Financial well-being: a conceptualization and research agenda

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Abstract With savings rates at record lows and inadequate long-term financial planning for retirement, financial well-being has become an important topic for individuals and households as well as for societies and countries. Research on the topic, however, remains scarce and scattered across disciplines. The present paper aims to consolidate and extend knowledge on financial well-being and makes a three-fold contribution to the discussion. First, we propose a new definition based on a perceptual perspective of financial well-being and link it to an individual's current and anticipated desired living standard and financial freedom. We then develop a framework that distinguishes key elements of financial well-being; namely, interventions and financial behaviors, consequences, contextual factors, and personal factors. We then present a research agenda to guide future research on financial well-being. This work is designed to inspire researchers to continue expanding the knowledge so that financial institutions can take measures to increase financial well-being.

Key words Financial well-being, transformative service research, service research, consumer financial decision making, financial services

Highlights

- Research on financial well-being is still at an early stage.
- We provide a new definition of financial well-being.
- We develop a comprehensive framework of financial well-being.
- We present a research agenda related to financial well-being.

1 Introduction

As the world economy slowly recovers from the recent financial turbulence, healthy spending and saving habits of citizens have become a topic of increasing importance for companies, policy makers, and regulators. The OECD reports that household savings rates have decreased for most industrialized countries in recent years (OECD 2016). In the eurozone, for example, savings rate are estimated to drop from over 8.5% in 1999 to 6.56% by 2017. In the US, the OECD forecasts that household savings rates will drop to 4.48% by 2017 (OECD 2016). There are several explanations for this phenomenon. A stable labor market and an increase in consumption demand has led to greater private spending and caused the savings rate to decline at the same time. Moreover, with record-low base interest rates, depositing money in traditional savings accounts has become considerably less attractive as an investment (Blackstone and Troianovski 2013).

Young adults between the ages of 20 and 30 are particularly vulnerable to these financial threats. Many members of Generation Y (that is, those people born between the early 1980s and mid-1990s) entered the workforce during the economic downturn (Kasperkevic 2016). As the markets recover, these young adults in particular struggle (Kasperkevic 2016). An additional issue that is being increasingly observed is rising student debt. A recent analysis by Citizens Financial Group in the US showed that college graduates aged 35 or under are spending 18% of their salaries on student loan payments, which significantly limits their consumption (Citizens Financial Group 2016) and saving for retirement. In addition, average saving contributions are about 4% of current salaries in the US, whereas experts suggest that members of Generation Y, especially, need to save up to 15–20% of their annual incomes beginning at age 25 in order to maintain a similar standard of living in retirement (Struck 2012). The situation is even more dire with regard to long-term financial behavior, since a recent industry report states that retirement is not the main savings

priority for 85% of working-age people. Paradoxically, while retirement planning is not the main priority for a majority of working-age people, more than two-thirds (69%) are worried about running out of money in retirement and 66% are concerned about having enough money for everyday expenses in later life (HSBC Global Report 2016). All of these numbers show that the issue of financial well-being is of utmost importance to nearly every industrialized country on the globe.[1]

It is not surprising that researchers, especially the transformative service research initiatives (Anderson et al. 2013), have acknowledged the importance of gathering knowledge on how to motivate customers to engage in healthier spending and saving behavior (e.g., Mende and van Doorn 2015; Winterich and Nenkov 2015). Generating more knowledge in this area is important: a large number of people facing financial problems at the same time creates a societal problem and leads to negative welfare effects, both now and in the future. From an individual's point of view, financial well-being is important and research has shown that it has a strong and positive relation to overall well-being. Van Praag and Frijters (2003) confirmed that a healthy spending and savings balance is crucial for sustaining long-term financial and personal well-being. Hojman, Miranda, and Ruiz-Tagle (2016) found that depressive symptoms are higher for those who have been persistently over-indebted. In addition, research has shown that personal stress caused by unhealthy spending and saving behavior will not only affect the individual, but also their families and societies (resulting, for example, in reduced physical health or weaker job performance) (Dunn and Mirzaie 2012; Kim and Garman 2003). Having limited financial reserves

[1] While financial well-being is, of course, not limited to industrialized countries, the meaning of the term is quite different for developing countries, where a large part of the population struggles to make ends meet. Recent service research has started to generate insights for base-of-pyramid settings (e.g., Gebauer and Reynoso 2013).

can cause great difficulty when unexpected financial emergencies arise, and may prompt individuals to suffer from financial hardship (UBS 2014).

In light of the pressing nature of this topic, this article makes the following contributions. First, the fact that research on financial well-being is still at an early stage and is currently scattered over various disciplines has led to a lack of clarity in understanding what the term financial well-being actually means. Therefore, we aim to synthesize the various meanings and definitions of financial well-being to provide a new definition for future research in this domain. More specifically, we define financial well-being as "the perception of being able to sustain current and anticipated desired living standard and financial freedom". Gaining a common understanding of this important term is crucial in order to advance a cohesive body of knowledge on this topic of growing interest and importance and to make research outcomes more comparable and interchangeable across disciplines. Second, the article develops an overarching framework that can serve as a guideline for future research into the measurement, drivers, and outcomes of financial well-being. We also discuss boundary conditions that could influence either the antecedents' effects on financial well-being or its specific outcomes. Third, based on the framework, we develop a list of research themes and research questions that will help generate knowledge on financial well-being.

2 Previous definitions and conceptualizations

Financial well-being has been studied in various academic fields, including economics, financial counseling and planning, developmental psychology, consumer decision making, and services marketing. However, there is no universally agreed-upon definition or measurement and no clarity

with regard to its conceptualization and its components. In many cases, while published studies have included financial well-being as one of their major variables of interest, such studies have developed and used various measures of financial well-being without actually defining it (e.g., Guo et al. 2013; O'Neill et al. 2005; Shim et al. 2009). The majority of these papers, including the oft-cited InCharge Financial Distress/Financial Well Being (IFDFW) scale (Prawitz et al. 2006), do not provide a clear definition of this construct that they set out to measure.

However, the existing definitions and measures can be clustered into three groups in terms of their approach: those that use both objective and subjective characteristics, and those that use either objective or subjective characteristics to define financial well-being. In the first group, financial well-being is defined as an objective and subjective concept that contributes to a person's assessment of his/her current financial situation (Vosloo, Fouche, and Barnard 2014). It is treated as a composite concept that consists of both objective and subjective dimensions (Cox et al. 2009), although different studies have adopted different indicators for those objective and subjective dimensions, seemingly without a clear focus. For example, many studies that examine students' financial well-being have included the students' level of debt as a measure of their objective well-being and their satisfaction with their financial status as a subjective measure (Shim et al. 2009). Likewise, Porter and Garman (1992) included quantitative indicators of the financial situation such as income level as the objective measure of financial well-being and perceived satisfaction with standard of living as the more subjective measure.

In the second group, income and other financial indicators have mostly been included as objective measures of financial well-being without considering subjective variables (e.g., Joo and Grable 2004; Kahneman and Deaton 2010). While some studies included mostly financial information, financial ratios, and benchmarks as objective measures of financial well-being (e.g.,

Greninger et al. 1996), others stated that a household's ability to increase and manage liquidity can be used to determine its financial well-being (Aggarwal 2014).

While many studies have used these two approaches to defining and measuring financial well-being, other studies have emphasized a more subjective and less objective approach when defining financial well-being. Although objective measures of the financial situation (income, debt-to-income ratio, etc.) provide objective evidence of where an individual stands financially, subjective measures of financial well-being can help researchers examine peoples' perceptions about and reactions to their financial condition (Norvilitis, Szablicki, and Wilson 2003; O'Neill et al. 2005). The above-mentioned objective indicators measure facets of the financial condition itself rather than one's subjective assessment of the situation (Prawitz et al. 2006). Furthermore, people in similar financial situations, as defined by objective measures such as assets or income, could perceive their financial well-being differently depending, for example, on what they compare it to and what they prefer it to be. Thus, people in the same financial situation may assess their personal financial well-being more or less positively (Garman et al. 2004). Most of these studies have underlined the importance of personal characteristics (e.g., Joo and Grable 2004) and financial behavioral factors (Shim et al. 2009) that affect individuals' subjective assessment of their financial well-being. In other words, those individuals may have a different assessment of their financial well-being based on, for example, their life stages (Malone et al. 2010), or based on their attitude toward risk (Kim, Garman, and Sorhaindo 2003). The perceived ability to meet expenses, satisfaction with savings and investment, and tendency to worry about debt have also been included in studies with a subjective definition of financial well-being (Kim and Garman 2003). In summary, this part of the literature suggests that a subjective approach is more comprehensive

and can also capture non-financial issues, and is therefore more suited than an objective approach to defining and measuring a complex and personal phenomenon such as financial well-being.

Besides different approaches to its definition and measurement, another cause of confusion is that some definitions use wellness and well-being interchangeably, even though the literature makes a clear distinction between them. While wellness typically implies the quality or state of being healthy in body and mind, especially as the result of deliberate effort (Judge, Ilies, and Dimotakis 2010), well-being refers to a good or satisfactory condition of existence (Guo et al. 2013). Studies of the different types of wellness seem to have primarily focused on personal wellbeing and to have been anchored in psychology, whereas our conceptualization relies on the well-being literature where financial well-being as such is of interest.

3 Financial wellbeing: a new conceptualization

We define financial well-being as **the perception of being able to sustain current and anticipated desired living standards and financial freedom.**

We now turn to the individual components of our definition to explain how they fit together. First, our definition of financial well-being is *subjective* in nature because it is based on how an individual perceives it rather than how it is objectively denoted. This implies that only the individual can assess his/her own well-being. Someone cannot make an evaluation of another person's financial well-being. This means that the perception is personal and that individuals may experience high or low financial well-being regardless of their objective financial position. For example, individuals on the same income level can have differing assessments of their

financial well-being depending on their personal preferences and values. How an individual perceives his/her financial well-being is affected by an extensive list of factors. For example, various studies have included personal demographic characteristics such as gender, age, education, marital status, and family structure (Joo and Grable 2004; Malone et al. 2010) that affect a person's assessment of his/her financial well-being. Similarly, someone's financial knowledge and efficacy (Shim et al. 2009; Vosloo, Fouche, and Barnard 2014), financial attitudes toward matters such as money or debt (Norvilitis, Szablicki, and Wilson 2003), financial dispositions like materialism and willingness to take risks (Gutter and Copur 2011), and financial behavior regarding areas like budgeting, saving, and compulsive buying (Joo and Grable 2004; Shim et al. 2009) can all affect the perception of financial well-being. The contextual factors, as well as changes in the macroeconomic environment like increasing or decreasing economic indicators such as unemployment rate, interest and inflation rates, or the occurrence of negative financial events (stressors, for example) like losing a job (O'Neill et al. 2005) can all contribute to the perception of financial well-being. Finally, the subjective nature of this definition implies that an individual's subjective financial well-being assessment is not only driven by his or her income and other personal factors, but it also changes relative to his or her social reference groups (e.g., Ferrer-i-Carbonell 2005). What an individual has or does not have plays an important role in shaping that subjective assessment; however, what he or she has in relation to others has an equally important influence on that assessment (Dolan, Peasgood, and White 2008). While traditional measures such as income or net worth are important, they do not fully capture these aspects of the concept of financial well-being.

Second, the definition has a time dimension, in two ways. Unlike many other previous definitions that focus only on the present, our definition includes *both* the *current and coming*

situation. A future-based assessment of financial well-being may be part of an individuals' assessment and behavior in the present (Norvilitis, Szablicki, and Wilson 2003). The other time aspect is that the financial well-being perception is *dynamic* in that individuals' evaluations of their subjective financial well-being can change over time. The subjective assessment of financial well-being for an individual is determined by different personal and contextual factors that are not static or constant. Given the changes that someone may go through in their life, it would be unrealistic to assume that an individual's assessment of their well-being will stay the same over a longer period of time. For example, a divorce has financial consequences for the short and long term: a separate household needs to be financed, assets are split, and accumulated retirement benefits are divided. Since personal and contextual factors change over time, one's subjective evaluation of financial well-being stays dynamic. Any conceptualization that does not include subjective and dynamic factors would be incomplete.

'Living standard ' refers to the combination of wealth, services, comfort, and material goods available to someone that is considered essential to his/her living (Fah 2010). In our definition, we include *desired living standard* to refer to how someone would prefer his or her quality of life to be; in recent years, this has been the focus of many individual and household financial decisions and planning. Maintaining a specific standard of living is also closely related to financial behaviors and goals. For example, people often spent significant amounts of money on housing, cars, or education, so that these fit the desired life-style; typically at the expense of long-term financial behaviors such as retirement planning (e.g., Meyer 1996). Therefore, we believe that in order for someone to have the perception of financial well-being, he or she must be able to meet his or her desired standard of living. The subsequent assessment of financial well-being can fail to meet or exceed the expenses necessary for a standard of living, which

reflects the reference point. Furthermore, evaluating financial well-being against the individual's personal life goals as a significant comparison standard makes the definition not only individual, but also relative. People compare what they have with what others have and care about how they stand relative to their former classmates, neighbors, friends, or colleagues. This reconfirms the need to conceptualize financial well-being with a subjective lens. Changes can occur in terms of what kind of living standard is desired, but also in terms of whether the available means will suffice to achieve it, all of which contributes to the dynamics of financial well-being.

Finally, *financial freedom* is an important concept of our definition. It implies that someone does not feel forced or stressed about making choices with regard to his/her necessities or covering his/her baseline expenses (Cazzin 2011; Choudhury 2009). Having financial freedom enables individuals to make life decisions without worrying about financial constraints, and achieving it would improve that person's perception of having financial well-being. The relevance of financial freedom for financial well-being is confirmed by interviews conducted by the Consumer Financial Protection Bureau.[2] One aspect that came out strongly in their research is that people perceive themselves to be financially 'well' when they can splurge once in a while, can afford 'wants', such as being able to go out to dinner, and are able to make choices such as being generous toward their friends, family, and community.

Furthermore, it is important to highlight the differences between our definition of financial well-being and other constructs that have been used interchangeably in the literature. One such construct is financial distress. Some studies (e.g., O'Neill et al. 2005) have defined financial well-being as absence of financial distress or have treated them as opposite ends of the same continuum

[2] http://files.consumerfinance.gov/f/201501_cfpb_report_financial-well-being.pdf

(Prawitz et al. 2006). In our view, however, financial well-being and financial distress are two related but different concepts. Financial distress has a narrower scope, as it refers mostly to the (non)-ability to meet expenses at a certain point in time (Kim and Garman 2003). Our definition of financial well-being is broader than financial stress and includes an assessment of not only current but also anticipated standard of living and financial freedom. These are the main differences between our proposed definition of financial well-being and how financial distress is captured.

Similarly, our conceptualization of financial well-being is different from financial efficacy, as used in the literature. Financial efficacy can be defined as a person's perceived capability to control his/her personal finances (Vosloo, Fouche, and Barnard 2014). It reflects a person's skills and ability to influence and control his or her financial matters. Therefore, while efficacy is about having the necessary knowledge to control one's finances, financial well-being refers to the subjective evaluation of one's financial well-being in a comprehensive manner. Financial efficacy, or the lack thereof, can undoubtedly affect an individual's perception of having the control and means to sustain his/her desired lifestyle. Therefore, someone who has such financial efficacy may have a more positive perception of his/her financial well-being. Furthermore, having a positive financial well-being perception may reassure someone of his/her financial efficacy. While we agree that these two concepts can be related, they denote different things.

Finally, our conceptualization of financial well-being is not the same as financial satisfaction, which can be defined as satisfaction with one's present financial situation (Joo and Grable 2004). While we agree with the general consensus that financial satisfaction can be used as one measure of financial well-being, our definition of financial well-being is more encompassing,

including someone's present assessment of his/her satisfaction as well as his/her ability to finance the desired life in the present and the future.

4 Financial well-being: a new framework

Now that we have defined financial well-being, we will develop a broad framework of financial well-being. Elements in the framework include interventions, financial behavior, and contextual and personal factors. The consequences of financial well-being are also included. Inspired by the literature on transformative service research (TSR), which analyzes the effects of service concepts on both the individual as well as on the collective level, we discuss financial well-being on both levels. We also include other stakeholders and look at organizational and societal consequences. In the following sections, we will describe each element of the framework in more detail, summarize the state of research in this area, and point out directions for further research.

4.1 Interventions

Interventions are an effective means of motivating consumers' sustainable behaviors. Research has shown that interventions can encourage consumers to engage in desirable behaviors in a variety of contexts, including alcohol consumption (Campo and Cameron 2006; Perkins 2002), recycling (Schultz 1999), sustainability behaviors such as "grass cycling" (White and Simpson 2013), financial decisions (Beshears et al. 2015), and energy usage (Allcott 2011). Thus, at the heart of our framework we place the role of interventions such as financial counseling or advice (Gerrans, Speelman, and Campitelli 2014), education (such as financial literacy interventions) (Joo 2008; Lusardi 2012), framing (Grinstein and Kronrod 2016; White and Simpson 2013), nudging (Thaler

and Sunstein 2008), or structural interventions (tax benefits, Save More Tomorrow, etc.) (e.g., Benartzi and Thaler 2007).

It is important to consider interventions because they make it possible for policy makers and financial institutions to affect financial well-being. Interventions can be roughly classified into two areas: (1) structural approaches, which attempt to change the conditions for financial planning; and (2) communication approaches, which focus on changing participant knowledge (through training) or perceptions (Wiener and Doescher 2008). Examples of structural changes include tax benefits, raising saving limits, and automatic saving increases such as "Save More Tomorrow" (SMarT) (Thaler and Benartzi 2007). Another widely advocated structural approach for long-term financial planning (that is, retirement planning) is automatic enrollment, which involves automatically enrolling employees in the employer's pension scheme and requiring them to actively opt out if they do not want to join. In terms of the second approach, there has been a lot of research into the effects of financial education (e.g., Lusardi and Mitchell 2011). Individuals who have a good understanding of financial principles are found to plan more for retirement (Lusardi and Mitchell 2011), while other studies have shown that literacy has a positive effect on behavior promoting financial well-being (e.g., Mende and van Doorn 2015). Framing of messages (adapting the wording but not the content of communication) can be a powerful nudge to shape individuals' intentions and behaviors into a desired direction (e.g., Saez 2009; Ulkumen and Cheema 2011). Framing effects are interesting, since minor changes in the wording of a message can significantly alter an individual's perception and response, compared to expensive awareness-generating campaigns and programs (Saez 2009). Many government institutions around the world have also set up behavioral insight units that develop interventions aimed at 'nudging' people into desired behaviors; for example, the Nudge Unit (Halpern 2015). While many of those studies

provide interesting and important results, they have not yet found completely satisfactory answers about how to improve financial behaviors.

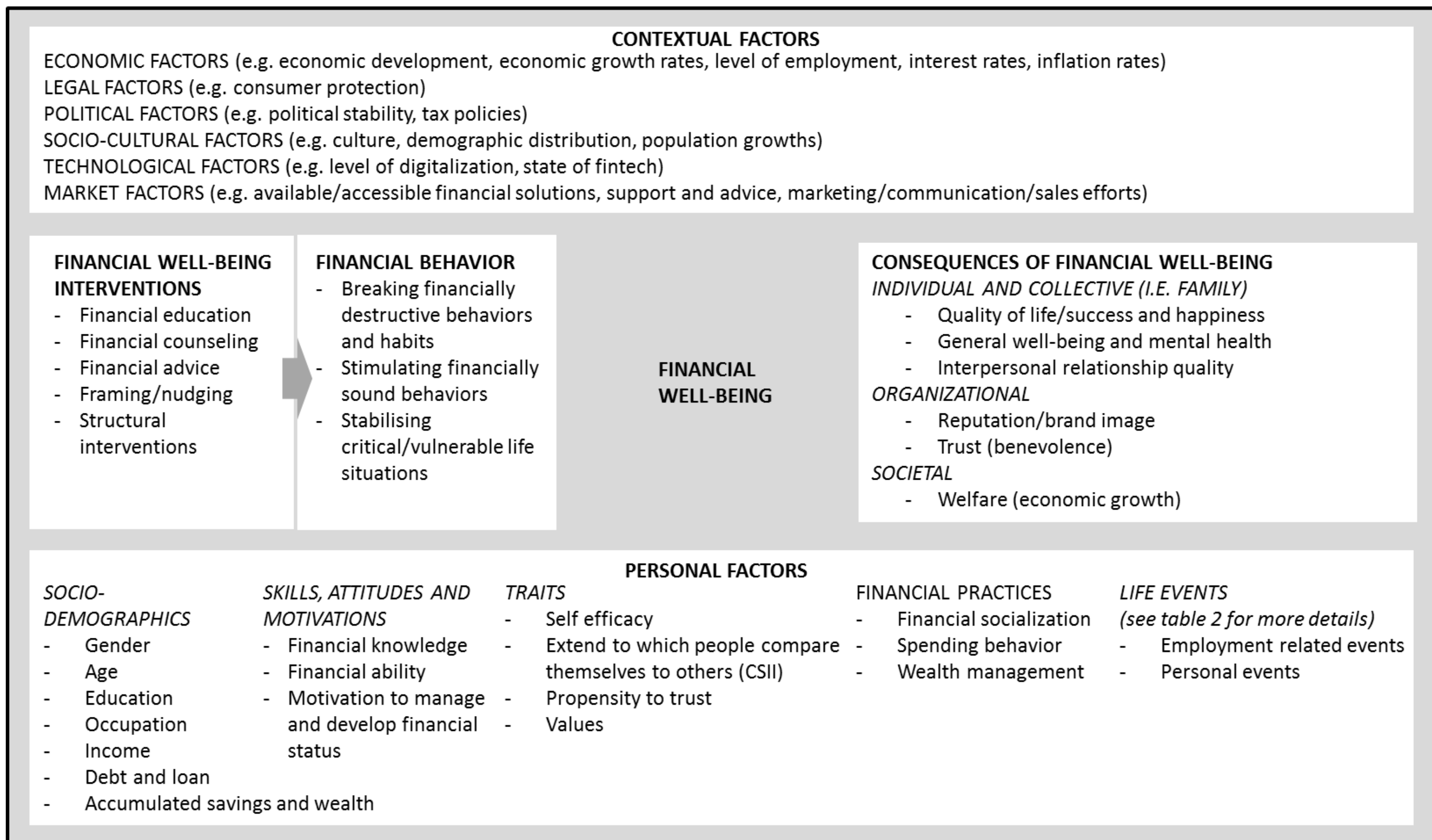

Figure 1 Pictorial representation of five elements and their interrelationships of a new financial well-being framework

4.2. Financial behavior

We have put behavior at the heart of the model because it has a direct impact on financial well-being. Possible behaviors include breaking financially destructive behaviors, stimulating sound financial behaviors, or stabilizing behaviors during critical life situations. More specifically, financially destructive behaviors include overspending, generating debt, paying bills late, or consuming an emergency fund. Interventions, for example through educating consumers or generating awareness, may aim to reduce those destructive behaviors, thereby increasing financial well-being. Alternatively, interventions may aim to increase sound financial behaviors such as saving, creating an emergency fund, paying bills on time, or retirement planning. Interventions can also aim to have a stabilizing effect on critical or vulnerable life situations involving financial shocks; for example, through long-term illness, unemployment, divorce, retirement, and personal bankruptcy. Negotiating solutions for these crises and circumstances and preventing them from becoming long-term problems would have a significant impact not only on the financial well-being of individuals and families, but also on society as a whole.

4.3 Consequences of financial well-being

Because of the wide range and significance of its consequences, it is important to pay attention to and manage financial well-being. The framework includes consequences on different levels and for different stakeholders; that is, the individual, collective, organizational and societal levels.

On an individual or collective level, financial well-being can positively affect quality of life, success, happiness, general well-being, mental health and relationship quality (Dunn and

MirzaieI 2012; Hubler et al. 2016). However, an imbalance in financial well-being can affect those factors negatively. For example, a recent study by Downing (2016) suggested that experiencing financial distress due to foreclosure or being near foreclosure is associated with poor psychological and behavioral indicators, such as anxiety and violent behavior, and declining health.

On an organizational level, fostering the financial well-being of both employees and customers is a form of social responsibility, where actions are undertaken to contribute to a larger social good. Thus, supporting financial well-being contributes to the corporate social responsibility (CSR) goals of organizations, which has been found to improve a company's image (Arendt and Brettel 2010) and trust (Pivato, Misani, and Tencati 2008; Vlachos et al. 2009). Research has shown that image and trust have positive effects on profitability (Cochran and Wood; García de Leaniz and Rodríguez Del Bosque Rodríguez 2015).

Financial well-being also has societal implications (Cochran and Wood; World Commission on Environment and Development (WCED) 1987). When a large group of people is facing financial problems at the same time, it creates a societal problem. People consume less or rely more on social support, which negatively impacts welfare. Vice versa, if large groups of people experience financial well-being, they consume more and rely less on social support, creating positive welfare effects (Griggs et al. 2013; Sacks, Stevenson, and Wolfers 2012).

Financial well-being is also influenced by a broad range of different factors that form the surrounding context and are therefore important to consider. These factors are dynamic and may vary over time. Also, the relative importance and impact may be determined culturally and may differ between countries.

4.4 Contextual factors

The contextual factors constitute the overarching setting and are listed on the upper part of the framework. Contextual factors consist of economic factors, such as the level of economic development (developed economies, economies in transition, and developing economies), economic growth rates, financial crises, levels of employment, interest rates or inflation rates), market factors (such as availability and accessibility of financial solutions, support and advice, marketing, communication, and sales efforts for financial services), legal factors (consumer protection), political factors (political stability, terrorism, tax policies, etc.), socio-cultural factors (such as culture, demographic distribution, population growth rates, level of education, distribution of wealth and social classes, living conditions, and lifestyle), technological factors (level of digitalization, or new inventions such as robo-advising or mobile solutions that offer holistic financial overviews, etc.).

4.5 Personal factors

The bottom of the framework shows five different types of personal factors that impact the financial well-being of individuals and families: socio-demographic factors, skills, traits, financial practices, and life events. Those personal factors can influence financial well-being, but also affect the effectiveness of financial well-being interventions or financial behaviors. In the lower part of the framework we have listed all personal factors that, based on existing research, we would expect to directly influence, mediate, or moderate the central part of the model. However, since the exact effect may depend largely on the exact research question, context, and setting, we have left open the question of how exactly they influence the central part of the model.

4.5.1. Socio-demographic factors

Socio-demographic factors play an important role in the context of financial well-being. For example, women have been consistently found to be more risk-averse than men (Finucane et al. 2000; Flynn, Slovic, and Mertz 1994; Slovic 1987; Weber, Blais, and Betz 2002). Lusardi and Mitchell (2006; 2007a; 2007b; 2011) reported that, in a majority of their analyses, women seem to be less financially knowledgeable than men. Even if women are objectively equally as knowledgeable as men, they are more insecure about their capacity to make financial decisions (Bucher-Koenen and Lusardi 2011). Another difference is that financial knowledge provides financial satisfaction for men, whereas women's financial satisfaction is more affected by financial status (Gerrans, Speelman, and Campitelli 2014). Age can also have a significant effect on wealth accumulation (Binswanger and Carman 2012). Lusardi, Mitchell, and Curto (2010) showed that many young people lack the basic financial knowledge needed to make good financial decisions. Income is generally found to positively influence financial interest (e.g., Donkers and van Soest 1999) and lead to higher saving rates (Beverly and Sherraden 1999); this is believed to be due to the limited access of low-income households to institutionalized saving mechanisms, targeted financial education, and attractive saving incentives and facilitation, which are assumed to promote saving behavior (Beverly and Sherraden 1999). Binswanger and Carman (2012) found that having a college or advanced degree beyond college has a significant positive effect on wealth accumulation. Although the impact of race and different cultures on financial decisions has been studied less extensively than other demographic factors, there is some evidence that race can potentially influence financial well-being. When tested on questions concerning financial literacy,

African-Americans and Hispanics were less likely than Caucasians to answer correctly (Lusardi and Mitchell 2011; Lusardi and Mitchell 2007b).

4.5.2 Skills, attitudes and motivations

Many researchers have asked whether individuals actually possess the necessary skills to engage in financially sound behavior and whether financial illiteracy, lack of ability, or lack of motivation is the reason why many fail to accumulate sufficient wealth. Lusardi and Mitchell have conducted several studies on financial literacy (2012; 2007a; 2011; 2007b; 2008b) and found a positive relationship between financial knowledge and planning for retirement. Lusardi, Mitchell, and Curto (2010) concluded that increasing financial literacy skills is critical for overall economic and social welfare. However, these results should be viewed with caution, as recent research casts some doubt on the effects of financial literacy on behavior (Fernandes, Lynch, and Netemeyer 2014).

4.5.3 Traits

Although demographic information concerning individuals provides the general basis for differentiating a population, it does not provide enough insight to divide people into meaningful segments that explain financial behaviors or financial well-being. Studying personality traits in this context may add additional information to help understand differences in financial well-being among people who are similar in terms of sociodemographic factors. Research shows that personality factors correlate strongly with well-being variables. Whereas demographic factors were shown to correlate to a maximum of .20 with well-being reports, both self-reported and non-

self-reported measures of personality correlate much more strongly with well-being (see Diener and Lucas (1999) for a review). Thus, personality factors may predispose individuals to experience different levels of well-being. Personality traits that could matter in this context are people's propensity to plan, susceptibility to interpersonal influence, self-efficacy, a person's propensity to trust, and life values related to money, consumption, spending, and saving (Luhmann et al. 2012).

4.5.4. Financial practices

Another category of personal factors that impact financial well-being consist of individual's practices in relation to their finances. These practices are partly formed through financial socialization. Children learn financial practices from their parents and others as they grow up. For example, socioeconomic advantage and disadvantage has been found to be transmitted between generations (e.g., Cooper and Stewart 2013; Hubler et al. 2016). Many studies have confirmed that parental influence through financial socialization has a direct and significant influence on the financial attitudes and financial behavior of children and young adults (e.g., Gudmunson and Danes 2011; Jorgensen and Savla 2010). Actual spending behavior and financing spending with different forms of credit have been found among the traps that lead to financial stress (Hojman, Miranda, and Ruiz-Tagle 2016). Wealth management, including cash-flow management, credit management, saving, and investment practices (Hilgert, Hogarth, and Beverly 2003), are all part of financial practices and influence financial well-being.

4.5.5 Life events

Individuals frequently face circumstances or changes that potentially affect their financial behavior and well-being. Previous research has shown that these so-called life events can have short- and long-term effects on subjective well-being (SWB) (Luhmann et al. 2012). Table 1 lists selected key life events that are likely to be relevant for financial well-being. Those life events can be subdivided into employment-related life events that typically affect the income side, and personal life events that typically affect expenditures.

Take marriage as an example: Lupton and Smith (1995) proposed that marriage can affect saving behavior in two ways. First, marriage can serve as a "risk-reducing institution" (Lupton and Smith 1995), where partners insure each other for unforeseen events, making savings less important. In addition, marriage can be seen as a "wealth-enhancing institution" (Lupton and Smith 1995), reducing monthly expenditures by sharing costs, thereby providing more opportunity to save. The purchase of a house can also have a significant effect on the ability to accumulate wealth (Binswanger and Carman 2012). Whereas life events of this type have a positive effect on financial behaviors and well-being, others generally have a negative effect. For example, having children generally depresses saving behavior (Ricketts, Rezek, and Campbell 2013) and pension preparedness (Scottish Widows 2009), as parents increase consumption while potentially decreasing income as parents exit the labor market. Especially for families with three or more children, pension savings show a severe decline (Scottish Widows 2009). For other events, whether the effect is positive or negative depends heavily on the specific situation. For example, the death of parents can improve financial well-being in case of an inheritance, but decrease financial well-being if, for example, parents have left debt. Likewise, a job change could lead to a

salary increase or decrease. In any case, employment-related life events are likely to have a strong impact on people's financial well-being.

Table 1: Overview of selected life events affecting FWB.

Employment-related life event	**Personal life events**
- Being a student	- Marriage
- Starting work for the first time	- Birth or adoption of child
- Retirement	- Last child leaves home
- Being forced to retire	- Death of spouse
- Losing one's job	- Death of parents
- Changing jobs	- Having grandchildren
- Reduction in hours of employment	- Buying a house
- Starting own company	- Divorce or separation
	- Moving to a different location
	- Caring for aged relatives
	- Chronic illness or serious injury
	- Parent put in nursing home

5 Financial well-being: a research agenda

We now present a research agenda of important research topics related to financial well-being, displayed in Table 2, that are based on the elements of the new framework presented in the previous sections.

Table 2: Research agenda for financial well-being

1. CONCEPTUALIZATION OF FINANCIAL WELL-BEING

The current early stage of research warrants comprehensive and fine-grained conceptual development. We suggest:

- Exploring (additional) subjective and cognitive components of financial well-being.
- Identifying (additional) constructs that may have relevance for financial well-being.
- Enriching current concepts and issues in marketing research and practice with a view to financial well-being.

2. MEASURING FINANCIAL WELL-BEING

The complex nature of the concept necessitates using multiple methods. We suggest:

- Exploring the correspondence/mismatch between objective and subjective indicators of financial well-being.
- Developing reliable and valid measures for financial well-being on individual, household, and group levels.
- Exploring the use of big data and data analytics to measure and test financial well-being.
- Developing standards and metrics for different levels/types of financial well-being for use by companies and institutions.
- Using and comparing different data collection methods to measure financial well-being.
- Including different time scopes and levels of analyses to measure financial well-being.

3. INTERVENTIONS TO IMPROVE FINANCIAL WELL-BEING AND FINANCIAL BEHAVIOR

We suggest the following ways of improving financial well-being:

- Developing and implementing new financial interventions to improve financial well-being.
- Testing the effectiveness of different financial interventions on financial behavior and financial well-being.
- Applying technological innovations to monitor and assist in financial well-being interventions.

4. CONSEQUENCES OF FINANCIAL WELL-BEING

Financial well-being has many consequences that need to be explored. We suggest:

- Analyzing how financial well-being affects individual and collective quality of life, mental health, and interpersonal relationships.
- Examining how individual and collective financial well-being affects companies and organizations.
- Assessing how individual and collective financial well-being affects communities and societies.
- Evaluating how to improve the awareness of financial well-being in companies and organizations, especially in those that may have consumers in financial distress, and how to develop business models to serve them better.

- Researching how to increase the awareness of financial well-being in society.
- Investigating the links between financial well-being and sustainability attitudes and behavior.
- Exploring the relationships between financial well-being and other marketing and services-related constructs.

5. CONTEXTUAL FACTORS OF FINANCIAL WELL-BEING

Financial well-being is embedded in a societal setting, and certain contextual factors need to be understood. We suggest:

- Identifying different contextual factors and empirically testing their differential and collective impact on financial well-being.
- Comparing different countries and types of markets in terms of their effect on financial well-being.
- Evaluating how changes in contextual factors affect financial well-being in the short- and long-term.

6. PERSONAL FACTORS AFFECTING FINANCIAL WELL-BEING

Personal factors are fundamental to financial well-being and need to be acknowledged in a broad manner. We suggest:

- Identifying different personal factors and empirically testing their differential and collective impact on financial well-being.
- Measuring and comparing the effects of different personal factors on financial well-being.
- Analyzing how financial well-being is transmitted/learned in households, groups, and communities.
- Identifying key drivers of financial well-being evaluation for different segments.
- Identifying the drivers of financial well-being evaluation over different life events.
- Revealing processes that deteriorate or strengthen financial well-being over the short- and long-run.

First of all, since financial well-being is an emerging research area, we propose that there is a need for both comprehensive and fine-grained conceptual development. Because we have defined financial well-being in a broad manner, we have also opened up many different areas. A whole spectrum of cognitive, behavioral, psychological and also emotional aspects deserve more consideration – not just each of these factors in themselves, but also the interplay between them; for example, how emotional issues affect cognition and vice versa. Although happiness has been studied to some extent, we concur with other researchers (e.g., Gaur, Herjanto, and Makkar 2014) who have called for research into emotions more broadly. There seems to be a complete lack of such studies in the research on financial well-being, perhaps due to the popularity of the objective approach. Here, we also refer to different positive and negative emotions, as different emotions

have different effects. For example, Lerner and Keltner (2001) found that fearful people are pessimistic, whereas both angry and happy people are optimistic.

Our definition offers additional insights; for example, on what different kinds and levels of desired life standards there are and on the meaning of financial freedom of choice. Both of these should offer a fresh perspective and capture individuals' thinking in line with the new subjective definition.

A different option could be to choose a longitudinal perspective and aim to identify different typical and atypical patterns that either weaken or strengthen the factors of financial well-being. In addition, key drivers of financial well-being for different segments could be explored, such as those related to the personal factors mentioned in the framework; that is, socio-demographics, skills, traits, financial practices, and life events. We also recommend analyzing life events that are likely to cause fundamental changes in financial well-being; for example, when individuals experience an exceptional increase (such as a lottery win or inheritance) or decrease (such as bankruptcy) in wealth. In addition, we strongly endorse looking at other disciplines, including psychology, behavioral finance, sociology, and social anthropology, for useful models and conceptualizations to apply in marketing studies. Furthermore, we would recommend applying a financial well-being perspective to current key concepts and issues in marketing research and practice. From a customer perspective, how could financial well-being enrich, for example, customer experience, customer value (or the destruction of value), service satisfaction, and the adoption and use of smart services and mobile applications? Here, financial well-being could be measured at the individual level as well as the collective level; that is, the family or community level. Financial well-being is particularly related to the emerging transformative service research discipline that focuses on creating 'uplifting changes' that aim to improve the lives of individuals

(both consumers and employees), families, communities, society, and the ecosystem more broadly (Anderson et al. 2013). Using an interactional approach, additional insights could be gained by infusing financial well-being into value co-creation, service innovation, and service eco-systems. From a company perspective, financial well-being could be useful for discovering not only new business ideas and customer segments, but also values in the design of digitalization, (sustainable) business models, and contact personnel's skill sets. These notions can be considered to have a financial underpinning that has so far been neglected, but could benefit from research with a focus on financial well-being.

The second set of new research themes we propose relates to the measurement of financial well-being. Here, measurement refers to its meaning in a broad manner, as we need a holistic set of methodologies to generate both in-depth insights and generalizable quantitative results. Thus, research into financial well-being should embrace qualitative interviews as well as surveys, field experiments, archival data, or neuroscience techniques such as EEG, eye-tracking, skin-conductance, and heart-rate measures in order to generate knowledge. Research should also experiment with novel research approaches from semiotics, cultural consumption, sociology, critical perspective, anthropology, Consumer-Culture-Theory, historical and novel data collection methods (such as netnography, diaries, video filming, text and image analysis), and comparative approaches. A particularly valuable option could be to analyze the match between objective/numerical and subjective/cognitive indicators. For example, there could be situations in which someone possesses considerable wealth but perceives their financial well-being as poor, and vice versa. Different scales are needed, as are metrics and standards for different purposes. These guidelines could be used by companies to better understand their customer base and clients, as well as by authorities and organizations. Our new definition inspires the development of

dimensions and scales to describe desired lifestyles and financial freedom of choice. We also see huge potential in the use of big data and data analytics, particularly over time. Moreover, we strongly encourage longitudinal studies and the selection of different levels of analysis, such as individual, household, group, community, society, and country.

The third area in need of more research is the ways in which financial well-being can be influenced and favorable financial behavior can be supported. Even though financial well-being is of direct relevance to each of us and closely linked to real life, there have been surprisingly few attempts to develop efficient interventions to support it. It is a research area that is very much in an early stage; therefore, studies to develop new tools and practices are needed. We suggest that interventions to improve financial well-being could be supported similarly to the way in which wealth and well-being are studied and promoted in transformative service research (e.g., Anderson et al., 2013; Anderson and Ostrom, 2015; Mende and van Doorn, 2015). There are situations in which outside support is clearly needed to, for example, break financially destructive behaviors or stabilize temporary emergencies, but there could also be a need to create awareness and support financially sound behaviors in general. Thus, interventions of different kinds through education or counseling need to be developed. Testing different intervention concepts and their effects and doing so in new teams and constellations is encouraged. Researchers with supplementary skills from disciplines such as communication theory, sociology, and information theory could cooperate, and authorities and companies could also be involved in this process. Thus, creating new sorts of teams would be beneficial. Another point to highlight is that, because of its relevance and potential, financial well-being should be a promising and appealing theme for research project applications for company, organization, governmental, and EU funding. Moreover, IT innovations such as apps and wearables would be modern and suitable tools for promoting financial well-being

that would appeal especially to the younger generations. As banks are currently developing related tools because of the digitalization trend, they could be particularly interested in financial well-being issues as a way to add value to their service portfolio.

The consequences of financial well-being form a fourth broad theme. So far, these consequences have been studied primarily in terms of the effects on the individual level, but we suggest also taking other kinds into account. What makes financial well-being so meaningful to study is its relevance and its multi-faceted effects. So far, the ways in which financial well-being affects individuals' everyday life has so far only been recognized to a limited extent (e.g., Sacks, Stevenson, and Wolfers 2012). Therefore, analyzing life-satisfaction and happiness, mental health, and relationships with others would be natural research themes with the potential to generate novel insights into consumers and their lives. Equally important are links to companies and organizations and also communities and societies, implying an eco-system or network perspective on financial well-being. This would benefit companies with financially distressed customers, but also other stakeholders that aim to promote general well-being in society, which could be done by spreading success stories and best practices. Furthermore, we recommend linking financial well-being to sustainability concerns and discovering ways to simultaneously promote both, for the benefit of the whole society and the individual. This combination could also be an idea that has business potential.

Since context is very important to financial well-being, we invite researchers' attention to this aspect as well. Sub-aspects of economic, legal, political, socio-cultural, technological, and market factors are all areas in need of more attention. Both structural and dynamic research designs focused on these aspects are recommended. Since countries and cultures differ, comparative approaches would also be useful. Money is a fundamental aspect of human life throughout the

world, and financial well-being needs to be approached in diverse ways – from politics, culture, and economics to digitalization and financial service development. For instance, selecting specific events or changes on a general societal level and revealing how they affect financial well-being could benefit political decision-making, social welfare, and business innovation.

Last but not least, and following from the broad range of personal factors outlined in the framework, we believe that much can be revealed about financial well-being by examining different such factors. Most research to date has focused on socio-demographic and skills as antecedents to financial well-being, but we believe that personal traits, financial practices, and zooming in on different life events are new and fruitful research areas. Taking a subjective perspective on financial well-being while linking it to, for example, motivation to manage one's own financial status, spending behavior, or selected life events can be expected to substantially enrich our understanding. For example, financial behavior such as credit card use, gambling, compulsive buying, payday personal (online) loans, and over-indebtedness represent behavioral practices that are risky and costly for consumers and society and therefore warrant closer attention. Similarly, self-efficacy (that is, the ability to manage financial problems and cope with setbacks) would be worth supporting through improved insight from intervention studies. Values such as materialism and the meaning of buying could be other research topics that are particularly suitable to link to the topic of desired lifestyle and financial freedom of choice. Furthermore, wealth management (Cho, Geistfeld, and Loibl 2014; Hira, Sabri, and Loibl 2013; Pompian 2012), including short-term and long-term deliberate and undeliberate wealth handling, including savings, investment, cash as parts of an investment portfolio, and insurance preferences and management, could be other areas related to financial well-being that could be encouraged from a marketing research perspective.

6 Conclusion

The aim of this article was to summarize and structure the current discussion of research on financial well-being, a topic that is of increasing importance for academia, practice, and policy makers alike. Based on our literature review, we have described the lack of a clear definition of the construct 'financial well-being'. We have addressed this apparent gap in the literature by providing a comprehensive definition that could help bridge the different research streams on this topic. In so doing, we have added to the valuable new research stream of transformative service initiatives (Anderson et al. 2013). The contribution of our manuscript is threefold. First, we have synthesized and compared the distinct definitions of financial well-being. This is worthwhile, as definitions guide the conceptualization and measurement of a specific construct. Providing a commonly accepted definition makes research outcomes more comparable and easier to grasp. We have delineated a definition that will form a common basis for future research in this domain. Our definition incorporates the relevant stakeholders as well as the time horizon covered by decisions that affect financial well-being. We decided to propose a very broad definition that recognizes the complex nature of an individual's financial well-being, including fundamentally different but supplementing elements such as cognition, emotions, and action and the relationships between these various elements. Therefore, in contrast with many previous studies, we have not stressed just the objective dimension of well-being, but have also discussed its subjective component. Furthermore, we have recognized the interdependence between the individual and society. This provides the additional advantage of a broader view, since the financial well-being of individuals is not disconnected from, but instead closely linked to, the societal context and the changes taking place in it. Second, we have synthesized and structured the current state of the literature. Based on

this discussion, we developed a comprehensive framework showing the determinants and outcomes of financial well-being. Moreover, our framework shows the context factors and personal characteristics that might moderate these relationships. In doing this, we have informed academics about potential avenues for future research. We developed six research themes and a comprehensive set of research topics that could be addressed in future research in order to create knowledge on the antecedents, consequences, and influencing factors of financial well-being. In line with transformative service research, this paper addresses both the individual as well as the collective level and the community. In addition, we have included other stakeholders and looked at organizational and societal consequences. Thus, we hope that this article contributes to theory development by stimulating research in this area, thereby enhancing our knowledge and understanding of financial well-being, the factors that influence it, as well as its consequences. We hope that this analysis consolidates and extends knowledge on financial well-being and encourages more research in this prominent field. Overall, this work may inspire marketing researchers to continue expanding our knowledge of financial well-being.

From a managerial and public policy perspective, we provide the following insights. First, addressing the research themes proposed in this article will improve the financial well-being of individuals and families, which will have a positive impact on quality of life and happiness, general well-being and mental health, and the quality of interpersonal relationships. In the same vein, the suggested research will provide knowledge about how financial well-being can be improved in order to help avoid potentially negative effects on consumption in the long run and increased reliance on social support. Financial service providers will learn more about how people behave financially and which interventions work, in order to facilitate financially sound behaviors. This knowledge can be used to improve their services so that financial well-being is increased.

REFERENCES

Aggarwal, S. (2014), "Developing an Index for Measuring Financial Well-Being in a Geography," *IFMR Finance Foundation.*

Allcott, H. (2011), "Social Norms and Energy Conservation," *Journal of Public Economics*, 95 (9), 1082–95.

Anderson, L. and Ostrom A.L. (2015), "Transformative Service Research: Advancing our Knowledge about Service and Well-Being," *Journal of Service Research*, 18 (3), 243-49.

Anderson, L., A.L. Ostrom, C. Corus, R.P. Fisk, A.S. Gallan, M. Giraldo, M. Mende, M. Mulder, S.W. Rayburn, M.S. Rosenbaum, K. Shirahada, and J.D. Williams (2013), "Transformative Service Research: An Agenda for the Future," *Journal of Business Research*, 66 (8), 1203–10.

Arendt, S. and M. Brettel (2010), "Understanding the Influence of Corporate Social Responsibility on Corporate Identity, Image, and Firm Performance," *Management Decision*, 48 (10), 1469–92.

Benartzi, S. and R.H. Thaler (2007), "Heuristics and Biases in Retirement Savings Behavior," *The Journal of Economic Perspectives*, 21 (3), 81–104.

Beshears, J., J.J. Choi, D. Laibson, B.C. Madrian, and K.L. Milkman (2015), "The effect of providing peer information on retirement savings decisions," *The Journal of Finance*, 70 (3), 1161–201.

Beverly, S.G. and M. Sherraden (1999), "Institutional Determinants of Saving: Implications for Low-Income Households and Public Policy," *The Journal of Socio-Economics*, 28 (4), 457–73.

Binswanger, J. and K.G. Carman (2012), "How real people make long-term decisions: The case of retirement preparation," *Journal of Economic Behavior & Organization*, 81 (1), 39–60.

Blackstone, B. and A. Troianovski (2013), "Europe's Easy-Money Policy Snubs German Savers," *The Wall Street Journal*, [available at http://online.wsj.com/news/articles/SB10001424052702304607104579214103697074802].

Bucher-Koenen, T. and A. Lusardi (2011), "Financial Literacy and Retirement Planning in Germany," *Journal of Pension Economics and Finance*, 10 (4), 565–84.

Campo, S. and K.A. Cameron (2006), "Differential effects of exposure to social norms campaigns: A cause for concern," *Health communication*, 19 (3), 209–19.

Cazzin, J. (2011), "11 Steps to Financial Freedom," *Money Sense*, 13 (5), 47–51.

Cho, S.H., L. Geistfeld, and C. Loibl (2014), "Motivation for emergency and retirement saving: an examination of Regulatory Focus Theory," *International Journal of Consumer Studies*, 38 (6), 701–11.

Choudhury, G. (2009), "New Freedom of Financial Choice," *McClatchy – Tribune Business News*, Aug. 15.

Citizens Financial Group (2016), "Millennial College Graduates with Student Loans Now Spending Nearly One-Fifth of Their Annual Salaries on Student Loan Repayments," [available at http://investor.citizensbank.com/about-us/newsroom/latest-news/2016/2016-04-07-140336028.aspx].

Cochran, P.L. and R.A. Wood "Corporate Social Responsibility and Financial Performance," *Academy of Management Journal*, 27 (1), 42–56.

Cooper, K. and K. Stewart (2013), "Does Money Affect Children's Outcomes?" *Report, Josef Rowntree Foundation (JRF)*, [available at https://www.jrf.org.uk/report/does-money-affect-children%E2%80%99s-outcomes].

Cox, A., H. Hooker, C. Markwick, and P. Reilly (2009), "Financial Well-Being in the Workplace," *Report by Institute for Employment Studies*.

Diener, E. and R.E. Lucas (1999), "Personality and Subjective Well-Being," in *Well-being: The foundations of hedonic psychology.*, D. Kahneman and E. Diener and N. Schwarz and D. Kahneman and E. Diener and N. Schwarz, eds. New York, NY, US: Russell Sage Foundation.

Dolan, P., T. Peasgood, and M. White (2008), "Do we Really Know What Makes us Happy? A Review of the Economic Literature on the Factors Associated with Subjective Well-Being," *Journal of Economic Psychology*, 29 (1), 94–122.

Donkers, B. and A. van Soest (1999), "Subjective Measures of Household Preferences and Financial Decisions," *Journal of Economic Psychology*, 20 (6), 613–42.

Downing, J. (2016), "The Health Effects of the Foreclosure Crisis and Unaffordable Housing: A Systematic Review and Explanation of Evidence," *Social Science & Medicine (1982)*, 162, 88–96.

Dunn, L. and I.A. Mirzaie (2012), "Determinants of Consumer Debt Stress: Differences by Debt Type and Gender," *Working Paper,* Ohio State University, Columbus, OH.

Dunn, L.F. and I.A. MirzaieI (2012), "Determinants of Consumer Debt Stress: Differences by Debt Type and Gender," *Working Paper*, Ohio State University, Columbus, OH.

Fah, B.C.Y. (2010), "Living Standard, Living Level and Economic Wellbeing of Older Persons," *Canadian Social Science,*, 6 (5), 145–50.

Fernandes, D., J.G.j. Lynch, and R.G. Netemeyer (2014), "Financial Literacy, Financial Education and Downstram Financial Behavior," *Management Science*, 60 (8), 1861–83.

Ferrer-i-Carbonell, A. (2005), "Income and Well-Being: An Empirical Analysis of the Comparison Income Effect," *Journal of Public Economics*, 89 (5–6), 997–1019.

Finucane, M.L., A. Alhakami, P. Slovic, and S.M. Johnson (2000), "The Affect Heuristic in Judgments of Risks and Benefits," *Journal of Behavioral Decision Making*, 13 (1), 1–17.

Flynn, J., P. Slovic, and C.K. Mertz (1994), "Gender, Race, and Perception of Environmental Health Risks," *Risk Analysis*, 14 (6), 1101–08.

García de Leaniz, P.M. and I. Rodríguez Del Bosque Rodríguez (2015), "Exploring the Antecedents of Hotel Customer Loyalty: A Social Identity Perspective," *Journal of Hospitality Marketing & Management*, 24 (1), 1–23.

Garman, E.T., B. Sorhaindo, W. Bailey, J. Kim, and J. Xiao (2004), "Financially Distressed Credit Counseling Clients and The Incharge Financial Distress/Financial Well-Being Scale," in Proceedings of the Eastern Regional Family Economics and Resource Management Association Conference.

Gaur, S.S., H. Herjanto, and M. Makkar (2014), "Review of Emotions Research in Marketing, 2002–2013," *Journal of Retailing & Consumer Services*, 21 (6), 917–23.

Gebauer, H., and Reynoso, J. (2013), "An Agenda for Service Research at the Base of the Pyramid. *Journal of Service Management*, 24 (5), 482-502.

Gerrans, P., C. Speelman, and G. Campitelli (2014), "The Relationship between Personal Financial Wellness and Financial Wellbeing: A Structural Equation Modelling Approach," *Journal of Family and Economic Issues*, 35 (2), 145–60.

Greninger, S.A., V.L. Hampton, K.A. Kitt, and J.A. Achacoso (1996), "Ratios and Benchmarks for Measuring the Financial Well-Being of Families and Individuals," *Financial Services Review*, 5 (1), 57.

Griggs, D., M. Stafford-Smith, O. Gaffney, J. Rockström, M.C. Ohman, P. Shyamsundar, W. Steffen, G. Glaser, N. Kanie, and I. Noble (2013), "Policy: Sustainable development goals for people and planet," *Nature*, 495 (7441), 305–07.

Grinstein, A. and A.N.N. Kronrod (2016), "Does Sparing the Rod Spoil the Child? How Praising, Scolding, and an Assertive Tone Can Encourage Desired Behaviors," *Journal of Marketing Research (JMR)*, 53 (3), 433–41.

Gudmunson, C.G. and S.M. Danes (2011), "Family Financial Socialization: Theory and Critical Review," *Journal of Family and Economic Issues*, 32 (4), 644–67.

Guo, L., E.J. Arnould, T.W. Gruen, and C. Tang (2013), "Socializing to Co-Produce: Pathways to Consumers' Financial Well-Being," *Journal of Service Research*, 16 (4), 549–63.

Gutter, M. and Z. Copur (2011), "Financial Behaviors and Financial Well-Being of College Students: Evidence from a National Survey," *Journal of Family and Economic Issues*, 32 (4), 699–714.

Halpern, D. (2015), Inside the Nudge Unit. London, UK: Ebury Press.

Hilgert, M.A., J.M. Hogarth, and S.G. Beverly (2003), "Household Financial Management: The Connection between Knowledge and Behavior," *Federal Reserve Bulletin*, 89 (7), 7.

Hira, T.K., M.F. Sabri, and C. Loibl (2013), "Financial Socialization's Impact on Investment Orientation and Household Net Worth," *International Journal of Consumer Studies*, 37 (1), 29–35.

Hojman, D.A., Á. Miranda, and J. Ruiz-Tagle (2016), "Debt Trajectories and Mental Health," *Social Science & Medicine*, 167, 54–62.

HSBC Global Report (2016), "The Future of Retirement: A Balancing Act."

Hubler, D.S., B.K. Burr, B.C. Gardner, R.E. Larzelere, and D.M. Busby (2016), "The Intergenerational Transmission of Financial Stress and Relationship Outcomes," *Marriage & Family Review*, 52 (4), 373–91.

Joo, S.-h. and J.E. Grable (2004), "An Exploratory Framework of the Determinants of Financial Satisfaction," *Journal of Family and Economic Issues*, 25 (1), 25–50.

Joo, S. (2008), "Personal financial wellness," in *Handbook of consumer finance research.*, J.J. Xiao and J.J. Xiao, eds. New York, NY, US: Springer Science+Business Media.

Jorgensen, B.L. and J. Savla (2010), "Financial Literacy of Young Adults: The Importance of Parental Socialization," *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, 59 (4), 465–78.

Judge, T.A., R. Ilies, and N. Dimotakis (2010), "Are Health and Happiness the Product of Wisdom? The Relationship of General Mental Ability to Educational and Occupational Attainment, Health, and Well-Being," *Journal of Applied Psychology*, 95 (3), 454–68.

Kahneman, D. and A. Deaton (2010), "High Income Improves Evaluation of Life but not Emotional Well-Being," *Proceedings Of The National Academy Of Sciences Of The United States Of America*, 107 (38), 16489–93.

Kasperkevic, J. (2016), "Tired, Poor, Huddled Millennials of New York Earn 20% Less than Prior Generation," [available at https://www.theguardian.com/us-news/2016/apr/25/new-york-millennials-great-depression-economic-crisis].

Kim, J. and E.T. Garman (2003), "Financial Stress and Absenteeism: An Empirically Derived Model," *Financial Counseling and Planning*, 14 (1), 31–42.

Kim, J., E.T. Garman, and B. Sorhaindo (2003), "Relationships among Credit Counseling Clients' Financial Well-Being, Financial Behaviors, Financial Stressor Events, and Health," *Financial Counseling and Planning*, 14 (2), 75–87.

Lerner, J.S. and D. Keltner (2001), "Fear, Anger, and Risk," *Journal of Personality & Social Psychology*, 81 (1), 146–59.

Luhmann, M., W. Hofmann, M. Eid, and R.E. Lucas (2012), "Subjective well-being and adaptation to life events: A meta-analysis," *Journal of Personality and Social Psychology*, 102 (3), 592–615.

Lupton, J.P. and J.P. Smith (1995), "Marriage, Assets and Savings," in *Marriage and the Economy: Theory and Evidence from Advanced Industrial Societies*, S.A. Grossbard-Shechtman, ed. Cambridge: Cambridge University Press.

Lusardi, A. (2012), "Financial Literacy and Financial Decision-Making in Older Adults," *Journal of the American Society of Aging*, 36 (2), 25–32.

---- (1999), "Information, expectations, and savings for retirement," *Behavioral dimensions of retirement economics*, 81, 115.

Lusardi, A. and O.S.Mitchell O.S.(2006), "Financial Literacy and Planning: Implications for Retirement Wellbeing," *MRRC Working Paper*, 2006–144.

---- (2007a), "Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth," *Journal of monetary Economics*, 54 (1), 205–24.

---- (2007b), "Financial literacy and Retirment Planning: New Evidence from the Rand American Life Panel," in MRRC Working Paper No. 2007–157.

---- (2008a), "Planning and financial literacy: How do women fare?," National Bureau of Economic Research.

---- (2008b), "Planning and Financial Literacy: How Do Women Fare?," *National Bureau of Economic Research*.

---- (2011a), "Financial Literacy and Planning: Implications for Retirement Wellbeing," National Bureau of Economic Research.

Lusardi, A., O.S. Mitchell, and V. Curto (2010), "Financial Literacy among the Young," *Journal of Consumer Affairs*, 44 (2), 358–80.

Malone, K., S.D. Stewart, J. Wilson, and P.F. Korsching (2010), "Perceptions of Financial Well-Being among American Women in Diverse Families," *Journal of Family and Economic Issues*, 31 (1), 63–81.

Mende, M. and J. van Doorn (2015), "Coproduction of Transformative Services as a Pathway to Improved Consumer Well-Being: Findings From a Longitudinal Study on Financial Counseling," *Journal of Service Research*, 18 (3), 351–68.

Meyer, G.D. (1996), "Living for Today While Saving for Tomorrow," *Journal of the American Society of CLU and ChFC*, 50 (6), 34–35.

Norvilitis, J.M., P.B. Szablicki, and S.D. Wilson (2003), "Factors Influencing Levels of Credit-Card Debt in College Students," *Journal of Applied Social Psychology*, 33 (5), 935–47.

O'Neill, B., B. Sorhaindo, J.J. Xiao, and E.T. Garman (2005), "Financially Distressed Consumers: Their Financial Practices, Financial Well-Being, and Health," *Financial Counseling and Planning*, 16 (1), 73–87.

OECD (2016), "Household Savings Forecast (Indicator)," [available at https://data.oecd.org/hha/household-savings-forecast.htm].

Perkins, H.W. (2002), "Social norms and the prevention of alcohol misuse in collegiate contexts," *Journal of Studies on Alcohol, supplement* (14), 164–72.

Pivato, S., N. Misani, and A. Tencati (2008), "The Impact of Corporate Social Responsibility on Consumer Trust: The Case of Organic Food," *Business Ethics: A European Review*, 17 (1), 3–12.

Pompian, M.M. (2012), "Behavioral Finance and Investor Types," *Private Wealth Management Feature Articles*, 2012 (1), 1–3.

Porter, N.M. and E.T. Garman (1992), "Money as Part of a Measure of Financial Well-Being," *American Behavioral Scientist*, 35 (6), 820–26.

Prawitz, A.D., E.T. Garman, B. Sorhaindo, B. O'Neill, J. Kim, and P. Drentea (2006), "InCharge Financial Distress/Financial Well-Being Scale: Development, Administration, and Score Interpretation," *Financial Counseling and Planning*, 17 (1), 34–50.

Ricketts, C.F., J.P. Rezek, and R.C. Campbell (2013), "The Influence of Individual Health Outcomes on Individual Savings Behavior," *The Social Science Journal*, 50 (4), 471–81.

Sacks, D.W., B. Stevenson, and J. Wolfers (2012), "The New Stylized Facts about Income and Subjective Well-Being," *Emotion (Washington, D.C.)*, 12 (6), 1181–87.

Saez, E. (2009), "Details Matter: The Impact of Presentation and Information on the Take-Up of Financial Incentives for Retirement Saving," *American Economic Journal: Economic Policy*, 1 (1), 204–28.

Schultz, P.W. (1999), "Changing behavior with normative feedback interventions: A field experiment on curbside recycling," *Basic and Applied Social Psychology*, 21 (1), 25–36.

Scottish Widows (2009), "A Major Assessment of Pensions Savings Behaviour " *The Scottish Widows UK Pensions Report*.

Shim, S., J.J. Xiao, B.L. Barber, and A.C. Lyons (2009), "Pathways to Life Success: A Conceptual Model of Financial Well-Being for Young Adults," *Journal of Applied Developmental Psychology*, 30 (6), 708–23.

Slovic, P. (1987), "Perception of Risk," *Science*, 236 (4799), 280–85.

Struck, H. (2012), "Gen Y Seeks Savings Advice in Face of Down Economy," [available at http://www.reuters.com/article/2012/11/29/us-retirement-401k-generationy-idUSBRE8AS0ZA20121129].

Thaler, R.H. and S. Benartzi (2007), "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving," in *Recent Developments in Behavioral Economics*, S. Maital, ed.: Elgar Reference Collection. International Library of Critical Writings in Economics, vol. 204. Cheltenham, U.K. and Northampton, Mass.: Elgar.

Thaler, R.H. and C.R. Sunstein (2008), Nudge: Improving Decisions about Health, Wealth, and Happiness: Yale University Press.

UBS (2014), "Couples and Money: Who Decides?," *UBS Investor Watch 2Q2014: Analyzing Investor Sentiment and Behavior*, [available at https://www.ubs.com/content/dam/WealthManagementAmericas/documents/investor-watch-2Q2014-report.pdf].

Ulkumen, G. and A. Cheema (2011), "Framing Goals to Influence Personal Savings: The Role of Specificity and Construal Level," *Journal of Marketing Research*, 48 (6), 958–69.

Van Praag, B.M.S. and P. Frijters (2003), "The Anatomy of Subjective Well-Being," *Journal of Economic Behavior and Organization*, 51 (1), 29–49.

Vlachos, P.A., A. Tsamakos, A.P. Vrechopoulos, and P.K. Avramidis (2009), "Corporate Social Responsibility: Attributions, Loyalty, and The Mediating Role of Trust," *Journal of the Academy of Marketing Science*, 37 (2), 170–80.

Vosloo, W., J. Fouche, and J. Barnard (2014), "The Relationship between Financial Efficacy, Satisfaction with Remuneration and Personal Financial Well-Being," *International Business and Economics Research Journal*, 13 (6), 1455–70.

Weber, E.U., A.-R. Blais, and N.E. Betz (2002), "A Domain-Specific Risk-Attitude Scale: Measuring Risk Perceptions and Risk Behaviors," *Journal of Behavioral Decision Making*, 15 (4), 263–90.

White, K. and B. Simpson (2013), "When Do (and Don't) Normative Appeals Influence Sustainable Consumer Behaviors?," *Journal of Marketing*, 77 (2), 78–95.

Wiener, J. and T. Doescher (2008), "A Framework for Promoting Retirement Savings," *Journal of Consumer Affairs*, 42 (2), 137–64.

Winterich, K.P. and G.Y. Nenkov (2015), "Save Like the Joneses: How Service Firms Can Utilize Deliberation and Informational Influence to Enhance Consumer Well-Being," *Journal of Service Research*, 18 (3), 384–404.

World Commission on Environment and Development (WCED) (1987), "Our Common Future," in *Report of the World Commission on Environment and Development*. Oxford: Oxford University Press.