

No, they didn't? Oh, they did!

Citation for published version (APA):

Verhallen, P. F. E. (2021). *No, they didn't? Oh, they did! Advancing insights on social norm interventions in consumer financial decision-making*. [Doctoral Thesis, Maastricht University]. Ipskamp. <https://doi.org/10.26481/dis.20210628pv>

Document status and date:

Published: 01/01/2021

DOI:

[10.26481/dis.20210628pv](https://doi.org/10.26481/dis.20210628pv)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

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CHAPTER 6

Impact

Impact

In addition to providing theoretical contributions to advancing our understanding of peer effects from social norm interventions, the results of my dissertation set out to make an impact on consumer financial decision-making and, consequently, consumer welfare. This section highlights the scientific and societal impact as a consequence of the research from this dissertation. First, I discuss the relevance of the research. Second, I provide five dos and don'ts for marketers active in the financial services industry, for future impact. Lastly, I share an overview of the current impact achieved through dissemination of the research takeaways at international conferences and through media outlets, publications, workshops, teaching, and collaborations.

Relevance

The welfare of consumers is strongly connected to consumer financial decision-making – from smaller decisions, such as using a credit card to fund a small purchase, to larger decisions, such as choosing a mortgage or retirement product. Yet, two out of every five Americans are unable to pay a US\$400 expense without charging a credit card, obtaining a line of credit or payday loan, selling something, or borrowing from family and friends (Federal Reserve, 2019). If you are or were standing in one of their shoes, which course of action would you take to resolve the US\$400 expense? Which course of action would you take to prevent such a situation from developing?

Consumers, on average, exhibit high levels of financial illiteracy (Lusardi & Mitchell, 2011), inertia (O'Neill, 2007), and inadequate financial planning, posing a risk for financial well-being (Brüggen et al., 2017). As a matter of fact, in the United States, one-third of all households led by someone aged 55 or older has accumulated no pension savings (GOA, 2019). Similarly, in the Netherlands, 31% of households have to face a lower gross replacement rate than the expected 70% of current income (Knoef et al., 2016). Whether suffering from the inability to resolve a current expense of US\$400, or to save adequately for retirement, consumers in these dire situations can be

supported through tailored interventions to increase savings (e.g., Thaler & Benartzi, 2004). For this reason, our experiments take place in the context of consumer financial decision-making broadly, and increasing savings and retirement engagement intentions and behavior specifically.

The dos and don'ts from this dissertation provide the basis for crafting effective social norm interventions in settings in which consumers have to make important financial decisions, such as saving more for retirement, reading important pension information, or reducing discretionary spending.

Dos and don'ts for social norm interventions

Social norms are not simply numeric anchors – use peer behavior to drive behavior change

In Chapter 2, I show that a social norm intervention in a retirement savings scenario, where people were shown what others had contributed to their retirement savings account, led to peer effects – a change in behavior in response to peer information. More importantly, I show that this behavioral change is not caused by an anchoring effect, that is, behavioral change as a response to anchoring towards a noticeable number in the decision environment when making a decision. Previous research in the savings domain has considered effects from numeric normative messaging as anchoring effects (e.g., Grinstein-Weiss et al., 2015; Navarro-Martinez et al., 2011; Stewart, 2009), but my results highlight that this may not be the case. Instead, the normative component of the messages is more likely to drive the behavior change.

Similarly, in Chapter 3, in studies with three different groups of subjects – Dutch pension fund participants, students, and a broad sample of Americans – I show that sharing peer behavior leads to shifts in retirement engagement intentions (intention to spend more hours on planning) and behaviors (reading a relevant pension news article). These findings imply that social norms, and not simply anchors, should be used

in interventions to change behaviors in the context of financial decision-making, such as selecting the contribution level of income to pensions, reading important pension information, or reducing discretionary spending. Such interventions should be based on accurate information, and may therefore require an investment of time and financial resources to gather information on what relevant peers are doing. In addition to the accuracy of peer information used in the interventions, it is crucial to be mindful of the behavior used in the intervention, as social norms that highlight that others are *not* doing something, or are behaving counterproductive to the goal of the intervention, others can follow such inactivity or counterproductive behavior. In situations where most peers behave counterproductive to an intervention goal, framing can help. In such situations, marketers can focus on how many relevant peers are behaving in line with the intervention goal, and use phrasing, such as “many [peer group] behave [intervention goal behavior],” to achieve their intervention goals.

Be mindful of which peers you use in your intervention. Using peers that work in the same sector as the people you are targeting (for example, nursing) works well

The research in Chapter 3 shows that social norm interventions tailored to individual consumers can have a substantial impact on consumer financial decision-making, as illustrated by a field experiment with tailored communication sent to 222,596 pension fund participants. By utilizing peers that score high on both identification and credibility as perceived by each target consumer, the intervention raised click-rates to a relevant pension news article by 31 to 55 percent, compared to consumers receiving no social norm or receiving a social norm commonly used in industry (simply pension fund participants of the respective pension provider).

According to my findings, the age of the peers in a social norm intervention is the most important attribute for both identifying with the peers, and for finding them credible. However, people identify most with peers of the same age, whereas credibility is highest for older cohorts (10-20 years older), except for people aged 46 or older. For

those aged 46 years or older, peers of the same age are found most credible. While peers from the same work sector are slightly less important for identification and credibility, all pension plan participants in our research scored them high on *both* identification and credibility. Therefore, same age peers should be used for interventions targeting those 46 and older. For people under 45 years old, marketers should use peers from the same work sector.

Moreover, the research from Chapter 3 utilizes methodology that is common for analyzing purchasing decisions, and I apply this in a novel technique to identify which peer attributes influence their credibility and the extent to which a targeted population identifies with them. This novel use of existing tools can be easily followed by industry practitioners or government bodies to identify which peers evoke the highest identification and credibility for any target population. Consider, for instance, identifying which neighbors are most credible or exhibit a high level of identification, to then utilize in social norm interventions increasing savings behaviors, such as electricity reduction.

Do not use peers that the target population does not identify with

An important takeaway from Chapter 3 is that social norm interventions using peers that the target population does not identify with, can result in what we call an oppositional reaction. Oppositional reactions occur when the target population changes their behavior in the direction that was not desired by the intervention designers. For instance, if the intent is to increase consumers' retirement savings contribution by sharing peers' higher contribution behavior, then using peers with whom the consumers do not identify can result in a decrease in consumers' retirement savings contribution instead. Therefore, avoid using peers that the target population does not identify with.

Take into account specific consumer traits of your target population (and individual differences within), as they can affect behavioral change in response to a norm

Findings from Chapter 3 provide evidence that specific consumer traits make consumers more susceptible to behavioral information from specific peers. These traits can also differ between consumers, which further highlights the need to address heterogeneity in the population. The evidence is based on results from both a student sample in the Netherlands, and an online panel from the United States. I find evidence that a behavioral response to a social norm intervention with peers with whom the targeted population greatly identifies, is conditional on the targeted population's susceptibility to normative influence. I also find indicative evidence that the same relation holds true for peers' credibility and consumers' susceptibility to informational influence. To make use of these findings, marketers should study how susceptible their target population is for normative and informational influences, and whether there is heterogeneity (individual differences) in the population regarding these influences. Consumers' susceptibilities to the two influences can be identified by using existing scales (see Chapter 2 and Chapter 3; e.g., Bearden, Netemeyer, & Teel; 1989, 1990). Marketers can then segment their target population by their susceptibilities to influence, and should target those more susceptible to normative influence with norm interventions using peers that they highly identify with, and target those more susceptible to informational influence with norm interventions using peers that they additionally find very credible. When peers that score both high on identification and on credibility are available to use in an intervention, then their use should receive priority, as no negative effects were found for higher social identification and higher source credibility, regardless of consumer susceptibilities.

Be cautious of the (level of) peer behavior that you share with your targeted population

Findings from Chapter 2 suggest that values more distant from the behavior of the targeted population can work positively by shifting behavior even more in the desired direction. However, findings from Chapter 4 suggest that greater distance in behavior between the shared peer behavior and the targeted population's (current) behavior can result in a reduction of the targeted population's identification with the used peers. As discussed in points 2 and 3, this reduction in identification may result in less behavioral change towards the shared norm. Therefore, marketers should identify and take into consideration consumers' current behaviors before implementing any social norm intervention.

Based on my findings, I recommend implementing gradual milestones in the direction of the desired behavior level, to gradually shift behavior and keep distance between salient norm and current behavior minimal at any point in time. Moreover, where the distance in current behavior and desirable behavior is large and cannot be altered, marketers should identify which peer attributes drive identification and credibility for their intervention target population (e.g., using methodology from Chapter 3), and make only those attributes salient that do so. Higher identification is likely to act as a buffer for the negative indirect effect of behavioral distance on norm convergence.

Impact from collaboration & knowledge dissemination

The process through which all three research chapters reached completion, involved close collaboration with scientific and industry partners. I will first address the scientific impact, followed by societal and industry impact, through my collaborations.

Each of the chapters in this dissertation have been shared with academics through presentations at leading conferences around the world. Those conferences

include, amongst others, the RAND Behavioral Finance Forum (2017), Boulder Summer Conference on Consumer Financial Decision-Making (2017), Society for Judgement and Decision Making Conference (2020), AMA SERVSIG (2016), TIBER (2018), M-BEPS (2018), NETSPAR International Pension Workshop (2017, 2020, 2021), NETSPAR Pension Day (2016, 2020), ITEM PhD Meeting on Pensions (2017, 2020), NoBec (2018), Business & Management Conferencia Internacional (2020), and the NETSPAR Engaging Pension Plan Participants (2016) conference. Additionally, these chapters have been presented at research seminars in Europe (Nyenrode University, Maastricht University, Open University) and North America (Duke University, University of South Florida, Universidad Panamericana). Through these conferences and seminars, the work has been received, reviewed, and discussed by a diverse group of academics and practitioners from marketing, (social) psychology, (behavioral) economics, (behavioral) finance, econometrics, management, law, and public policy. Additionally, all three research projects benefited from NETSPAR grant funding, as part of a large theme grant, which involved additional knowledge dissemination across a broad set of partners from academia and industry. Similarly, a collaboration with and research visit at the Common Cents Lab from Duke University's Center for Advanced Hindsight, which also funded research from this dissertation, provided further valorization to the global scientific community and industry.

Lastly, the results have been incorporated into teaching at the undergraduate and graduate level (e.g., Consumer Behavior course, Universidad Panamericana) and at the executive level (e.g., nudging and behavioral screening trainings through Maastricht University's UMIO executive training program; EMBA Human Decision-Making module, Maastricht University). In addition to executive trainings, the findings from these research projects have also been disseminated through industry workshops, lectures, recordings, think-tank discussions, news media, and industry publications (e.g., NETSPAR Industry Design Paper 137, NETSPAR Academic Design Paper 2018-001). Workshops with NETSPAR partners have allowed the results from this

dissertation to enter the dialogues on recent developments in the pension sector. One such development is the recently implemented *Wet verbeterde premieregeling* in the Netherlands. This development introduced more control – and thus more responsibility – to the consumer, making interventions for beneficial behaviors all the more important. Takeaways from these research projects have also been implemented in practice through (research) partnerships with industry, from Silicon Valley FinTech start-ups to large financial institutions in the Netherlands and the United States. By leveraging the aforementioned dos and don'ts, the field experiment in Chapter 3, for instance, resulted in a 31 to 55 percent increase in the click-rate of a relevant news article for many of the targeted 222,596 pension fund participants. It is one intervention that, hopefully, paves the road for many more to come.