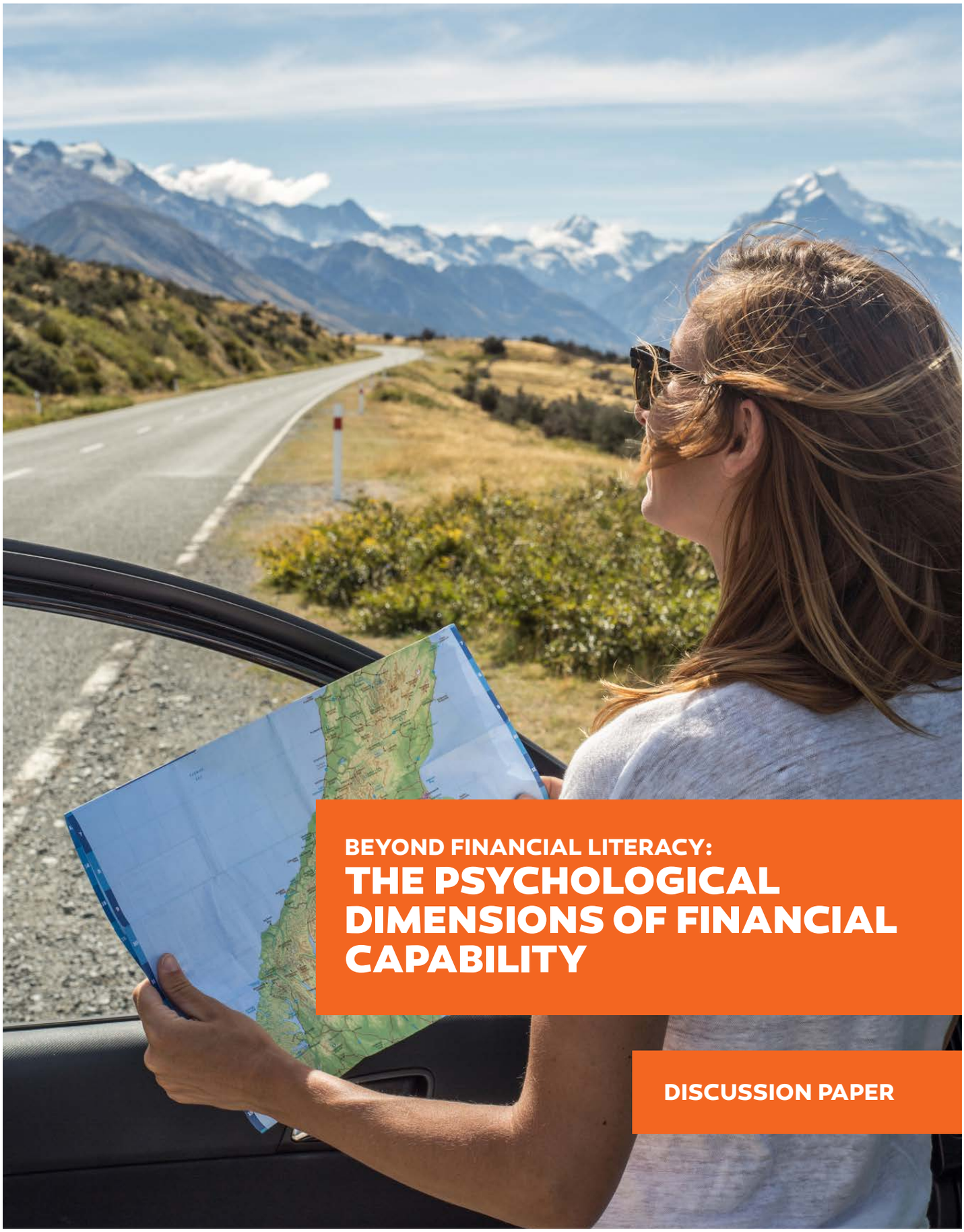

BEYOND FINANCIAL LITERACY:

THE PSYCHOLOGICAL DIMENSIONS OF FINANCIAL CAPABILITY

DISCUSSION PAPER

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THINK FORWARD INITIATIVE

BEYOND FINANCIAL LITERACY: THE PSYCHOLOGICAL DIMENSIONS OF FINANCIAL CAPABILITY

DISCUSSION PAPER[1]

Making good decisions about money isn't just about knowing financial facts. Psychology plays a significant part too.

Our research finds that a higher level of financially capable behaviour is not just down to how much knowledge a person has acquired or the attitude towards money they hold, but also is strongly linked to certain psychological factors. These include how optimistic or impulsive someone is, how they approach challenges, and whether they typically feel in control of their future. Overall, we found that the addition of psychological variables almost doubled the amount of variance in financial capability than can be explained by measures of financial literacy and attitudes towards money alone.

There is a broad base of existing research into financial capability, and where studies do incorporate a psychological or behavioural science perspective, they tend to focus on a single psychological element in relation to a single financial behaviour. To our knowledge, this is one of the first studies to look at a wide range of psychological factors and their effect on an overall measure of financial capability. And while there are limitations to the study – with a survey, researchers are reliant on self-reports being accurate, and we are able to learn about correlation only, not causality – it is nevertheless an important contribution to the field.

It comes at a time when, according to ING surveys, three in 10 people across Europe have no savings whatsoever, and 10 per cent with personal debt don't even know how much they owe (ING 2017). Any step towards better understanding financial capability has the potential to help a significant number of people.

UNPACKING FINANCIAL CAPABILITY

This research surveyed a nationally representative sample of 800 people across the Netherlands. The survey included questions about financial capability, financial literacy, financial attitudes, and a range of psychological constructs such as optimism, (non-) impulsivity, locus of control, approach or avoid goal orientation, and peer influence. See figure 1.

A useful way of thinking about our conception of financial capability is by contrasting it with financial literacy. Perhaps surprisingly, there is no clear consensus in the academic and practitioner literature about one reigning definition or model of financial capability[2]. The distinction we make is that financial literacy is knowledge about financial concepts, whereas financial capability is the behaviour and actions that result in positive financial outcomes. Financial literacy, as we describe it, is often measured by the suite of questions used in Global Financial Literacy Excellence Center (GFLEC) research (Lusardi and Mitchell 2011). Financial capability, as we describe it, does not yet have a standard scale of measurement. Rather than developing our own measure of financial capability which would have contributed further to the lack of consistency within the field, we chose to use the measure used by the Organisation for Economic Co-operation and Development (OECD) in their research (Atkinson 2016)[3].

To determine a participant's level of financially capable behaviour we used questions such as, "I pay my bills on time" and, "sometimes people find that their income does not quite cover their living costs. In the last 12 months, has this happened to you personally?". These questions are the same as used in the OECD's research and map to their financial behaviour questions. The answers to all the questions were standardised and combined to create a composite score for financial capability (financially capable behaviour).

[1] As part of the Think Forward Initiative, a group of researchers from ING, Aflatoun, Motivaction, and other organisations investigated the extent to which financial capability is correlated with various psychological factors. This discussion paper is intended to summarise the research findings of the corresponding technical report of the same title (Shephard et al [2017]), while exploring some contextual issues such as how this research sits within the broader field and how it could contribute to future discussion or applications to improve financial capability.
[2] Compare, for example, OECD's international survey (Atkinson [2016]) to Money Advice Service's financial capability survey ([2016]) to FINRA's National Financial Capability Study ([2015]).
3 The OECD research sets out that financial literacy – as they describe it, which is similar to our conception of financial capability - is a combination of behaviour, attitude, and knowledge.

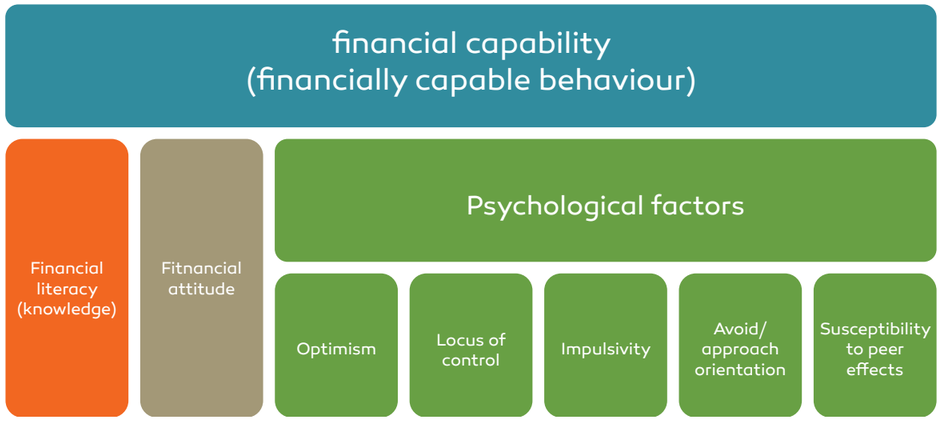

Figure 1: Our model of financial capability. Financial Capability is a suite of behaviour that is influenced by someone's level of financial literacy (knowledge); an attitude favouring the long-term; and various psychological factors such as optimism, locus of control, non-impulsivity, goal orientation, susceptibility to peer effects.

Additionally, we surveyed participants on their levels of financial literacy and their attitudes towards money by asking questions such as, "[True or false] It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares," or asking for responses on a scale to the statement, "Money is there to be spent". These questions were used with permission from the OECD, and map to their financial knowledge and financial attitude questions respectively.

Finally, we surveyed participants on the extent to which they exhibit the various psychological constructs shown in figure 1.

PSYCHOLOGY MATTERS WHEN IT COMES TO OUR MONEY

Overall, we found that the addition of psychological variables almost doubled the amount of variance in financial capability (28.5 percent) than can be explained by measures of financial literacy and attitudes towards money (15 per cent). The relationship between financial capability and each of the psychological constructs is summarised below.

Optimism

While some optimism is needed to help us stay motivated throughout our daily lives, unrealistic optimism could result in false expectations and leave people susceptible to inadequate planning for the future. We therefore expected to find a curvilinear relationship between optimism and financially capable behaviour, with very low levels and very high levels of optimism predicting low financial capability. To test the level of optimism we used two different sets of questions, one to check general dispositional optimism (Gavrilov-Jerkovic and others 2014) and one which we created, inspired by McKenna (1993), to check the extent to which people have unrealistic optimism within the domain of personal finance.

Instead of a curvilinear relationship, *we found a linear relationship between optimism and financially capable behaviour, meaning that people who are more optimistic also tend to have higher financial capability.*

Non-impulsiveness

Previous research has found that generic and financial impulsivity has a negative impact on financially capable behaviour, such as decreased accumulation of assets (Letkiewicz and Fox 2014) or the increased use of unsecured debt (Parise and Peijnenburg 2017). Impulsivity can be used to describe 'mindless' purchases whether they are spontaneous or habitual, in contrast to what we have termed 'mindful' or more considered purchases. For this measure, participants were asked to answer on a scale how likely they were to agree with statements such as, "I often act without thinking through all the alternatives" or, "I find it difficult to resist buying something that really appeals to me".

We found that those who scored highly for non-impulsiveness had higher financially capable behaviour.

Approach or Avoidance Goal Orientation

Approach and avoidance temperaments refer to whether someone is motivated by positive or negative stimuli. An approach goal orientation is the extent to which someone seeks out to accomplish positive outcomes, whereas avoidance goal orientation is where a person is motivated to avoid negative outcomes such as failure or uncomfortable situations (Elliot and Thrash 2010). Participants were asked how likely they were to agree with statements such as, "Thinking about the things I want really energises me", or, "It doesn't take much to make me worry". We hypothesised that having an avoidance goal orientation may mean people ignore dealing with issues that are potentially distressing and, as such, also be related to lower financial capability.

We found that approach goal orientation was associated with higher financially capable behaviour, while avoidance goal orientation was associated with lower levels.

Locus of control

This refers to whether an individual believes they can control their own fate, or whether they are at the mercy of something outside of themselves: chance, fate, God, or something else. These differing perspectives are called an internal locus of control or external locus of control, respectively. Questions to test people's locus of control included "Whether or not I get to become wealthy depends mostly on my ability". Previous research has found relationships with locus of control and various specific financial behaviour (Cobb-Clark, Kassenboehmer, Sinning 2016; Perry and Morris 2005; Salamanca and others

2016) and therefore we expected that internal (vs external) locus of control is positively correlated with financial capability, potentially via increased action taken to improve financial position such as increased saving for the future or taking riskier investments.

We found that a higher internal locus of control with regards to finances was strongly associated with higher financially capable behaviour, with a more external locus of control predicting lower levels.

Peer Influence

There is significant work to demonstrate the effects of peer influence and social norms on financial behaviour. For example, Georgarakos and others (2014) found "that those who consider themselves to be poorer than their peers are more likely to borrow 'to keep up with the Joneses' and, as a result, to find themselves facing financial distress" (Vaitingam 2015 citing Georgarakos et al). Therefore we tested whether those who are more susceptible to peer influences exhibit better financially capable behaviour when they perceive their peers as doing better financially. To do this we asked questions both about susceptibility to peer influences and also about their perceived relative financial position as compared to their peers. We did not carry out social network analysis (SNA) to map people's actual ties to others.

Surprisingly, *we did not find a relationship between our measure of peer influence and higher financially capable behaviour.* Given the existing literature on the influence of social norms on financial behaviour (see e.g. Spencer, Nieboer and Elliot 2015 for a summary) and the complexity of peer effects, we believe that the lack of statistical relationship in our findings is a measurement issue. That is, it is likely to be a reflection of the difficulty in eliciting peer effects rather than being evidence that there is no effect of peer influence.

Further exploration by other researchers into peer effects and peer advice could be useful. Who do people consult for advice on money matters? Who do they try to emulate, and under what circumstances? This would require a different methodology to the one in this paper.

WHAT NEXT?

The findings in our research illustrate an important point about improving financial capability: it is not simply an information deficit or an attitudinal problem. While more information may help to improve someone's financial literacy, we have shown that a person's psychological profile is related to financial capability as well.

However we are still left with some questions such as the direction of causality of the relationships. In other words, does optimism lead to higher financial capability, or does higher financial capability lead to optimism? This paves the way for more research which could benefit practitioners both in the financial education field and in financial product design or regulation.

If indeed the direction of causality is such that changing someone's level along one or more of the psychological factors would improve their financial capability, and these factors are changeable, then financial education programmes could explore how to help shift people's profiles. If such characteristics are most malleable at an early age, financial education should begin early at school. However, given that financial capability is influenced neither solely by one's financial literacy and attitude, nor solely by their psychological characteristics, a financial education programme should attempt to be holistic by addressing all of these factors.

The findings also have important implications for the design and regulation of financial products. For example, products that seek to understand a user's psychological profile could be tailored to the user accordingly. These tailored applications could then provide the user with support in areas of their financial behaviour that are most in need.

Further, in the technical report and this discussion paper we refer to a combined scale for financially capable behaviour. The dataset could be explored further to look into the individual questions that made up the FCB score construct variable, and other relationships could be tested, such as isolating the correlation between being able to make ends meet and any one of the psychological characteristics, financial literacy and/or financial attitude.

Overall, the research supports the growing literature at the intersection of financial capability and behavioural science, and more specifically by evaluating the strength of the importance of psychological factors to financial capability. This may help the field move beyond discussions on knowledge-based financial literacy and into developing more behaviourally-informed design and education, creating products and programmes that consider the psychological motivations and biases that drive our behaviour with money.

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