UNIVERSITEIT VAN TILBURG

Behavioral Economics and Financial Literacy: Evidence and Policy Implications

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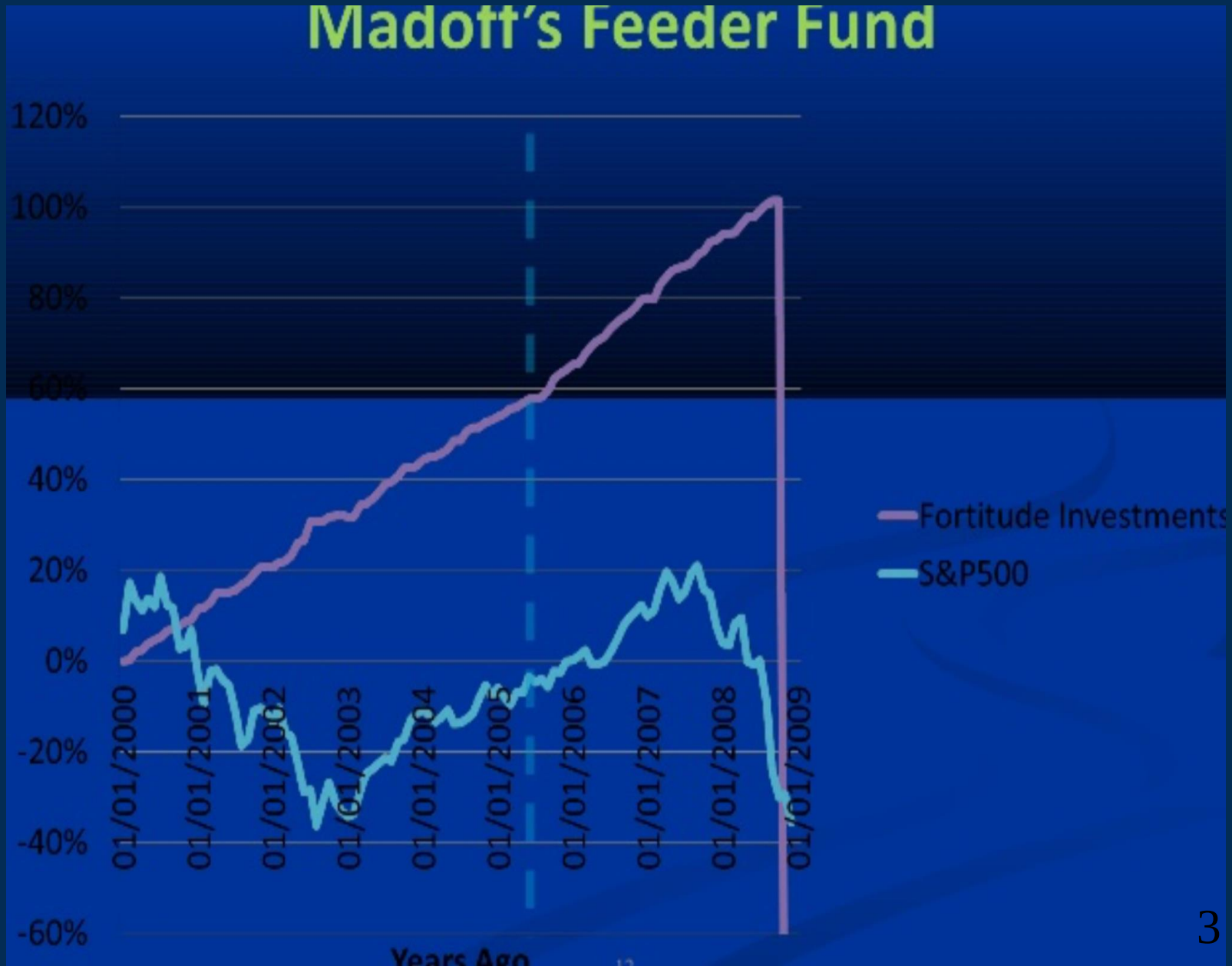
Which would you choose?

This is what happened next



Financial education, rational view

- As long as markets work and people are well informed, what people do is in line with their preferences:

Understanding – Awareness – Informed Choice

Consumers blamed for crisis

“Consumers’ limited financial knowledge is being mentioned more and more as one of the causes of the current financial crisis. Financial education of consumers can therefore be one of the solutions to prevent similar problems in the future”

(then Minister of Finance Wouter Bos in a letter to the Dutch Parliament)

Therefore policy recipe

- Make markets work
- Make people informed
- Create awareness

Policy examples EU, NL

- Prospectus regulation (eg Mifid II)
- Mandated pension information
- Financial education
- Warning borrowing
- Warning investing

Gurria (OECD), G20 2013 St Pburg

"The recognition by the G20 of the importance of financial education for …. financial stability derives from the following observations:

On the one hand, individuals are increasingly responsible for taking key financial decisions in a complex and volatile environment
On the other hand, the level of financial literacy of most citizens remains appallingly low"

What is the evidence on

Financial literacy

The relationship between financial literacy and financial behavior

-in general
-during the crisis

The relationship between financial education (= an intervention) and financial behavior

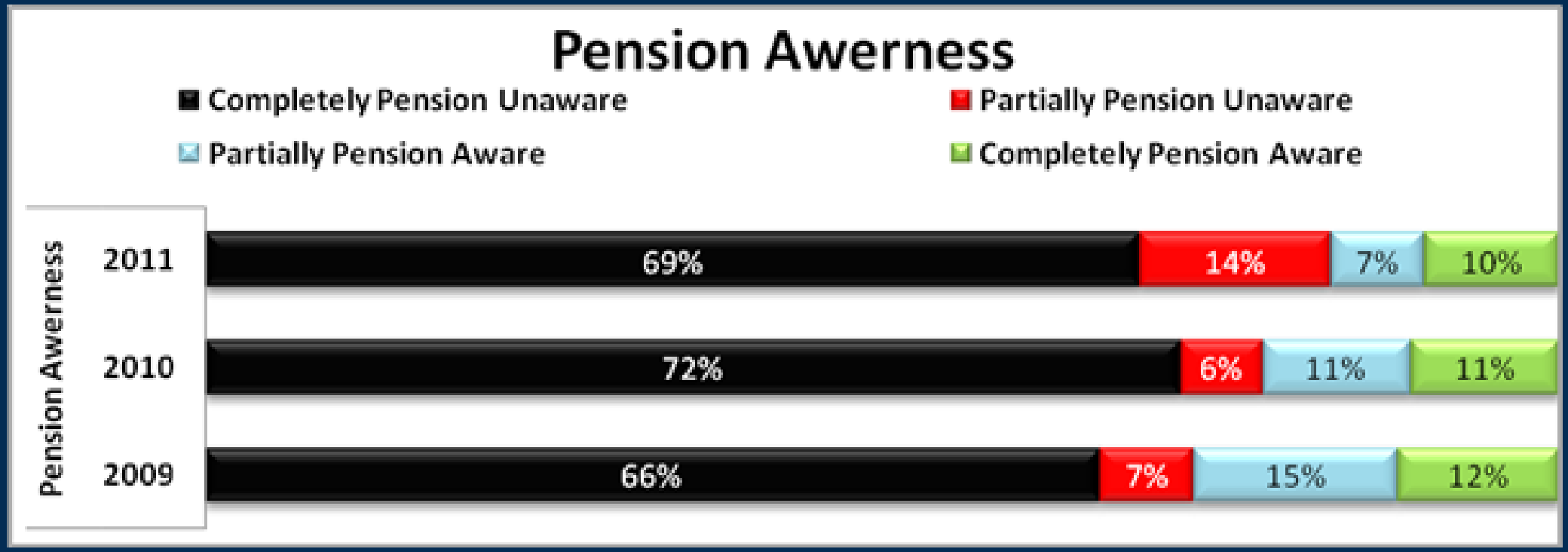
“Financial literacy important”

“”We have no evidence that the behavior of consumers has changed, but everybody is convinced that financial literacy is as important as being able to read and write”

(Dutch Platform Financial Education)

Pension awareness, Nl (Azadi, 2013)

3.194.120.940 euro spent on mandatory pension communication to Increase pension awareness (=knowledge own pension situation)



Financial literacy test question 1

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?4

More than $102
Exactly $102
Less than $102
Do not know
Refuse to answer

Financial literacy test question 2

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?

More than today
Exactly the same
Less than today
Do not know
Refuse to answer

Financial literacy test question 3

Please tell me whether this statement is true or false. “Buying a single company’s stock usually provides a safer return than a stock mutual fund.”

True
False
Do not know
Refuse to answer

Test results: US

How much do Americans know?

Distribution of responses across the U.S. population (2009 FINRA National Survey)

	Responses			
	Correct	*Incorrect*	*DK*	*Refuse*
Interest rate	65%	21%	13%	1%
Inflation	64%	20%	14%	2%
Risk diversif.	52%	13%	34%	1%

NB: Only 30% correctly answer all 3 questions; less than half (46%) got the first two questions right.

Test results: Netherlands

How much do Dutch know?

Distribution of responses across the Dutch population (2010 DNB Household Survey)

	Responses			
	Correct	*Incorrect*	*DK*	*Refuse*
Interest rate	85%	5%	9%	1%
Inflation	77%	8%	14%	1%
Risk diversif.	52%	13%	33%	2%

NB: Less than half (45%) correctly answer all 3 questions; 73% got the first two questions right.

Financial literacy and behavior, crisis

Guiso and Viviano (2014) study the behavior of Italian retail investors during the crisis

They distinguish between high and low literacy investors

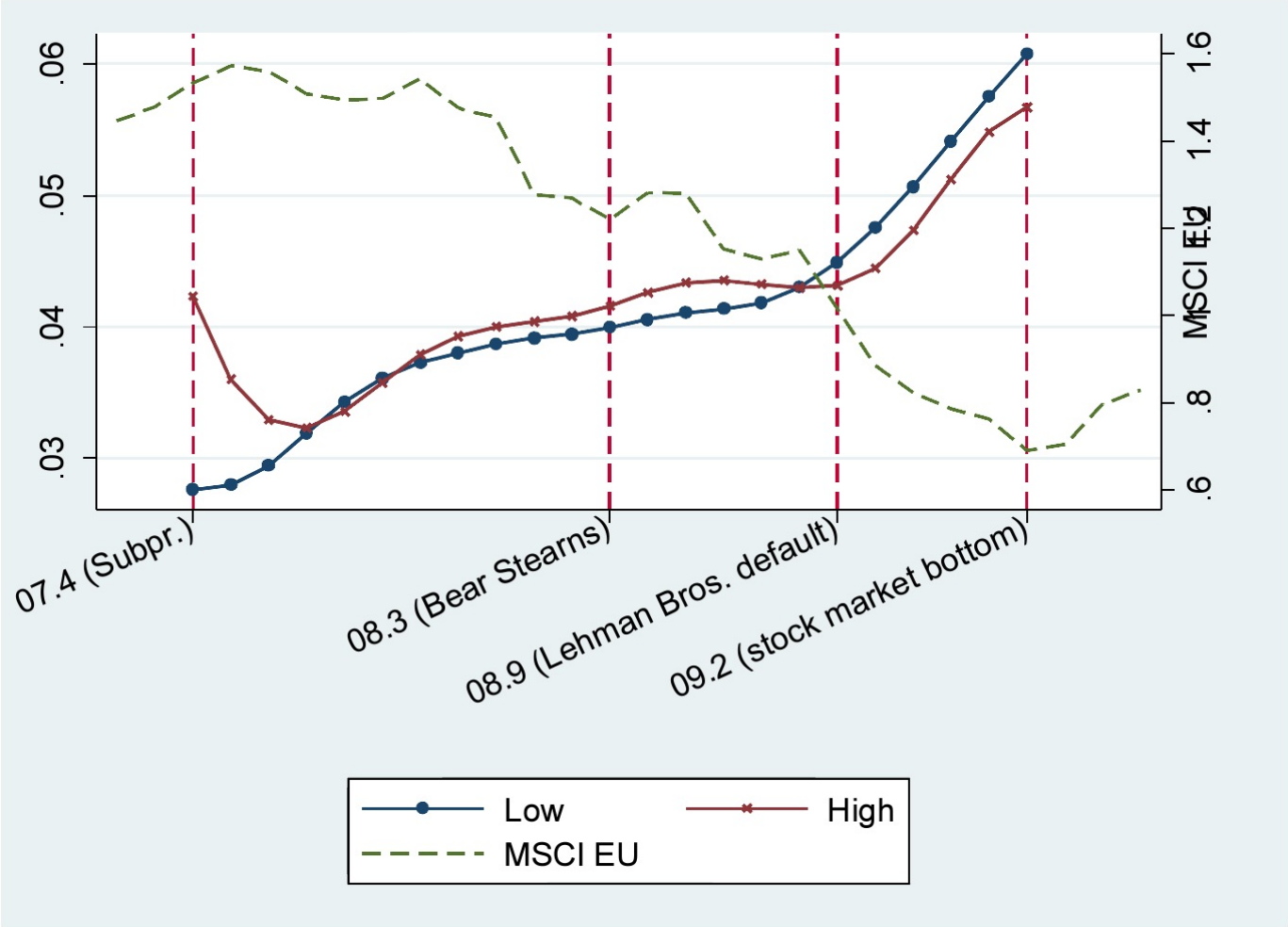
They look at
market timing
portfolio choice
bank bond holdings

They conclude that “financial literacy is a poor hedge against financial mistakes”

Market timing

Fig. 4

Timing the market. Stock market leavers. Distribution of the time of exit from the stock market during the period April 2007-Febryary 2009 for investors with high and low financial literacy



Right scale: MSCI Europe (in euro). Left scale: Distribution of the time of exit for investors with low and high financial literacy for each month from April 2007 to February 2009. The sample is

Financial literacy and behavior, crisis

Cheng *et al* (2014) study the private behavior of US securitization managers during the housing bubble

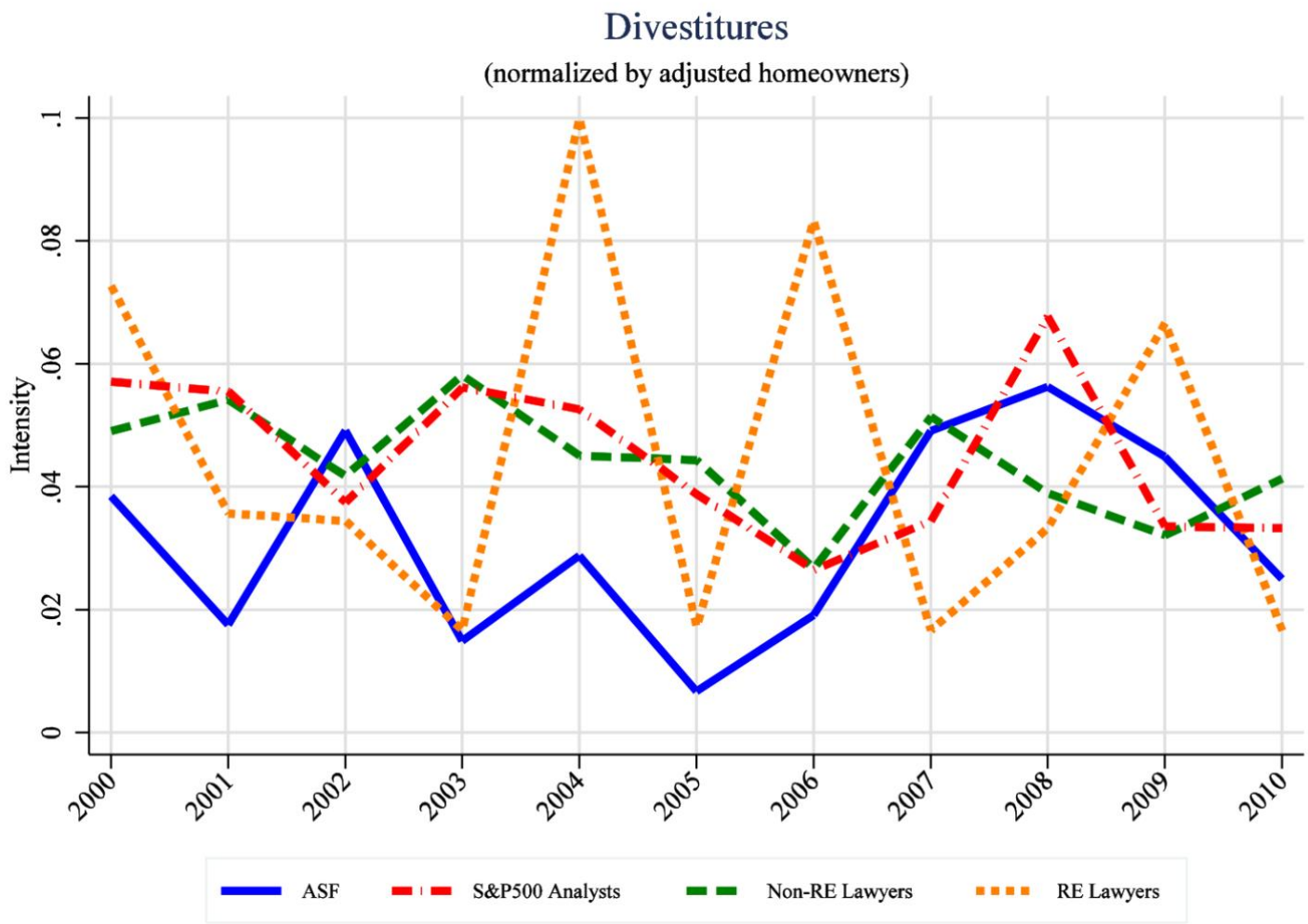
did managers owning a house leave the market before others, ie before bubble burst?? NO

did managers not owning a house avoid entering during bubble? NO

➔ in their private decisions, they did not do better than others

Figure 3: Divestitures

This figure plots the intensity of divestitures through time, defined as the number of divestitures per adjusted homeowner each year, for each sample.



Financial literacy and usury policies

Mlodcik and Prast (2016)

What are the characteristics of owners of a “usury policy”

No effect of financial literacy

Positive effect of financial expertise…

Financial literacy and behavior, general

Many studies claim a relationship between financial literacy and financial planning

Problems are that

planning sometimes defined as “thinking about retirement” instead of behavior

studies are sometimes flawed

relationship does not necessarily imply causality running from literacy to behavior

Correlation may also be due to

Inverse causality

Where doctors are, people are ill

➔ ❽you become ill if you go to the doctor”

Third factor effect: both literacy and behavior are influenced by something else, which is why they are correlated, but not necessarily causal relation

Italians eat pasta

Italians are catholic

➔ ❽if you eat pasta, you will become catholic”

Fernandes *et al* (2014)

Meta study based on 168 papers covering 201 prior studies

Distinguish between two types of studies:

measuring the effect of financial education (= an intervention) on financial behavior; they call it “manipulated literacy

measuring finlit (with a test) and measuring financial behavior = correlation; they call it “measured literacy”

Findings

Manipulated literacy (education intervention) explains 0.11 percent of differences in behavior
and even less among lower incomes….

Measured literacy explains (=correlates with) much more: 1,79 percent of differences in behavior

Why smaller effect of interventions?

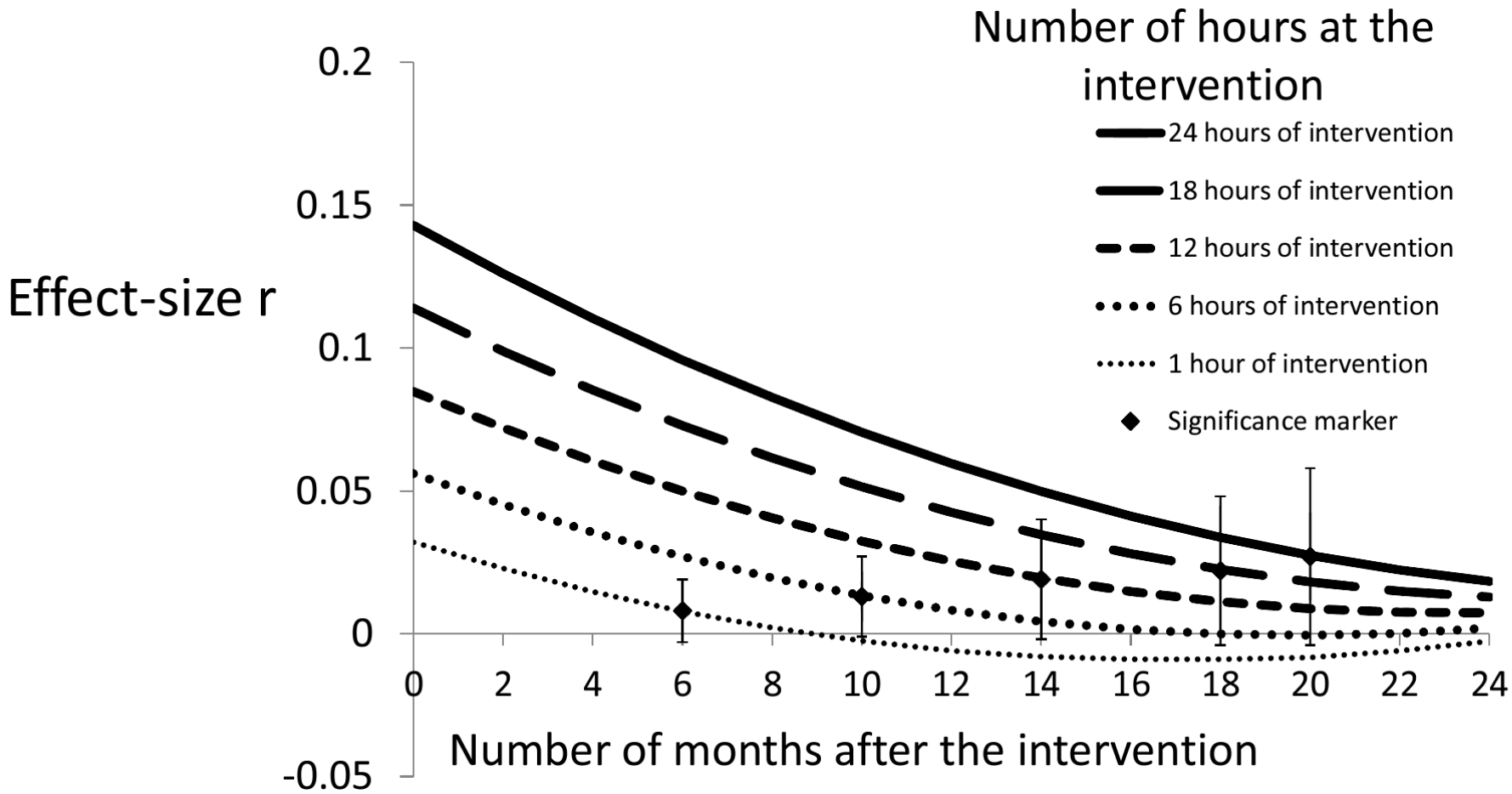
Suggested reasons:

effect of financial education on behavior disappears over time

effect of financial education on relevant financial literacy is small

correlation between financial literacy and behavior is due to third factor(s) – omitted variables

Interventions Decay: The Case for "Just-in-time" Financial Education



After a delay, even long interventions have no significant influence

From Fernandes, Lynch, & Netemeyer (2014, Management Science)

Fernandes *et al* own studies: findings

Effect of financial literacy disappears if adding "omitted" variables:

confidence in ability
propensity to plan
willingness to take risks

Behavioral economics

There are characteristics of decision problems that make it very likely that revealed preferences ≠ normative preferences EVEN when markets work and people are well informed and educated (Camerer *et al*, 2003)