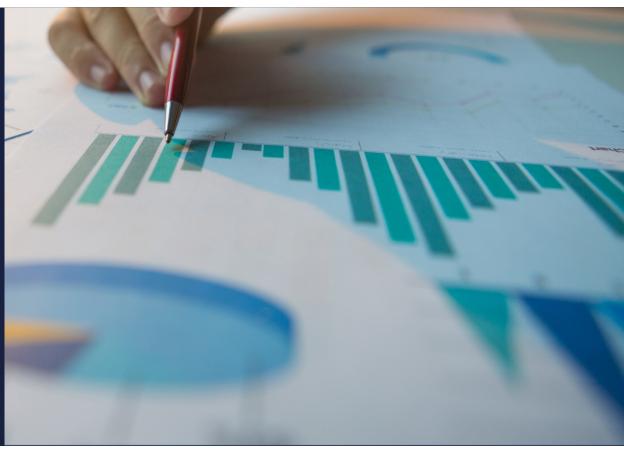
# Financial Literacy and Preparation for Retirement

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### Introduction

- Increasingly challenging financial and economic landscape in older age
  - DB → DC pensions
  - More complex financial products
- Financial literacy a key component of human capital (Delavande et al., 2008)
- Defined as 'knowledge of fundamental financial concepts and the ability to do simple financial calculations' (Lusardi and Mitchell, 2011; 510)



#### Introduction

- Correlated with numeracy, but the correlation with other aspects of cognition is low (Smith et al., 2010; Skagerlund et al., 2018)
- There are concerns over levels of financial literacy, and distribution across the population (OECD, 2017)



### Previous Literature I

- Financial literacy varies by gender, SES (Lusardi and Mitchell, 2011; Klapper et al., 2016; van Rooij et al., 2012)
- But differences apparent even in relatively homogenous groups (e.g., Clark et al., 2017)
- Similar patterns evident in older populations (Christelis *et al.*, 2017; Li *et al.*, 2017; Lusardi *et al.*, 2014)



### **Previous Literature II**

- Financial literacy associated with financial outcomes (wealth, debt, etc.) in older age (Banks and Oldfield, 2007; Christelis et al., 2010; Smith et al., 2010)
- Even when considering outcomes that are clearly 'suboptimal' (Agarwal and Mazunder, 2013)
- Retirement planning a key mechanism (Lusardi and Mitchell, 2008; van Rooij et al., 2012)
- But difficult to identify causal effects



### **Research Questions**

- How does financial literacy vary across the preretirement population?
- Is financial literacy associated with financial outcomes in this population?
  - Outcomes = wealth, financial stress, retirement preparedness (pension cover, retirement income expectations)



### Sources of Income in Retirement in Ireland

- Three-pillar system
  - Flat-rate state pension does not provide a high level of pension adequacy (Nivakoski and Barrett, 2017)
  - Concern over low rates of supplementary pension cover (cso, 2016)
  - Draw down of asset wealth another (potential) source of income in retirement (Nivakoski and Barrett, 2017)



## The Irish Longitudinal Study on Ageing (TILDA)

- Nationally-representative longitudinal study of the over 50s in Ireland
  - Harmonised with SHARE, ELSA, HRS
- Extensive information on economic, social and health dimensions of life among over 50s
- At baseline (2010), 8,504 over 50s (and partners of any age) participated
- Further waves in 2012, 2014, 2016 and 2018, with 6<sup>th</sup> wave planned for 2020



### Methods

- Focus on pre-retirement sample (n=1,346)
- Estimate multivariate models of financial outcomes
- Three broad sets of outcomes:
  - Wealth
  - Financial stress
  - Preparation for retirement



#### Data

### Measuring financial literacy in TILDA (wave 3)

- If the chance of getting a disease is 10 percent, how many people out of 1,000 would be expected to get the disease?
- If 5 people all have the winning numbers in the lottery and the prize is two million euro, how much will each of them get?
  - If 1 and/or 2 correct, subsequently asked:
- Let's say you have €200 in a savings account. The account earns 10 percent interest per year. How much would you have in the account at the end of two years?



## **Descriptive Statistics** Financial Literacy Question Responses

	% correct	% incorrect	% don't know	% refused
Q1	88.9	8.3	2.4	0.4
Q2	72.7	21.8	5.1	0.4
Q3	17.7	80.0	2.3	-

16.3 per cent answered all three questions correctly

Nearly two-thirds of those who get Q3 incorrect answer as in terms of a simple interest calculation

Average score is 1.8 (median 2; range 0-3)



# Descriptive Statistics Financial Literacy and Individual Characteristics

	Financial Literacy Score
All pre-retired	1.79
Men	1.91
Women	1.65
Age 50-64	1.83
Age 65-74	1.75
Age 75+	1.16
Primary level education	1.31
Secondary level education	1.77
Third level education	2.06

## Descriptive Statistics Financial Outcomes

	%	Mean	Median
Net Financial Wealth	91.1	120,052	31,879
Net Housing Wealth	92.3	136,958	100,000
Net Total Wealth	97.2	256,955	158,190
Savings	87.2	25,989	7,229
Stocks	35.9	22,041	0
Investment Property	18.0	20,872	0
Other Assets	29.0	64,891	0
Cars	86.4	4,737	3,012



## **Descriptive Statistics** Financial Outcomes, continued

	%	Mean	Median
Non-Mortgage Debt	34.3	16,860	0
Mortgage Debt	21.9	8,834	0
Financial Stress	53.6	-	-
Occupational Pension	52.0	-	-
PRSA Pension	13.5	-	-
Private Pension	6.2	-	-
Expected Retirement Income	-	382	275



## Results Financial Outcomes

	Unadjusted	Fully Adjusted
Net Financial Wealth	ns	ns
Net Housing Wealth	+	ns
Net Total Wealth	+	+
Savings	+	ns
Stocks	+	ns
Investment Property	+	+
Other Assets	ns	ns
Cars	ns	ns

<sup>+ =</sup> positive effect, statistically significant at 5 per cent level or higher



<sup>- =</sup> negative effect, statistically significant at 5 per cent level or higher

## Results Financial Outcomes, continued

	Unadjusted	Fully Adjusted
Non-Mortgage Debt	ns	ns
Mortgage Debt	+	+
Financial Stress	-	-
Occupational Pension	+	ns
PRSA Pension	ns	ns
Private Pension	ns	ns
Expected Retirement Income	+	+

<sup>+ =</sup> positive effect, statistically significant at 5 per cent level or higher



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### **Robustness Checks**

- Examining wealth holdings, rather than levels
- Adjusting wealth for remaining life expectancy
- Using alternative indicators of financial literacy (e.g., Q3 correct)
- Restricting sample to those with no other household members



### **Policy Implications**

- Low levels of financial literacy a concern
  - Household/couple financial literacy and financial outcomes
  - How to improve financial literacy?
- (Little or) no relationship with retirement preparedness (cover)
  - Suggests pathway from financial literacy to supplementary pension cover in Irish context is primarily via selection into occupations/sectors



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### **Extra Slides**



### ESRI/Pensions Authority Joint Research **Programmes**

- TILDA and the Financial Dimensions of Retirement
  - Retirement transitions
  - Determinants of retirement financial decisions
  - Consumption/expenditure in retirement
  - Decumulation of assets in retirement
- **Decision Making and Pensions** 
  - Comprehension and Perception of Pensions
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