Financial Well-Being: Understanding Risky Borrowing Behavior among Young Adults

By

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Abstract
Risky financial decisions are especially critical for young adults and may hinder their future ability to accumulate wealth. This study develops a conceptual framework aimed at understanding the risky borrowing tendencies of young adults. Two survey samples were used: Sample 1 consisted of 488 young individuals (18–25) who had never taken out a risky loan before, and Sample 2 included 214 young adults (18–25) who had already taken out a risky loan. The results show that a number of factors affect young adults' intentional risky borrowing behavior, which in turn affects how they actually borrow. Additionally, the study revealed that the relationship between intentional risky borrowing behavior and actualized risky borrowing behavior is negatively moderated by risky borrowing perceived risk – but not by risky borrowing perceived complexity. Specifically, the results suggest that policymakers, financial institutions, and educators should strive to eradicate detrimental social norms concerning financial behavior. Moreover, efforts should be directed towards heightening young adults' perception of risk associated with risky borrowing, thereby deterring the transition from intentional to actualized risky behavior.

Keywords: Financial services, risky borrowing behavior, young adults, financial knowledge, social norms, perceived risk, financial trust

Introduction
In recent years, the options available to financial consumers have expanded significantly; yet evidence suggests that many may lack a comprehensive understanding of reasonable financial behavior (Chen et al., 2022; Sevim et al., 2012). Consumers' bad financial decisions may not only negatively affect their short-term liquidity but may haunt them for years after they are made (e.g., Xiao et al., 2009). Obviously, this is especially critical for young adults who often carry large amounts of student loans or credit card debt (Lusardi et al., 2010), which in turn may hinder their future ability to accumulate wealth. Past research particularly indicates limited financial awareness among young adults (Dogra et al., 2023). Hence, understanding young adults' financial borrowing behavior is important for policymakers and financial institutions.

Previous studies have extensively examined various aspects of financial behavior and literacy among young adults. For instance, Hogarth and Hilgert (2002) and Hilgert et al. (2003) found that financially knowledgeable consumers are more likely to behave

responsibly. Lusardi and Tufano (2009) highlighted that consumers with less financial understanding are more prone to debt struggles and poor wealth management. Additionally, social norms and trust in financial institutions have been identified as significant influencers of financial behavior (Van der Cruijsen et al., 2023; Hansen, 2012). Despite these insights, there is a notable gap in understanding the specific drivers behind intentional and actual risky borrowing behavior among young adults. While trust, financial knowledge, and social norms have been studied in various contexts, their combined effect on risky borrowing behavior remains underexplored. Furthermore, the moderating roles of perceived risk and complexity in the transition from intentional to actual risky borrowing behavior have not been adequately addressed. This study aims to fill these gaps by developing a conceptual framework that examines these factors and their interactions.

This study explores the drivers behind both intentional and actual risky borrowing behavior among young adults and contributes to the marketing literature by examining trust in financial institutions, social norms, and financial health as influencers of intentional risky borrowing. Additionally, we find that the relationship between intentional and actual risky borrowing is moderated by perceived risk - but not complexity. Our study utilizes two survey samples: Sample 1 includes 488 young adults aged 18-25 without risky loans, while Sample 2 comprises 214 young adults with risky loans. Risky borrowing is borrowing at a very high percentage rate relative to the existing standard market conditions, and can include rapid loans, credit purchasing, and store credit card loans, among others (Durkin et al., 2014).

Conceptual model and research hypotheses

The conceptual model (Figure 1) suggests that actual risky borrowing behavior among young adults is influenced by psychological, sociological, and behavioral factors, shaping their predisposition toward such behavior. Our model portrays intentional risky borrowing behavior as a central variable mediating the influence of these factors on risky borrowing behavior.

Trust: Trust in financial institutions is important in consumer-seller relationships, particularly in the financial sector, where trust is pivotal due to the complicated nature of financial services and their long-term implications (e.g., Van der Cruijsen et al., 2023). While trust has been extensively studied in the context of customer-seller relationships, its influence on consumer risky borrowing behavior remains relatively unexplored. For instance, there is a need to investigate how trust in both traditional and 'risky' lending institutions affects young adults' intentional and actual risky borrowing behaviors. Trust emphasizes the consumer's expectation of dependability and the perception that the service provider won't exploit them (e.g., Hansen, 2012; Van der Cruijsen et al., 2023). Trust reduces transaction uncertainty and serves as a heuristic for consumers in justifying their actions. Consequently, young adults should be likely to prefer dealing with financially trustworthy institutions. Based on this, we propose:

H1a: Trust in banks negatively influences young adults' intentional risky borrowing behavior.

H1b: Trust in 'risky' lending institutions positively influences young adults' intentional risky borrowing behavior.

Consumer financial knowledge: Hogarth and Hilgert (2002) and Hilgert et al. (2003) discovered in a series of studies that financially knowledgeable consumers are more likely to behave financially responsibly. In a similar vein, additional research indicate that consumers with less financial understanding are more likely to struggle with debt (Lusardi and Tufano, 2009) and less likely to manage their wealth properly (Fessler et al., 2020). Furthermore,

knowledgeable consumers are predicted to be better equipped to evaluate their own performances and the repercussions of their acts than less knowledgeable consumers (Kruger and Dunning, 1999). We hypothesize as follows.

H2: Financial knowledge has a negative influence on young adults' intentional risky borrowing behavior.

Social norms: Social norms can be conceptualized as jointly-recognized agreements regarding appropriate or inappropriate behavior (Krupka and Weber 2009). Social comparison theory predicts that consumers may use their perceptions of peer norms to evaluate their own intentional and/or actualized behaviors (e.g., Elbayomy, 2023; O'Fallon and Butterfield 2012), potentially shaping their future decision-making processes (e.g., Krupka and Weber 2009). Social norms are especially important in the current setting, as contacts with family members, friends, financial advisors, and other persons frequently affect financial decisions (Kapteyn and Teppa, 2011). Furthermore, product complexity increases the possibility that consumers would seek social knowledge and rely on the opinions and actions of relevant persons (Hoffmann and Broekhuizen, 2010). We hypothesize as follows.

H3: Social norms have a positive influence on young adults' intentional risky borrowing behavior.

General financial healthiness: Consumers' overall financial well-being pertains to their financial standing and the extent of their financial security (Xiao et al., 2006). We anticipate that the general financial health of young adults will negatively impact their intentional engagement in risky borrowing behavior. Previous research suggests a relationship between individuals' general behavior and behavior specific to certain domains, indicating that general behavior is likely to influence reasoning and actions in specific domains (Duncan, 2007; de Vries, 2008). This perspective aligns with cognitive consistency theory (Kruglanski et al., 2018; Simon and Read, 2018), which proposes that consumers strive to maintain coherence among their knowledge, attitudes, goals, feelings, and behaviors to avoid cognitive dissonance. Hence, we hypothesize as follows.

H4: Financial healthiness has a negative influence on young adults' intentional risky borrowing behavior.

Risky borrowing risk: Perceived risky borrowing risk is defined as the perceived negative monetary consequences (e.g., paying too high costs or interests) that can occur when obtaining a risky loan (Conchar et al., 2004). Tan (1999) points out that consumers' perceived risks will negatively affect their transformation of purchase intention into actual purchase behavior. Perceived risk is not merely an independent factor influencing actualized risky borrowing; it operates as a psychological filter that conditions how individuals translate their intentions into action. Specifically, microeconomic theory (Weber et al., 2002) suggests that risk aversion leads individuals to modify their decisions based on their tolerance for negative outcomes. High perceived risk can amplify hesitation or create psychological barriers that weaken the influence of intentional behavior, even when intentions are strong. Conversely, when perceived risk is low, the psychological barrier is minimized, allowing intentions to translate into actual behaviors with greater ease. In sum, we propose as follows.

H5: The influence of young adults' intentional risky borrowing behavior on actualized risky borrowing behavior is negatively moderated by risky borrowing perceived risk, such that intentional risky borrowing behavior has a greater positive effect on actualized risky borrowing behavior when risky borrowing perceived risk is low compared to high.

Risky borrowing complexity: Complexity refers to the degree to which a financial service is difficult to understand and/or to use (Loureiro et al., 2020; Hoffmann and Broekhuizen, 2010). Previous research suggests that financial decisions can be especially

difficult for young adults (Remund, 2010) who with often limited financial skills must confront complex financial decisions (Lusardi et al., 2010). In this regard, studies indicate that when the information provided surpasses consumers' knowledge and processing capacity, the quality of their financial decisions can significantly deteriorate (Oehler and Kohlert 2009; Howlett et al., 2008). In the present study, we propose that perceived complexity might decrease the likelihood of intentional risky borrowing behavior materializing into actualized risky borrowing behavior. This is because perceived complexity is likely to serve as a barrier to action. Indeed, Tversky and Shafir (1992) have shown that when confronted with complex choices, individuals may choose to postpone decision-making or seek alternative options. We hypothesize as follows.

H6: The influence of young adults' intentional risky borrowing behavior on actualized risky borrowing behavior is negatively moderated by risky borrowing perceived complexity, such that intentional risky borrowing behavior has a greater positive effect on actualized risky borrowing behavior when risky borrowing perceived complexity is low compared to high.

Study 1

The aim of Study 1 was to examine the relationship between young adults' intentional risky borrowing behavior and financial psychological factors (such as trust in financial institutions and financial knowledge) as well as sociological and behavioral factors (such as subjective norm and general financial healthiness). Study 2 (see below) focuses on young adults who have already taken out a risky consumer loan, while Study 1 covers young adults who have not (yet) taken out one. The studies included gender and wealth as control variables. In addition, study 2 included age. This is because respondents who are 18 or 19 had less opportunity to borrow money within the last two years (because of being underage). While our study did not center on the control variables, accounting for their impact strengthens our hypothesis's testing (Greene, 2000).

Data collection: Participants were chosen from Gallup's online panel (which consists of about 50,000 Danish consumers) using a two-step procedure. First, from the online panel, a stratified random sample of 6,010 people in the age range of 18 to 25 was selected in order to ensure that the 18 to 25 population was represented in terms of gender, age, and educational attainment. Then, in the second phase, an email was sent to these 6,010 respondents asking them to respond to a screening question: "Have you acquired a consumer loan in the past two years?" (Yes/No). If the response was affirmative, respondents were further queried about the type(s) of loan obtained, including SMS-loans (type 1), credit purchases (type 2), shop credit card purchases (type 3), bank loans (type 4), and bank overdrafts (type 5). In this study, loan types 1, 2, and 3 were classified as 'risky' consumer loans due to their typical interest rates exceeding 35-40 percent, or even higher (Olsen, 2012; Tankpenge, 2024). Conversely, loan types 4 and 5, with typical interest rates ranging from 8-20 percent, were deemed 'reasonable' consumer loans (Olsen, 2012; Mybanker, 2024). Study 1 comprised young adults with loan types 4 and/or 5, excluding loan types 1, 2, or 3, whereas Study 2 focused on young adults with loan types 1, 2, and/or 3 (see below). In the final sample for Study 1 (n=488), 57.6 percent were female, with an average age of 22.3 years.

Measurements: Our measurement items were based on prior research, modified to fit the financial service context of this study where relevant. The final items for each construct are summarized in the appendix. In the questionnaire, the items used to measure the study constructs were presented in random order.

Validation of measurements: Confirmatory factor analysis (CFA) using AMOS 29 was conducted on the five latent factors, with each indicator specified to load on its hypothesized latent factor.

Insert Table 1 about here

The measurement model yields a chi-square of 246.61 (d.f.=94, $p<.01$). However, the Hoelter(.05) (Hoelter, 1983) estimate (n=233) suggests that the lack of absolute fit can be explained by sample size. Thus, since the chi-square test is highly sensitive to sample size other fit measures are given greater prominence in evaluating model fit (e.g., Ye, Marinova and Singh, 2007). The root mean square error of approximation (RMSEA=.058), the comparative fit index (CFI=.94) and the normed fit index (NFI=.91) suggest that the measurement model fits the data reasonably well (Bagozzi and Yi, 1988). Composite reliabilities were greater than .70, indicating good reliability of measured constructs (Bagozzi and Yi, 1988). Finally, extracted variance was greater than, or equal to, .5 for all latent constructs, which satisfies the threshold value recommended by Fornell and Larcker (1981).

Discriminant validity was assessed in two ways. First, the method proposed by Fornell and Larcker (1981) was applied. According to this method, the extracted variance for each individual construct should be greater than the squared correlation (i.e., shared variance) between constructs. An examination of Table 2 shows that the extracted variance for each of the constructs exceeded the squared correlation.

Insert Table 2 about here

Second, the baseline measurement model was compared to alternative models where covariances between pairs of constructs were constrained to one (Anderson and Gerbing 1988). In every case, the restricted model had a significant ($p<.05$) poorer fit than the unrestricted model suggesting sufficient discriminant validity.

Hypotheses testing: The applied fit measures indicate that the specified structural equation model (SEM) (using AMOS 29) provides an acceptable fit to the data (χ^2=301.33; d.f.=127; CFI=.93; NFI=.90; RMSEA=.054; Hoelter(.05), n=246). Standardized beta-coefficients from the estimated structural model are reported in Figure 2.

Insert Figure 2 about here

It was proposed that trust in lending institution (i.e., young adults' trust in their current bank) would be negatively related to intentional risky borrowing behavior (H1a). This proposition was confirmed (β=.-19, p=.04). H2 was not supported in the study, as financial knowledge did not affect intentional risky borrowing behavior (β=-.15, $p<.21$), although the coefficient was in the expected direction. H3 was supported since subjective norm was positively related to intentional risky borrowing behavior (β=.56, $p<.01$). H4 was also supported, as financial healthiness was negatively related to intentional risky borrowing behavior (β=-.18, $p<.01$). None of the control variables were significantly related to intentional risky borrowing behavior.

Study 2

The objectives of Study 2 are both to compare the findings of Study 1 with a sample of young adults who already have obtained a risky consumer loan and to investigate how intentional

risky borrowing behavior may influence actualized risky borrowing behavior. Also, Study 2 aims to investigate whether the relationship between intentional risky borrowing behavior and actualized risky borrowing behavior may be moderated by risky borrowing perceived risk and risky borrowing perceived complexity, respectively.

Data collection: Study 2 included young adults with loan types 1, 2 and/or 3 (but not loan types 4 or 5) (see 'Study 1' above). The specific data collection procedure is also detailed above under 'Study 1'. In the final Study 2 sample (n=214), 62.9% were women and average age was 21.9 years.

Measurements: Our measurements of financial knowledge, subjective norm, financial healthiness, and intentional risky borrowing behavior were identical to the measures used in Study 1. However, while trust in lending institution related to young adults' trust in their current bank in Study 1, trust in lending institution related in Study 2 to young adults' trust in the institution where they took their 'risky' consumer loan. Perceived risk was measured using two items adapted from Cox and Cox (2001), whereas three items derived from Hung (2001) measured perceived risky borrowing complexity. Actualized risky borrowing behavior was an observed variable, which was operationalized as the amount (in Danish Kroner, DKK) of risky borrowing carried out over the last two years. The final items for each of the latent constructs are summarized in the Appendix.

Validation of measurements: Similar to Study 1, a CFA was conducted on the seven latent factors, with each indicator specified to load on its hypothesized latent factor. Table 1 summarizes the CFA results.

Insert Table 1 about here

The measurement model is a reasonable fit to the data (χ^2=198.12, d.f.=168, p=.06; CFI=.94;NFI=.90; RMSEA=.051. Composite reliabilities were greater than .70, indicating good reliability of measured constructs (Bagozzi and Yi, 1988) and extracted variance was greater than .5 for all latent constructs, which satisfies the threshold value recommended by Fornell and Larcker (1981). An examination of Table 2 shows that the extracted variance for each of the constructs exceeded the squared correlation suggesting sufficient discriminant validity. In addition, a comparison of the baseline measurement model to alternative models where covariances between pairs of constructs were constrained to one, showed that the restricted model in every case had a significant (p<.05) poorer fit than the unrestricted model indicating sufficient discriminant validity.

Hypotheses testing: The moderating effects were formed applying the residual-centering (i.e., orthogonalizing), two-step procedure recommended by Little et al. (2006). First, each of the specified interactions was regressed onto the first-order effect indicators of the two constructs under consideration. Second, for each of these regressions, the residuals were saved and used as indicators of the interaction construct. This method is regarded superior to more common path models because it incorporates measurement error (Kaplan, 2009). Both the main effects and the hypothesized interaction effects were estimated in the model.

The model chi-square statistic was 509.29 (d.f.=396, p<.01), indicating that the model fails to fit in an absolute sense. However, the more robust fit indexes (CFI=.92; NFI=.90; RMSEA=.047) indicated an acceptable model fit. To test the improvement in fit due to the hypothesized interaction effects, a competing model omitting these interactions, but retaining all other relationships, was estimated. Compared with the proposed model the results suggest that the competing model had inferior fit statistics: χ^2=329.84, d.f.=209, p<.01; CFI=.91;

NFI=.89; RMSEA=.052. To conclude, the hypothesized model is a reasonable fit to the data. Figure 2 displays the estimated coefficients from the SEM analysis.

Trust in lending institution (i.e., young adults' trust in the institution where they obtained their risky loan) was positively related to intentional risky borrowing behavior (β=.14, *p*=.04). Thus, H1b was supported. H2 was not supported inn the study since financial knowledge was not related to intentional risky borrowing behavior (β=-.05, *p*=.65). Social norm was positively related to intentional risky borrowing behavior (β=.89, *p*<.01). This provides support to H3. H4 was also supported since financial healthiness was negatively related to intentional risky borrowing behavior (β=-.17, *p*=.05). The results suggest that risky borrowing perceived risk *negatively* moderated the relationship between intentional risky borrowing behavior and actualized risky borrowing behavior (β=-.16, *p*=.04). Thus, H5 was supported in the study. Risky borrowing complexity did not moderate the relationship between intentional risky borrowing behavior and actualized risky borrowing behavior (β=-.06, *p*=.26), although the coefficient was in the expected direction. Hence, H6 was not supported. We also found that intentional risky borrowing behavior was positively related to actualized risky borrowing behavior (β=.15, *p*<.04). In Study 2, age positively influenced actualized risky borrowing behavior (β=.22, *p*<.01). No other control variables were significant.

Discussion

The results of this study show that young adults' intentional risky borrowing behavior is significantly predicted by subjective norm. Given the impact that social norms have, public policymakers, financial institutions, and educators ought to work toward dismantling negative social norms associated with financial behavior. Attempts to reshape social norms surrounding risky borrowing behavior can benefit from prior successes in altering norms related to alcohol consumption, drug use, disordered eating, gambling, littering, and recycling (for a summary, see Schultz et al., 2007; Pahlevan et al., 2022). In contrast to some behaviors that have objective standards, like alcohol consumption limits, it can be difficult to define what constitutes an objectively excessive level of risky borrowing. Therefore, social comparison data is probably going to have an effect on young adults' future propensity for risky borrowing. Research suggests that young adults might use idealized images of themselves as a benchmark for social comparison norms (Tiggemann and Anderberg, 2020; Penman and McNeill, 2008). This suggests that using financially responsible 'role models' could be beneficial in promoting social comparison (Richins, 1991). It's important to remember, though, that changing people's views of social norms is a difficult undertaking. Social norms marketing campaigns may not succeed in changing behavior significantly without careful planning and execution (e.g., Granfield, 2005; Peeler et al., 2000), and in certain situations, they may even make undesirable behaviors worse (e.g., Wechsler et al., 2003). Furthermore, our findings imply that intentional risky borrowing behavior among young adults is negatively impacted by their overall financial well-being. Interestingly, this result was found in both studies 1 and 2, irrespective of whether or not young adults had taken out a risky loan. These results urge policymakers and financial regulators to work toward enhancing young adults' overall financial well-being in order to lower the probability that they will make risky borrowing decisions, either once or repeatedly. In this regard, a number of studies by Hogarth and Hilgert (2002) and Hilgert, Hogarth, and Beverly (2003) revealed that financially aware consumers are more likely to act in ways that are financially responsible. This idea is supported by the survey results obtained by Hansen (2012) and Perry and Morris (2005). Consistent with these results, we also detected significant correlations

between financial knowledge and general financial healthiness (Study 1: r=.32, p<.01; Study 2: r=.28, p<.01) (Table 2).

At the more general level, it has been emphasized that financial authorities should focus on maintaining trust in banks, and other financial institutions, because financial trust is known to be positively correlated with economic growth and because lack of trust may reduce financial market dynamism (Van der Cruijsen et al., 2023; Zak and Knack 2001). Adding to these considerations, our results suggest that financial authorities and politicians should also focus on trust from a welfare perspective. Specifically, this study demonstrates that trust in individual banks is also important because it may reduce young adults' intentional risky borrowing behavior and thereby, ultimately, prevent them from carrying out risky financial decisions. Risky financial decisions are known to potentially reduce consumer welfare (Xiao, Tang, and Shim 2009). Moreover, our results indicate that young adult risky borrowers who develop less trust in risky lending financial institutions are also less likely to repeat their risky barrowing behavior. Hence, in addition to improving consumers' knowledge about financial topics and concepts we suggest that financial education programs should also be concerned with enabling consumers to assess the trustworthiness of financial service providers. While trust in banks has become an even more important issue in the after crisis era, especially when viewed from a marketing relationship perspective, bank managers should also be committed to re-build trust in order to reduce young adult customers' intentional risky borrowing behavior.

Study 2 demonstrates that when the perceived risk of borrowing is low as opposed to high, intentional risky borrowing behavior has a greater impact on actualized risky borrowing behavior. That is, when young adults are thinking about taking out a risky loan, perceived risk is seen as a barrier. Although a study of perceived risk antecedents is not included in the research presented here, prior work offers strategies that may be used to increase perceived risk. According to social learning theory (Bandura, 1977), social norms, including collective risk perceptions, are subject to change over time. This implies that if role models, directed to exhibit high-risk perceptions, convey these to young adults, it could potentially shape their perceptions of risky borrowing risk (Barone and DeCarlo, 2012). This aligns with the belief that modeling is especially effective in public service advertising aimed at illustrating the adverse consequences of undesirable behaviors (e.g., Schultz et al., 2007).

Banks and financial regulators may also try to directly affect consumers' perceptions of risky borrowing by informing them of the increased uncertainty (i.e., less transparency in the product) and/or risk of more severe financial consequences (i.e., higher monthly payments) associated with risky loans (Campbell and Goodstein, 2001). The results indicate that risky borrowing perceived complexity did not act as a moderator in the relationship between intentional risky borrowing behavior and its actualization, despite the coefficient being in line with our expectations. This finding could be attributed to the phenomenon where consumers, when confronted with complexity, may either devise strategies to navigate it or simply overlook its presence. For instance, several researchers (e.g., Swait and Adamowicz, 2001; Bettman et al., 1998; Wilkie, 1974) have suggested that consumers tend to adopt simplified decision-making heuristics as perceived complexity escalates, allowing them to still make and rationalize their choices. However, these are speculative notions within our current context, and future research may delve deeper into these considerations concerning young adults' risky borrowing behavior.

Limitations and future research

This study drew on various theories (i.e., social learning theory, consumer choice theory, and relationship marketing theory) in order to develop a theoretical understanding of young adults' intentional and actualized bad borrowing behavior. However, it is not suggested that this study provides a definitive background understanding of the complexity of the proposed relationships. Indeed, two of the specified hypotheses were not supported in the study. Future research should therefore regard the propositions put forward in this study as starting points for a further understanding of young adults' bad borrowing behavior, which is clearly an under-researched topic. In that respect, applying qualitative methods (e.g., in-depth interviews, focus group interviews) may also serve to improve our understanding of the topic.

There are several limitations of this study that should be acknowledged. Customers were approached via online surveys; they may behave differently when engaging in specific financial service settings. Thus, although a survey is generally accepted as a means of data collection, there is little control over the contextual setting and over the response behavior of respondents (Kozup, Creyer, and Burton 2003). In addition, this study concentrated on analyzing young adults in one society. Although the investigated financial services are present in most societies and even though these service offerings are most likely guided by similar financial and economic principles, this could mean that the results may suffer from a lack of generalizability when other countries are considered. Future research is also called upon to take into account cultural characteristics such as, for example, the degree of customer uncertainty avoidance, among others. According to Hofstede (2001), uncertainty avoidance reflects a society's tolerance for uncertainty and ambiguity. Since uncertainty avoidance may increase bad borrowing risk avoidance, the negative moderating effect of this construct on the relationship between intentional bad borrowing behavior and actualized bad borrowing behavior may be stronger within uncertainty avoiding societies when compared to less uncertainty avoiding societies. Moreover, the direct influence of trust in financial institution on intentional bad borrowing behavior may also vary across country-specific uncertainty avoidance. This study used perceptive measures, which could be threatened by biased responses. Future research could examine this issue by manipulating some of the model constructs in an experimental setting. Such an experimental study would also replicate the present cross-sectional survey results in a more controlled laboratory setting, and thus provide stronger evidence for the direction of causality in the proposed research model.

APPENDIX

Items used to measure the constructs in the study

Trust in lending institution
X1. I believe that my [financial service provider] cannot be relied upon to keep its promises*
X2. I believe that my [financial service provider] is trustworthy
X3. Overall, I believe my [financial service provider] is honest

Financial knowledge
X4. In general, how knowledgeable are you about different types of consumer loans in the market?
X5. In general, how much experience do you have with different types of consumer loans in the market?
X6. Compared to others you know, how knowledgeable are you about the features of different consumer loans in the market?

Social norm
X7. Members of my family think that it is a good idea to obtain [the risky loan(s) in question]
X8. Most of my friends and acquaintances think that obtaining [the risky loan(s) in question] is a good idea

General financial healthiness (financial behavior over the last year)
X9. I set money aside for savings.
X10. I spent more money than I had.*
X11. I had to cut living expenses.*
X12. I had to buy on credit.*
X13. I had financial troubles because I did not have enough money.*

Intentional risky borrowing behavior
X14. I would consider obtaining [the risky loan(s) in question]
X15. It is likely that I would obtain [the risky loan(s) in question]

Risky borrowing perceived risk
X16. Getting [the loan(s) in question] is risky
X17. Getting [the loan(s) in question] can lead to risky results

Risky borrowing perceived complexity
X18. It is difficult to evaluate whether [the loan(s) in question] is good or risky.
X19. [the loan(s) in question] is not easy to understand
X20. Choosing [the loan(s) in question] is complex

*Item reverse coded.

Notes: Trust was measured by three items adapted from the trust in the organization scale developed by Tax et al. (1998). Knowledge was measured using three items derived from the subjective knowledge scale provided by Mukherjee and Hoyer (2001). Social norm was measured by two items adapted from Hansen (2008). Financial healthiness was measured using five items adapted from Joo and Grable (2004). Intentional risky borrowing behavior was measured by two items derived from Hayhoe et al. (1999). Consistent with Hoffmann and Broekhuizen (2010), affluence was treated as an observed (control) variable and was measured by obtaining respondents' response to the following question: 'What is your current portfolio size (in Danish Kroner, DKK)?'

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Table 1

Confirmatory Factor Analyses Results – Studies 1 and 2

Construct/indicator	Standardized factor loading[a] *Study 1/study 2*	Critical ratio *Study 1/study 2*	Composite reliability *Study 1/study 2*	Extracted variance *Study 1/study 2*
Trust in lending institution			.76 / .76	.51 / .52
X1	.75 / .72	- / -		
X2	.77 / .76	13.47 / 11.43		
X3	.60 / .68	9.46 / 7.56		
Financial knowledge			.75 / .78	.50 / .54
X4	.67 / .66	- / -		
X5	.70 / .89	8.96 / 8.84		
X6	.74 / .63	9.71 / 7.56		
Social norm			.76 / .72	.61 / .57
X7	.66 / .68	- / -		
X8	.89 / .82	10.91 / 7.86		
General financial healthiness			.84 / .87	.52 / .58
X9	.83 / .76	- / -		
X10	.67 /.79	9.96 / 10.15		
X11	.81 / .70	10.81 / 9.16		
X12	.55 /.84	8.09 / 10.78		
X13	.70 / .71	10.12 / 9.44		
Intentional risky borrowing behavior			.76 / .72	.62 / .57
X14	.79 / .82	- / -		
X15	.78 / .68	11.38 / 8.12		
Risky borrowing perceived risk			- / .77	- / .63
X16	- / .88	- / -		
X17	- / .69	- / 8.78		
Risky borrowing perceived complexity			- / .77	- / .52
X18	- / .69	- / -		
X19	- / .72	- / 9.30		
X20	- / .76	- / 10.04		

[a] One item for each construct was set to 1.

Model fit statistics:

Study 1: χ^2 =246.61 (d.f.=94, p<.01), CFI=.94, NFI=.91, RMSEA=.058, Hoelter(.05)=233.

Study 2: χ^2 =198.12 (d.f.=168, p=.06), CFI=.94, NFI=.90, RMSEA=.051.

Table 2

Discriminant validity of constructs – Studies 1 and 2

	Study 1					*Study 2*						
Construct	1	2	3	4	5	1	2	3	4	5	6	7
1. Trust in lending institution	.51					.52						
2. Financial knowledge	.47	.50				.44	.54					
3. Social norm	<.01	<.01	.61			<.01	<.01	.57				
4. General financial healthiness	.02	.10	.01	.52		.02	.08	.15	.58			
5. Intentional risky borrowing behavior	.04	.03	.37	.04	.62	<.01	<.01	.48	.08	.57		
6. Risky borrowing perceived risk	*Na*	*na*	*na*	*na*	*na*	<.01	<.01	.09	<.01	.15	.63	
7. Risky borrowing perceived complexity	*Na*	*na*	*na*	*na*	*na*	.05	.18	.01	.09	<.01	<.01	.52

Diagonals represent average amount of extracted variance for each construct.

Non-diagonals represent the shared variance between constructs

(calculated as the squares of correlations between constructs).

Na: Not applicable.

Figure 1

Conceptual Model

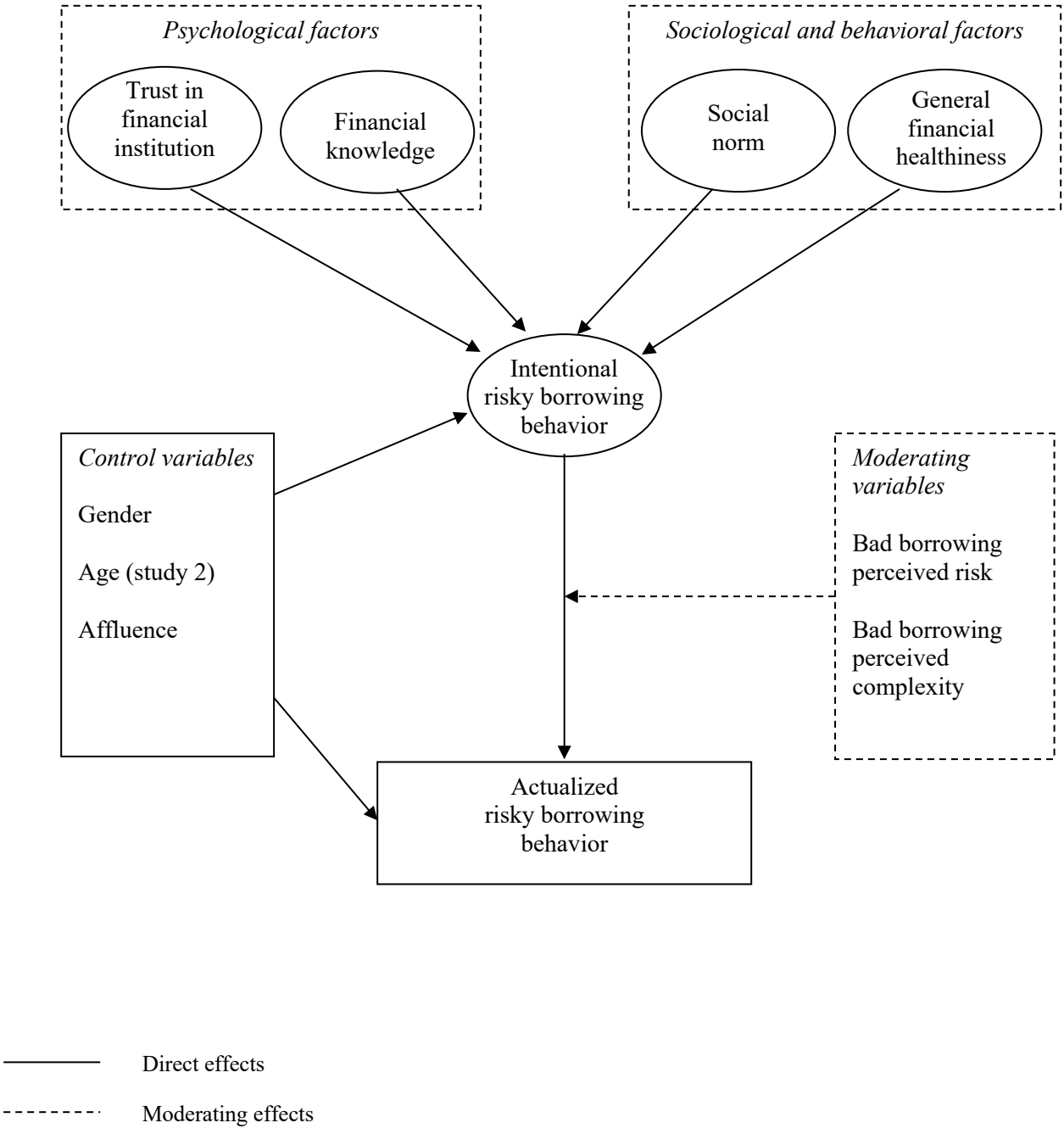
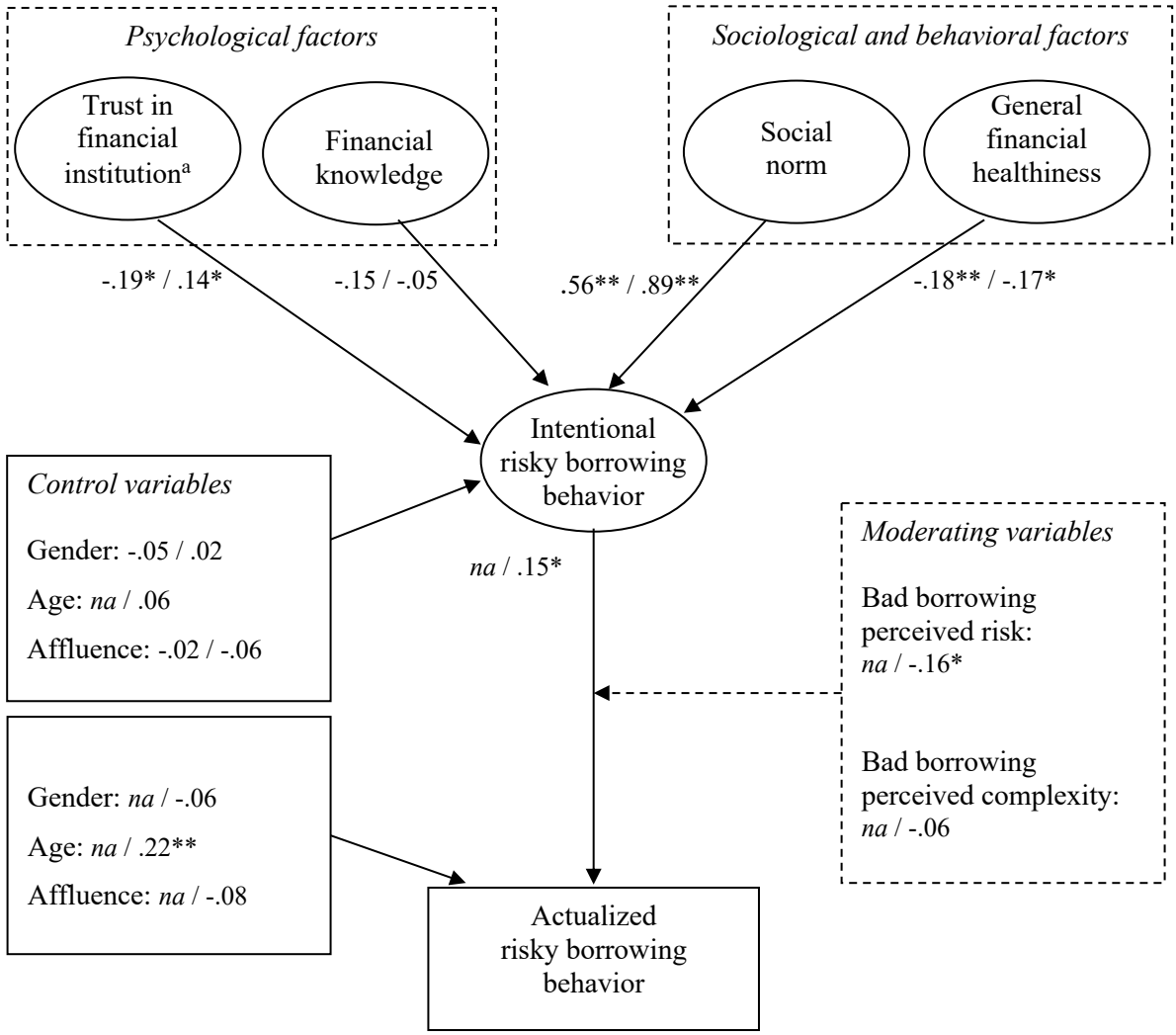


Figure 2

Estimated Standardized Coefficients – Studies 1 and 2



——— Direct effects

- - - - - - - - Moderating effects

Order of reported coefficients: Study 1 / study 2. **Significant on the 1% level; *significant on the 5% level.
Na: Not applicable.

Notes:
[a] In study 1, 'trust in financial institution' was specified as consumers' trust in their current bank. In study 2, 'trust in financial institution' was specified as consumers' trust in the institution, where they took their 'risky' loan.

In forming the 'intentional risky borrowing behavior x risky borrowing complexity' interaction, risky borrowing complexity was represented by its two most reliable indicators; see Jackman et al. (2011). In forming the 'intentional risky borrowing behavior x perceived risk' interaction, both indicators from each scale were used.

Common method variance

Study 1: In order to assess the effects of common-method variance, we reestimated the structural model by adding a same-source factor (all 16 main construct items loading on it) to the model (Netemeyer et al. 1997). Common method variance is a known limitation when using self-report measures. Comparing an unconstrained model in which all indicators are related to a common factor to one in which these paths are constrained to zero represents a significance test of the effects of the same-source factor. The fit of the constrained model was χ^2=223.12 (d.f.=126), CFI=.93; NFI=.91; RMSEA=.044. For the unconstrained model, the fit was χ^2 = 202.28 (d.f.=111), CFI=.94; NFI=.91; RMSEA=.041. The fit of the unconstrained model did not differ from that of the constrained model ($\Delta\chi^2$=20.84, Δd.f.=15, p=.14) and the results for all the estimated model paths were identical to the results reported above suggesting that the results are robust with respect to common method variance.

Study 2: Common-method variance was assessed using the same procedure as in Study 1. The fit of the constrained model was χ^2=560.28 (d.f.=395), CFI=.90; NFI=.88; RMSEA=.056. For the unconstrained model, the fit was χ^2 = 522.08 (d.f.=368), CFI=.92; NFI=.89; RMSEA=.047. The fit of the unconstrained model did not differ from that of the constrained model ($\Delta\chi^2$=38.20, Δd.f.=27, p=.07) and the results for all the estimated model paths were identical to the results reported above suggesting that the results are robust with respect to common method variance.