

FINANCIAL IDENTITY FORMATION: THE ROLE OF PERCEIVED PARENTAL
SES, PARENTAL FINANCIAL COMMUNICATION, FORMAL EDUCATION,
WORK EXPERIENCE, ATTITUDES, SUBJECTIVE NORMS, AND PERCEIVED
BEHAVIORAL CONTROL

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entitled Financial identity formation: The role of perceived parental SES, parental financial communication, formal education, work experience, attitudes, subjective norms, and perceived behavioral control

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DEDICATION

This dissertation is dedicated to my mother who embodies the meaning of relentless pursuit, to my son who forever inspires growth, and to my husband who provides continual support.

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ABSTRACT

Young adulthood is a crucial period for identity development, and an unclear sense of identity has been associated with deleterious psychological and social outcomes (Kroger & Marcia, 2011). Young adults have also identified self-sufficiency, including financial independence, as an essential aspect associated with attaining adulthood (Arnett, 2000). However, current realities such as global economic uncertainty and a shift toward greater personal responsibility for financial security may threaten the successful attainment of these essential goals (Furstenberg, Rumbaut, & Settersten, 2005). Hence, I explored identity formation (Erikson, 1950, 1968) in the domain of finance. Four socialization factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and three beliefs (attitudes, subjective norms, and perceived behavioral control) were used to predict financial identity (achievement, foreclosure, moratorium, and diffusion) in a sample of college students ($N = 2,098$) who were surveyed at two time points approximately 2.5 years apart. Four models were tested using structural equation modeling (SEM). First, using cross-sectional data, I tested the extent to which socialization factors and financial beliefs predicted financial identity. I found support for 79% of the hypothesized associations between the variables. Second, using cross-sectional data, I examined the degree to which financial beliefs mediated the association between socialization factors and financial identity. Findings indicated that financial beliefs partially mediated the association between parental financial communication and financial identity. Third, using longitudinal data, Time 1 (T1) socialization factors and T1 beliefs were used to predict Time 2 (T2)

financial identity. As expected, T1 financial identity was the most robust predictor of T2 financial identity. After controlling for T1 financial identity, T1 variables were most predictive of changes in T2 foreclosure: Increases in foreclosure were predicted by perceived parental SES, parental communication, formal education, and subjective norms. Finally, T1 financial beliefs were allowed to mediate the association between T1 socialization factors and T2 financial identity. I found no evidence of mediation using longitudinal data. Findings from this study suggest that identity formation within the financial domain is consistent with identity formation in other recognized identity domains.

INTRODUCTION

Poor financial behavior has the potential to threaten not only the welfare of individual consumers but also the security of the larger economy, including “exacerbated business cycles, further inequality in the distribution of income and wealth, inadequate savings for retirement, low savings rates and capital formation, a weakening in the value of the dollar, and inflation” (Mandell & Klein, 2009, p. 16). Many of these potentially deleterious consequences were realized in the wake of the recent financial crisis. In response, the U.S. Department of Treasury and the U.S. Department of Education have been working together to increase financial literacy among its citizens, particularly among the youth (Financial Literacy and Education Commission, 2011; U.S. Department of Treasury, 2009). However, empirical evidence suggests that levels of financial literacy remain low among high school and college students (for reviews, see McCormick, 2009; Huston, 2010; Mandell & Klein, 2009). Hence, such findings prompt the question: What other factors might contribute to financial literacy and fiscal responsibility among American youth?

Erickson’s (1950, 1968) theory of psychosocial development suggests that a fully formed identity—where commitments are made to personally meaningful values and beliefs after a period of exploration—is an essential aspect of human development. Indeed, a rich extant literature demonstrates that a highly developed sense of identity serves to guide and stabilize individuals as they navigate the ever increasing demands of modern living (for reviews, see Berzonsky, 2011; Côté & Levine, 2002; Kroger & Marcia, 2011). A personally meaningful identity also enables young adults to become

relatively more self-governing and responsible for their own lives as is typically expected in Western industrialized societies (Berzonsky, Branje, & Meeus, 2007). Hence, Barber, Card, Serido, and Shim (2011) suggested that Erickson's (1950, 1968) theory of psychosocial development might be usefully applied to expand our understanding of how young adults orient to central financial behaviors such as budgeting, saving, and debt accrual.

To explore these and other ideas, Shim and colleagues secured funding from the National Endowment for Financial Education (NEFE) for the Arizona Pathways to Life success for University Students (APLUS). Through this longitudinal study, Shim and colleagues aim to examine associations among financial behaviors and overall well-being. Data collection began in the spring of 2008 and is planned for every two to three years until participants are in their mid-thirties.

A number of papers related to the current study have been published using the APLUS data set. For example, Shim, Barber, Card, Xiao, and Serido (2009) found that financial beliefs and attitudes mediate the association between financial socialization factors and financial behaviors. Also, Shim, Serido, Bosch, and Tang (in press) found that financial capabilities and financial behaviors are associated with financial identity formation as expected theoretically. Finally, Barber and colleagues (2011) are preparing a paper that argues for the need to explore identity formation in the financial domain. This paper also describes the reliability and validity of a version of the revised EOM-EIS (Bennion & Adams, 1986) that was created to measure the financial identity (Barber et al., 2011). The present study is designed to follow this initial study. Hence, I explored the

role of four socialization factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and three beliefs (attitudes, subjective norms, and perceived behavioral control) in financial identity formation.

Although there are a number of similarities between the Shim and colleagues (in press) study and the current study, there are a number of important differences as well. First, this study is variable centered (rather than cluster or group centered). Second, as suggested by Shim et al. (2009), this study includes tests of mediation. Finally, in this study, I tested predictions longitudinally or across time.

As finance represents a new domain within the identity formation literature, the consumer socialization model (Moschis, 1985) was used to inform gaps in the identity formation literature although many of the recognized developmental influences overlap. Similarly, given the importance of beliefs, aspects of the highly researched theory of planned behavior (Ajzen, 1991) were used to inform gaps in the identity formation literature. However, hypotheses rely primarily on Erickson's theory of psychosocial development as operationalized by Marcia (1966).

According to Erikson (1950, 1968), resolution of fifth developmental challenge (crisis) requires individuals to balance the psychosocial conflict between identity on the one hand and identity diffusion on the other. *Identity* reflects the presence of self-selected ideals, whereas *identity diffusion* represents the absence of such ideals. Hence, Erikson (1950, 1968) asserted that successful resolution of the identity developmental challenge (crisis) rests near the midline on this bipolar dimension, albeit slightly closer to the

identity pole. Thus, identity formation begins with less complex identity structures comprised of identifications from childhood. This period of certainty is followed by a period of crisis or doubt in which old identifications are replaced or transformed through processes of exploration. Finally, successful identity formation culminates in more complex identity structures that reflect the presence of personally meaningful commitments. Scholars have found evidence to suggest both stability and developmental changes in identity formation (Kroger, Martinussen, & Marcia, 2010; Meeus, 2011).

At any time during their lives, all individuals can be placed at some point on the continuum between identity and identity diffusion (Erikson, 1950, 1968). Hence, Marcia (1966) developed the identity status model in an effort to operationalize aspects of Erikson's theory for empirical research. Based on Erikson's assertions, Marcia (1966) posited exploration and commitment as two fundamental dimensions of identity development. *Exploration* involves an active search for information regarding lifestyle, belief, and value options. *Commitment* involves deciding which options fit the individual best and applying these decisions in a variety of contexts. Crossing these two dimensions, Marcia (1966) derived four identity statuses or patterns of identity formation that vary according to the strength of identity related exploration and commitment.

Marcia's (1966) model has resulted in a proliferation of identity studies (for a review see Kroger & Marcia, 2011). In brief, more *achieved* individuals score high on both dimensions of exploration and commitment. This pattern has been associated with self-esteem, internal locus of control, and ego strength (Kroger & Marcia, 2011; Schwartz, Côté, & Arnett, 2005). More *moratorium* individuals score high on exploration

and low on commitment. This pattern has been positively associated with openness and curiosity on the one hand (Luyckx, Soenens, & Goossens, 2006), and with anxiety, depression, and low self-worth on the other (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). More *foreclosed* individuals score low on exploration and high on commitment. This pattern is associated with high self-worth but also with rigidity, closed-mindedness, and authoritarianism (Kroger & Marcia, 2011). Finally, more *diffuse* individuals score low on both exploration and commitment. This pattern has been associated with low self-esteem, drug and alcohol problems, and delinquency (Adams, Munro, Munro, Doherty-Poirer, & Edwards, 2005; Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005; Schwartz et al. 2011; Schwartz, Côté, & Arnett, 2005).

Identity formation typically occurs during adolescence (Erikson, 1950, 1968). However, Erikson (1958) also described ways in which identity formation could take place after adolescence although, at the time of his writing some 50 years ago, such extensions of the identity stage were thought to be exceptions to the normative event of adolescent identity formation. Currently, many scholars agree that the extension of the identity stage beyond adolescence appears to be normative in postindustrial societies (Arnett, 2000) where higher educational credentials have become essential for stable employment (Côté, 2006).

In order to achieve this essential developmental task, Erikson (1950, 1968, 1980) asserted that, as part of the transition to adulthood, societies can offer their young people *institutionalized moratoria*—or structured contexts for working through identity confusion and resolving an identity crisis (development task). Recognizable forms of

moratoria include college attendance, travel, military service, and “dropping out” for a while (Erikson, 1968, 1968b). Socially structured (as opposed to self-constructed) moratoria provide contexts in which the identity crisis can be resolved in relative safety (Erikson, 1980).

The pursuit of self-understanding is a major undertaking during the college years, as students navigate the transition from childhood dependency on parents toward the self-sufficiency expected in adulthood. University students have the opportunity to reflect not only on their personal goals and attitudes but also their place in the broader social context. In addition, college students often become responsible for managing a range of financial transactions on their own. Hence, it is useful to explore financial identity formation during the transition to adulthood in a sample of young adults engaged in an institutional moratorium; namely, university attendance.

Although much is known about personality correlates, much less is known about the socializing factors that predict identity formation. Accordingly, current conceptualizations of identity development have endeavored to incorporate Erikson’s (1968) views on the role of social contexts in shaping development (e.g., Adams & Marshall, 1996; Baumeister & Muraven, 1996; Côté & Levine, 2002; Schachter & Ventura, 2008). These perspectives assert that as people work together to create or construct their relationships with others, they simultaneously engage in a process of identity formation (Adams & Marshall, 1996; Côté & Levine, 2002). Hence, identity scholars recognize that ideas about the self “may be acquired, for instance, indirectly from parents, peers, and others via modeling; more directly through formal schooling,

instruction, and other sorts of cultural and social transmission; as well as from direct observation and experience” (Berzonsky, 2011, p. 57).

Finally, identity scholars recognize the importance of beliefs and values in identity formation. Hence, in this study, I explored three beliefs as suggested by the theory of planned behavior (Ajzen, 1991). *Attitude* refers to the degree to which a person has evaluated or appraised a behavior in favorable or unfavorable terms (e.g., saving money is favorable). *Subjective norm* refers to the perceived social pressure to perform (or not perform) the behavior (e.g., my parents expect me to save money). *Perceived behavioral control* refers to how easy or difficult an individual imagines performing a behavior will be (e.g., it is easy for me to save money). Perceived behavioral control is assumed to reflect past experience as well as anticipated obstacles.

Over the years, identity researchers have extended the domains of identity formation beyond those originally proposed by Erikson (ideology and career) to include interpersonal domains such as friendships, dating, and sex roles as well as other content areas such as recreation (for a review, see Schwartz, 2001). However, the development of identity related to financial values and beliefs has largely been ignored, despite global economic uncertainty, a shift toward greater personal responsibility for financial security, and the central role of financial independence in adult life (Arnett, 2000; Furstenberg, Rumbaut, & Settersten, 2005; Littrell, Brooks, Ivery, & Ohmer, 2010). These realities highlight the need to learn more about how young adults develop their identity around financial matters because such identities may promote, or inhibit, progress toward self-

sufficiency. In addition, such information might facilitate the design and implementation of intervention programs designed to promote financial literacy and fiscal responsibility.

In conclusion, although considerable research has examined social-cognitive, psychosocial, and personality dimensions associated with the identity formation, relatively less attention has been devoted to the role of socialization factors and beliefs in identity formation (e.g., Kroger & Marcia, 2011). Hence, applying the theory of psychosocial development (Erikson, 1950, 1968), as operationalized by Marcia (1966), I aim to extend the extant identity formation literature. I will explore relations among socialization factors and beliefs in the domain of finance during the transition to adulthood in a sample of college students. Participants were surveyed at two time points approximately 2.5 years apart. Ultimately, given the importance of financial independence coupled with the current social and economic uncertainty, an understanding of financial identity formation could inform programs designed to facilitate fiscal responsibility among the next generation of adults.

REVIEW OF LITERATURE

Young adulthood is a crucial period for identity development (Erikson 1950, 1968; Schwartz, Côté, & Arnett, 2005) and an unclear sense of identity has been associated with deleterious psychological and social outcomes (Kroger & Marcia, 2011). Young adults have also identified self-sufficiency including financial independence as an essential aspect associated with attaining adulthood (Arnett, 2000). However, current realities such as global economic uncertainty and a shift toward greater personal responsibility for financial security may threaten the successful attainment of this essential goal (Furstenberg, Rumbaut, & Settersten, 2005; Littrell, Brooks, Ivery, & Ohmer, 2010). Hence, it is important to understand which factors contribute to financial identity formation during the transition to adulthood as this formation may promote, or inhibit, progress toward self-sufficiency. Accordingly, the primary goal of this study was to extend Erikson's (1950, 1968) theory of identity formation to a new identity domain: finance. To do so, I explored the contribution of four socialization factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and three beliefs (attitudes, subjective norms, and perceived behavioral control). A review of the literature associated with each of these factors appears in the following sections.

Parental Social Class and Financial Identity Formation

Lower parental social status has been associated with above-average rates of physical, emotional, and behavioral problems (Berkman & Kawachi, 2000; Oakes & Rossi, 2003) as well as below-average rates of educational achievement and attainment

(Muller, Stage, & Kinzie, 2001; Schoone, Parsons, & Sacker, 2004; Sewell & Hauser, 1972). However, economic hardship during childhood and/or adolescence has also been associated with feeling older and self-identifying as an adult in the late teens and twenties (Foster, Hagan, & Brooks-Gunn, 2008; Galambos, Kolaric, Sears, & Maggs, 1999; Galambos, Turner, & Tilton-Weaver, 2005; Johnson & Mollborn, 2009; Shanahan, Porfeli, Mortimer, & Erickson, 2005).

Social class serves to provide the possibilities and limits for an individual's personal identity (Côté & Levine, 2002; Phillips & Pittman, 2003). However, given current cultural trends, identity formation in late modern or postindustrial Western societies may be less restricted by social ascription when compared to previous historical epochs (Côté & Levine, 2002). Accordingly, young adults who approach identity formation proactively, with a strong sense of agency (i.e., they accept responsibility for the course of their life; they own their decisions and accept the consequences; they are confident that they can overcome barriers and obstacles) may be more apt to achieve upward mobility (or replicate the social status of their parents) than those that take a less agentic (more passive) approach (Côté, 1996, 1997, 2002; Côté & Levine, 2002; Schwartz, Côté, & Arnett, 2005).

Given a dearth of empirical evidence, the role of parental SES in identity formation is difficult to predict. Theoretically, in terms of exploration and commitment, I expect that given an abundance of resources, higher SES contexts may serve to undermine exploration given the absence of challenges related to finances (e.g., no need to budget, no need to prioritize spending given an ability to purchase with ease, no need

to work or save for college). Such resource rich environments may serve to promote a passive approach to financial identity formation, thereby undermining identity development (higher foreclosure, moratorium, and diffusion). Conversely, given a decrement in resources, lower SES contexts may serve to encourage exploration, problem solving, and value clarification given the presence of financial challenges (e.g., the need to work, the need to save for college, the need to prioritize expenditures). Thus, low SES environments may promote an active approach to financial identity formation, thereby encouraging identity development (higher achievement).

Parental Financial Communication and Financial Identity Formation

Identity formation is expected to vary based on developmental origins (e.g., Berzonsky, 2004; Grotevant & Cooper, 1985). For example, higher identity achievement, which includes a period of exploration (higher moratorium), might be grounded in a secure environment where parents provide explanations, make clear but reasonable demands, provide supervision, and encourage age-appropriate behavioral autonomy. More identity foreclosure could be fostered by family environments high in parental involvement, cohesion, and structure but low in support for autonomy. Higher identity diffusion may be grounded in permissive parenting strategies characterized by limited structure and supervision as well as environments where parents are critical, intrusive, and inconsistent. Although the extant literature is sparse, researchers have explored links between family dynamics and identity formation (e.g., Adams, Ryan, & Keating, 2000; Campbell, Adams, & Dobson, 1984; Grotevant & Cooper, 1985; Papini, Micka, & Barnett, 1989). Findings suggest that family relationships characterized by flexibility,

expression of differences, and autonomy are associated with higher levels of exploration (higher achievement and moratorium; Grotevant & Cooper, 1985; Perosa, Perosa, & Tam, 1996). Higher identity foreclosure has been associated with familial warmth, cohesion, and relatedness (Adams, Berzonsky, & Keating, 2006; Frank, Pirsch, & Wright, 1990; Fullinwider-Bush & Jacobvitz, 1993; Perosa, Perosa, & Tam, 1996). Finally, higher identity diffusion has been associated with low family expressiveness and limited parental involvement and control (Perosa, Perosa, & Tam, 1996).

In a related domain, the consumer socialization model (Moschis, 1985) also recognizes the role of a number of socializing agents including family members, schools, and employers. Within this model, parents are the most widely researched socializing agents (Allen, 2008) and their influence appears to be long lasting (Caruana & Vassallo, 2003; Martin & Bush, 2000; Moschis, Prahasto, & Mitchell, 1986). Parental consumer socialization typically involves modeling consumer behaviors, making rules regarding consumer behaviors, and discussions around topics such as purchasing decisions, money, and credit (Allen, 2008). To further investigate the role of parents, Moschis and colleagues began incorporating the theory of family communication patterns (see Koerner & Fitzpatrick, 2006, for an overview of the theory) into the consumer socialization model. Accordingly, some research has focused on family communication and the use of credit among college students. For instance, Pinto, Parente, and Mansfield (2005) found an inverse association between the amount of credit information learned from parents and the use of credit among college students. Similarly, Edwards, Allen, and Hayhoe (2007) found that when the overall communication environment within the family is open,

college students are more frank in their discussions with parents about credit card use. Hence, I expected that more parental financial communication would facilitate the formation of financial identity commitments (higher achievement and foreclosure), whereas less parental financial communication would undermine the formation of financial identity commitments (higher moratorium and diffusion).

Formal Financial Education and Financial Identity Formation

The creation of financial education programs designed to enhance financial literacy is seen as a way to improve the skills that individuals and families bring to the financial problems they face. However, the effectiveness of such educational programs has received mixed reviews in the literature (Huston, 2011; McCormick, 2009). On the one hand, some research suggests that financial education in schools does not have a significant effect on improving the financial knowledge scores of high school students in the United States (Mandell, 2008). On the other hand, some findings suggest that financial education activities (e.g., classes, workshops, and seminars on personal finance) are associated with responsible attitudes towards personal financial management among college students (Borden, Lee, Serido, & Collins, 2008; Peng, Bartolomae, Fox & Cravener, 2007).

In a related domain, occupational identity formation, the role of educational activities has received some attention (Skorikov & Vondracek, 2011). Empirical evidence suggests that when schools incorporate an occupational perspective into the academic curriculum by including activities such as apprenticeships, internships, or job shadowing, these activities appear to promote occupational identity development (e.g., Flaxman,

Guerrero, & Gretchen, 1999; Zimmer-Gembeck & Mortimer, 2006). Conversely, a purely academic school system appears to delay the process of occupational identity formation by depriving students of opportunities to engage in occupationally relevant exploratory activities (Skorikov, & Vondracek, 2011). Hence, extrapolating from theory and empirical evidence, I expected opportunities to explore financial information within an educational setting (beyond the family setting) would facilitate financial identity formation (higher achievement). Conversely, lower levels of formal educational exposure would predict less financial identity formation (higher foreclosure, moratorium, and diffusion).

Work Experience and Financial Identity Formation

In recent years, an estimated 80 to 90 percent of adolescents are formally employed at some point during the high school period (Hirschman & Voloshin, 2007; U.S. Department of Labor, 2000). Ideally, early paid work experiences provide opportunities, for example, to gain responsibility, to test skills and develop new ones, to develop a sense of those aspects of work that are more or less important or aversive, and to get a sense of the extent to which initial career goals represent a good pathway (Staff, Messersmith, & Schulenberg, 2009). Hence, given the importance Erikson (1968) placed on exploration, employment could facilitate identity development as formal work environments contain an array of novel people and activities (Kroger, 2007). Empirically, however, the effects of work on adolescent development are mixed. On the one hand, studies suggest that intensive part-time work (more than 20 hours per week) during adolescence is associated with dysfunctional behaviors such as increased alcohol,

cigarette, and illicit drug use (e.g., Bachman & Schulenberg, 1993; Mortimer Finch, Shanahan, & Ryu, 1992; Paschall, Ringwalt, & Flewelling, 2002; Steinberg & Avenevoli, 1998; Wu, Schlenger, & Galvin, 2003). On the other hand, research points to functional outcomes including the formation of work-related values (Vondracek & Skorikov, 1997), personal responsibility, and the development of social skills (Kablaoui & Pautler, 1991).

Although the association between work and career development during adolescence has not been widely studied, career development relates to identity development because it provides a way to organize information about the self and to think about possible selves (Vondracek, Lerner, & Schulenberg, 1986). Accordingly, the role of the work place and early work experience has received some attention in the occupational domain of identity formation (e.g., Mortimer, 2003; Mortimer, Zimmer-Gembeck, Holmes, & Shanahan, 2002). Although high school work experiences could provide additional opportunities for identity exploration, early results indicate that the actual work activities afforded adolescents (in unskilled manual labor or service occupations) appear to have limited implications for developing ideas about their occupational future or for testing their capacity to perform adult work roles (Arnett, 2000; Skorikov & Vondracek, 2011). Nevertheless, adolescent work experiences have been positively associated with occupational goal-setting (Zimmer-Gembeck & Mortimer, 2006) and the development of work-related values including self-reported dependability, personal responsibility, punctuality, and self-reliance (Porfeli, 2007; Skorikov & Vondracek, 1998).

Extrapolating from these findings, it is unclear to what extent early work experiences may have an effect on the development of financial identity. In general, however, given the emphasis Erikson (1968) placed on the psychosocial moratorium, I expected more opportunities for exploration (e.g., more occasions to make financial decisions related to spending, budgeting, and saving given an income) would predict higher levels of financial identity development (higher achievement). Conversely, fewer opportunities for exploration would predict lower levels of financial identity development (higher foreclosure, moratorium, and diffusion).

Financial Beliefs and Financial Identity Formation

In brief, the theory of planned behavior (Ajzen, 1991) posits a mediational model where three conceptually independent determinants—attitudes, subjective norms, and perceived behavioral control—predict behavioral intentions, and, in turn, behavioral intentions predict behavioral enactment. I have incorporated the belief components from this well-established theory because the theory of planned behavior has been used effectively to predict a number of behaviors including health-related behaviors such as smoking, sexual behavior, exercise, and food choice (for a meta-analytic review see Hardeman, et al., 2002). In addition, some researchers have explored the role of identity-related constructs (e.g., self-concepts) within the theory of planned behavior. For instance, in a study of undergraduate students enrolled at university in the United Kingdom, Sheeran and Orbell (2000) found a positive correlation between self-concepts and attitudes, subjective norms, and perceived behavioral control.

In terms of predictions, first, I expected positive financial attitudes would predict the presence of financial identity commitments (higher achievement and foreclosure), whereas negative attitudes would predict the absence of financial identity commitments (higher moratorium and diffusion). Second, I expected subjective norms to predict the presence of commitments without exploration (higher foreclosure) as this tendency to adhere to parental expectations in a relatively automatic and unreflective manner has been demonstrated in the literature (Berzonsky, 2004, Dunkel, Papini, & Berzonsky, 2008, Soenens, Berzonsky, Dunkel, & Papini, 2011). As the other patterns of identity formation have not been associated with this tendency, I did not expect subjective norms to predict levels of financial identity achievement, moratorium, or diffusion. Finally, as identity achievement has been associated with self-determined regulatory efforts, self-esteem, internal locus of control, and ego strength (Schwartz, Côté, & Arnett, 2005; Soenens, Berzonsky, et al., 2005), I expected higher levels of perceived behavioral control to predict higher levels of financial identity formation (higher achievement). Conversely, given the absence of such psychosocial assets, I expected lower levels of perceived behavioral control to predict lower levels of financial identity formation (higher foreclosure, moratorium, and diffusion).

Goals of the Present Study and Summary of Hypotheses

Given the importance of identity formation in young adulthood and the significance of self-sufficiency in adulthood, the primary goal of this study was to explore identity formation in a new domain (finance). To do so, I used the existing APLUS dataset that sampled college students during the transition to adulthood as they

engaged in an institutionalized moratorium. Specifically, I tested the extent to which four socialization factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and three financial beliefs (attitudes, subjective norms, and perceived behavioral control) predicted financial identity formation (achievement, foreclosure, moratorium, and diffusion).

As finance represents a new identity domain, the extant identity formation literature is sparse. Hence, I relied heavily on Erikson's (1950, 1968) theory of psychosocial development as operationalized by Marcia (1966) to formulate my tentative hypotheses. In brief, given the importance Erikson placed on moratoria (exploration before commitment making), I hypothesized that more opportunities to engage in financial exploration would predict higher levels of financial identity formation (higher achievement). Conversely, fewer opportunities to engage in financial exploration would predict lower levels of financial identity formation (higher foreclosure, moratorium, and diffusion).

Similarly, regarding beliefs, I relied on the dimensions of exploration and commitment to form my tentative hypotheses. First, I hypothesized that higher (positive) financial attitudes would predict higher levels of financial identity commitment (higher achievement and foreclosure), whereas lower (negative) financial attitudes would predict lower levels of financial identity commitment (higher moratorium and diffusion). Second, I hypothesized that subjective norms would predict higher levels of commitment and lower levels of exploration (higher foreclosure). Finally, based on higher levels of exploration and higher levels of commitment, I hypothesized that higher feelings of

perceived behavioral control would predict higher levels of financial identity formation (higher achievement). Conversely, I hypothesized that lower feelings of perceived behavioral control would predict lower levels of financial identity formation (higher foreclosure, moratorium, and diffusion).

Specifically, I tested the following tentative hypotheses using cross-sectional data:

- H1: Higher achievement scores will be predicted by lower perceived parental SES, higher parental financial communication, more formal financial education, and more work experience, as well as higher attitudes and higher perceived behavioral control.
- H2: Higher foreclosure scores will be predicted by higher perceived parental SES, higher parental financial communication, less formal financial education, and less work experience, as well as higher attitudes, higher subjective norms, and lower perceived behavioral control.
- H3: Higher moratorium scores will be predicted by higher perceived parental SES, lower parental financial communication, less formal financial education, less work experience, as well as lower attitudes and lower perceived behavioral control.
- H4: Higher diffusion scores will be predicted by higher perceived parental SES, lower parental financial communication, less formal financial education, less work experience, as well as lower attitudes and lower perceived behavioral control.

In addition, I tested the extent to which beliefs mediated the association between socialization factors and financial identity as suggested by findings from the Shim and colleagues (2009) study. I tested this hypothesis using both cross-sectional and longitudinal data. Finally, as identity development (change) is possible during the transition to adulthood, I explored the extent to which these four socialization factors and three financial beliefs predicted changes in financial identity using longitudinal data.

In sum, I tested four models using structural equation modeling (SEM). In the first cross-sectional model (M1), I determined the extent to which socializing factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and financial beliefs (attitudes, subjective norms, and perceived behavioral control) predict financial identity formation (achievement, foreclosure, moratorium, and diffusion). In the second mediational (cross-sectional) model (M2), I tested the extent to which financial beliefs (attitudes, subjective norms, and perceived behavioral control) mediated the association between socializing factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and financial identity formation (achievement, foreclosure, moratorium, and diffusion). In the third longitudinal (panel) model (M3), I determined the extent to which Time 1 (T1) independent variables (perceived parental SES, parental financial communication, formal financial education, high school work experience, attitudes, subjective norms, and perceived behavioral control) predict Time 2 (T2) financial identity variables (achievement, foreclosure, moratorium, and diffusion). Ultimately, knowing which socializing factors are most predictive over time may serve to

focus efforts designed to facilitate financial identity formation. Finally, in the fourth longitudinal mediation model (M4), I tested the extent to which T1 financial beliefs (attitudes, subjective norms, and perceived behavioral control) mediated the association between T1 socializing factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and T2 financial identity (achievement, foreclosure, moratorium, and diffusion). Testing these models in SEM with latent variables allows for evaluation of a more complex mediational model with estimates that take into account the measurement error that is inherent in observed variables (Little, Card, Bovaird, Preacher, & Crandall, 2007).

METHOD

Participants and Procedures

First-year students ($N = 2,098$) at a major, land-grant, public university completed the survey. Sixty-two percent were female. Sixty-seven percent were White, 15% were Hispanic, 9% were Asian/Asian American/Pacific Islander, 3% were Black, 2% were Native American, and 4% reported Other. Seventeen percent reported they were first generation college students. The majority of fathers (60%) reported holding undergraduate (32%) or graduate (28%) degrees. Similarly, the majority of mothers (56%) reported holding undergraduate (36%) or graduate (20%) degrees. Sixteen percent reported annual family incomes less than \$50,000; 32% reported \$50,000-\$99,999; 34% reported \$100,000-200,000; and 18% reported annual family incomes in excess of \$200,000. Twenty-three percent reported taking one finance course or seminar during high school, 37% reported taking one and a half finance courses or seminars, 21% reported taking two finance courses or seminars, and 17.5% reported taking between two and a half and four finance courses or seminars during high school. Twenty percent reported they were never employed outside of the home during high school, 27% reported they had worked but only during the summer, and 53% reported they had worked all year around.

Time 1 (T1) data were collected over an 8-week period during the spring of 2008. After receiving approval from the Institutional Review Board (Human Subject Committee), the entire freshman class of approximately 6,000 students was invited to participate in the study. Several recruitment methods were employed including the use of

university-wide email, campus media, flyers, and classroom announcements. All respondents were offered a nominal incentive (e.g., \$10 to the first 1,000 respondents and \$5 to subsequent respondents) for their participation. In addition, every student who completed the survey was automatically entered into a raffle for a chance to receive a more expensive item (e.g., an iPod Touch). The survey questionnaire was posted online throughout the entire 8-week period of data collection. Also, during the final weeks of data collection, a pencil-and-paper survey was administered in classrooms and freshman residential halls as a means of including students who had not responded to email recruiting efforts.

Time 2 (T2) data were collected in fall 2010. After obtaining Human Subjects approval, an email invitation offering a \$25 financial incentive for survey completion was sent to 1,924 students (92%) using university email addresses obtained during the T1 survey. A series of email reminders, followed by a mailed post-card reminder, was sent to non-respondents (those whose addresses were available) to encourage them to complete the survey. There was an 81% return rate ($N = 1,563$). The online survey was similar in size and scope to the T1 survey and was posted over a 16-week period. Of note, the timing of data collection makes this dataset unique as the first wave of data (T1) were collected before the housing market crash and the second wave of data were collected during the subsequent economic recession (T2).

Measures

Perceived parental socioeconomic status. Perceived parental socioeconomic status (SES) was determined using the Computerized Status Index (CSI) method (Coleman, 1983). This method combines the levels of education for both parents and the annual family income as reported by participants. Measured at T1, this single item was used to form the latent construct for this variable.

Parental financial communication. Participants were asked about their perceptions of their parents' financial communication while growing up (before coming to college). Measured at T1, respondents indicated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*) the extent to which their parents discussed family financial matters with them, spoke to them about the importance of saving, taught them how to be a smart shopper, taught them how to use a credit card appropriately, discussed how to establish a good credit rating, and discussed how to finance their college education. Cronbach's alpha was .85.

To form the latent construct for this variable, items were parceled into three manifest variables using an item-to-construct balance approach (Little, Cunningham, Shahar, & Widaman, 2002). Parcels (i.e., aggregate-level indicators made of the sum or mean of two or more items), relative to items, provide a number of psychometric advantages. For example, parcels provide a decreased likelihood of distributional violations, higher communality, a larger ratio of common-to-unique factor variance, and higher reliability (see Little et al., 2002). Parceling also aids overall model fit. Finally, models based on parceled data are more parsimonious, have fewer chances for residuals

to be correlated or for dual loadings to emerge, and lead to reductions in various sources of sampling error compared to models based on item-level data (Little et al., 2002).

Formal financial education. High school finance classes (Lyons, 2003). Measured at T1, students were asked two questions: “While in high school, how many courses did you take related to personal financial management, consumer education, economics or business courses?” and “During your high school years, how many seminars, workshops, or after school programs that taught financial management did you attend?” Students responded on a scale from 0 (*none*) to 3 (*three or more*). Using Cohen’s (1988) benchmarks, the magnitude of the correlation between these two items was moderate ($r = .33, p < .001$). These two items were averaged and this single item was used to form the latent construct for this variable.

Pre-college work experience. Students were asked whether or not they were employed outside the home during high school. Responses were coded as follows: 1 (*no work experience during high school*), 2 (*worked but only during the summer*), and 3 (*worked all year round*). Measured at T1, this single item was used to form the latent construct for this variable.

Financial attitudes. To measure financial attitudes, students were asked to indicate on a five-point scale from 1 (*very unfavorable*) to 5 (*very favorable*) their views about performing six healthy financial behaviors: tracking monthly expenses, spending within the budget, paying credit card balances in full each month, saving money each month for the future, investing for long-term financial goals regularly, and learning about money management regularly. This scale was measured at T1. Cronbach’s alpha was .85.

As described previously, these six items were parceled into three manifest variables using an item-to-construct balance approach (Little et al., 2002).

Parental subjective norms. Parental subjective norms were measured using two scales that concerned parental normative expectations and motivation to comply with normative expectations. Students were asked to indicate on a five-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*) the extent to which their parents thought they should engage in each of six healthy financial behaviors: tracking monthly expenses, spending within the budget, paying credit card balances in full each month, saving money each month for the future, investing for long-term financial goals regularly, and learning about money management regularly. Students were also asked to indicate the extent to which their own financial behaviors were influenced by their parents when it came to money matters on a scale from 1 (*not influenced at all*) to 5 (*significantly influenced*). Then, as suggested by Ajzen (1991), the value for parental subjective norms was generated by multiplying scores for parental normative expectation and scores for student motivation to comply with normative expectations. These items were measured at T1. Cronbach's alpha was .83. As described previously, the multiplied scores for these six items were parceled into three manifest variables using an item-to-construct balance approach (Little et al., 2002).

Perceived behavioral control. Perceived behavioral control was measured at T1 by a single item asking students to indicate on a seven-point scale from 1 (*difficult*) to 7 (*easy*) how difficult or easy it was for them to stick to their plans when managing their money. This single item was used to form the latent construct for this variable.

Financial identity. The Financial Identity Scale (Barber et al., 2011), which represents a version of the revised EOM-EIS (Bennion & Adams, 1986) that has been changed to reflect the personal financial domain, was used to assess financial identity. These items were measured at T1 and T2. The scale consists of 12 items designed to measure the degree to which participants see themselves reflected in each of the four identity patterns: achievement (3 items), foreclosure (3 items), moratorium (3 items), and diffusion (3 items). Respondents rated each item based on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include: “I have tried different ways to manage my personal finances and now I have a clear idea of what makes sense for me” (achievement); “My parents know what’s best for me in terms of how I should take care of my finances” (foreclosure); “There are so many different ways to manage money, I haven’t decided which to follow but I’m trying to figure it out” (moratorium); and “I don’t think about money much, I just kind of take it as it comes” (diffusion). Cronbach’s alpha coefficients for the achievement T1, foreclosure T1, moratorium T1, and diffusion T1 subscales were .74, .75, .67, and .67, respectively. Cronbach’s alpha coefficients for the achievement T2, foreclosure T2, moratorium T2, and diffusion T2 subscales were .76, .75, .71, and .71, respectively. The three items from each subscale will be used to form the latent construct for each corresponding identity variable at T1 and T2. Although researchers have explored the identity status construct using both categorical and continuous data, in this study, I used continuous data given its advantages over the use of categorical data. For example, the use of cut points or median splits to

create artificial groups from variables measured on a continuous scale results in a loss of information and a reduction in power to detect effects (Aiken & West, 1991).

RESULTS

Overview of Analysis

To maximize power and to minimize exclusion of participants due to missing data, I performed a single imputation of missing values using a Markov Chain Monte Carlo (MCMC) algorithm in SAS (Graham, Cumsille, & Elek-Fisk, 2003). Assumptions of normality were checked for all variables. All scales were within acceptable ranges for skewness (less than 1.66) and kurtosis (less than 3.52) as recommended by Kline (2011). All models were fit using the Maximum Likelihood (ML) method of estimation in LISREL 8.8. To determine model fit, I relied on the Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI) statistics. Nested models were compared using the change in χ^2 relative to the change in degrees of freedom approach (Kline, 2011).

Crosssectional Measurement Model

To evaluate the hypothesized measurement structure in the cross-sectional model, I conducted an initial confirmatory factor analysis (CFA) in which the latent variances were fixed at 1.0 for scale setting purposes. All latent constructs in the model were allowed to correlate. The model closely fit the data: $\chi^2_{(224, N=2,098)} = 1,222.58$, RMSEA = .046, 90% CI = .04 to .05, CFI = .97. All hypothesized factor loadings were substantial and significant. Completely standardized factor loadings are summarized in Table 1. Latent means and standard deviations are shown in Table 2. Latent bivariate correlations among constructs are shown in Table 3. As depicted in Table 3, perceived parental SES was positively correlated with foreclosure and diffusion. Parental financial

communication was positively correlated with achievement and foreclosure and negatively correlated with moratorium and diffusion. Participation in high school financial classes was positively associated with achievement and negatively associated with diffusion. Work experience during high school was positively associated with achievement and negatively associated with all remaining financial identities. Achievement was positively associated with attitudes, subjective norms, and perceived behavioral control. Foreclosure was positively associated with attitudes and subjective norms. Moratorium and diffusion were both negatively associated with attitudes, subjective norms, and perceived behavioral control. Finally, among the financial identity variables, foreclosure was positively associated with moratorium and diffusion as well as achievement although to a lesser degree. Moratorium and diffusion were positively correlated, and both had negative relations with achievement. All associations between the independent and dependent variables as well as the identity variables were as expected and nothing unusual emerged.

Crosssectional Structural Equation Model (Model 1)

To fit the proposed structural equation model (SEM) of the predictive relations among the constructs, I allowed all seven independent variables (four socialization variables: perceived parental SES, parental financial communication, formal financial education, and work experience; and three belief variables: attitude, subjective norm, and perceived behavioral control) to predict all four outcome variables (achievement, foreclosure, moratorium, and diffusion). The latent variances were fixed at 1.0 for scale setting purposes. The seven independent variables were allowed to correlate with one

another as were the four outcome variables. The model closely fit the data: $\chi^2_{(224, N = 2,098)} = 1222.58$, RMSEA = .046, 90% CI = .04 to .05, CFI = .97. Results are shown in Table 4.

Hypothesis 1: I expected higher achievement scores would be predicted by lower perceived parental SES, higher parental financial communication, more formal financial education, and more work experience, as well as higher attitudes and higher perceived behavioral control. This hypothesis was fully supported. Higher achievement scores were predicted by lower perceived parental SES ($\beta = -.08, p < .001$), higher parental financial communication ($\beta = .30, p < .001$), more formal financial education ($\beta = .08, p < .001$), and more work experience ($\beta = .07, p < .001$), as well as higher attitudes ($\beta = .18, p < .001$), and higher perceived behavioral control ($\beta = .22, p < .001$). These seven predictor variables accounted for 23% of the total variance in achievement scores.

Hypothesis 2: I expected higher foreclosure scores would be predicted by higher perceived parental SES, higher parental financial communication, less formal financial education, and less work experience, as well as higher attitudes, higher subjective norms, and lower perceived behavioral control. This hypothesis was partially supported. Higher foreclosure scores were predicted by higher perceived parental SES ($\beta = .20, p < .001$), higher parental financial communication ($\beta = .21, p < .001$), and less work experience ($\beta = -.12, p < .001$), as well as lower attitudes ($\beta = -.06, p < .05$) and higher subjective norms ($\beta = .33, p < .001$). Unexpectedly, formal financial education and perceived behavioral control were not significant predictors, and lower rather than higher attitudes were predictive of foreclosure. These seven predictor variables accounted for 32% of the total variance in foreclosure scores.

Hypothesis 3: I expected higher moratorium scores would be predicted by higher perceived parental SES, lower parental financial communication, less formal financial education, less work experience, as well as lower attitudes and lower perceived behavioral control. This hypothesis was partially supported. Higher moratorium scores were predicted by higher perceived parental SES ($\beta = .06, p < .05$), lower parental financial communication ($\beta = -.10, p < .001$), less work experience ($\beta = -.07, p < .01$), as well as lower perceived behavioral control ($\beta = -.39, p < .001$). Unexpectedly, formal financial education and attitudes were not significant predictors of moratorium. These seven predictor variables accounted for 18% of the total variance in moratorium scores.

Hypothesis 4: I expected higher diffusion scores would be predicted by higher perceived parental SES, lower parental financial communication, less formal financial education, less work experience, as well as lower attitudes and lower perceived behavioral control. This hypothesis 4 was partially supported. Higher diffusion scores were predicted by higher perceived parental SES ($\beta = .13, p < .001$), lower parental financial communication ($\beta = -.10, p < .001$), less formal financial education ($\beta = -.05, p < .05$), less work experience ($\beta = -.12, p < .01$), as well as lower attitudes ($\beta = -.28, p < .001$), lower subjective norms ($\beta = -.08, p < .05$), and lower perceived behavioral control ($\beta = -.21, p < .001$). Unexpectedly, subjective norms proved a significant predictor of diffusion. These seven predictor variables accounted for 24% of the total variance in diffusion scores.

Crossectional Mediation Model (Model 2)

To fit the proposed structural equation model (SEM) of the predictive relations among the constructs, I allowed all four socializing constructs (perceived parental SES, parental financial communication, formal financial education, and work experience) to predict all three beliefs (attitude, subjective norm, and perceived behavioral control) and all four outcome variables (achievement, foreclosure, moratorium, and diffusion). I also allowed all three beliefs to predict all four outcome variables. All the latent variances were fixed at 1.0 for scale setting purposes. The four socializing variables were allowed to correlate with one another as were the three beliefs, and the four outcome variables. The model closely fit the data: $\chi^2_{(224, N=2,098)} = 1222.58$, RMSEA = .046, 90% CI = .04 to .05, CFI = .97. Results are shown in Figure 1.

Socializing factors predicting financial belief outcomes. I expected perceived parental SES, parental financial communication, formal financial education, and work experience would be associated with financial attitudes, subjective norms, and perceived behavioral control. I found partial support for this hypothesis. Higher perceived parental SES predicted higher scores on subjective norms ($\beta = .19, p < .001$). In addition, higher parental financial communication predicted higher financial attitudes ($\beta = .29, p < .001$), higher subjective norms ($\beta = .55, p < .001$), and higher perceived behavioral control ($\beta = .17, p < .001$). In contrast, formal financial education and work experience were not significantly predictive of financial beliefs.

Financial belief outcomes predicting financial identity formation. I expected financial attitudes, subjective norms, and perceived behavioral control to be associated

with financial identity formation. I found support for this hypothesis. Financial attitudes positively predicted achievement ($\beta = .18, p < .001$); negatively predicted foreclosure ($\beta = -.06, p < .05$), and negatively predicted diffusion ($\beta = -.28, p < .001$). Subjective norms positively predicted foreclosure ($\beta = .33, p < .001$) and negatively predicted diffusion ($\beta = -.08, p < .05$). Finally, perceived behavior control positively predicted achievement ($\beta = .22, p < .001$); negatively predicted moratorium ($\beta = -.39, p < .001$), and negatively predicted diffusion ($\beta = -.21, p < .001$).

Tests of Indirect Effects. I tested indirect effects using the alternative parameter technique in LISREL, which calculates the (ab) factor in the mediation equation: $c = c' + (ab)$ (Little et al., 2007). As depicted in Figure 1, the significant indirect paths were as follows. First, parental financial communication predicted achievement through attitudes (indirect effect = .06, $p < .001$) and through perceived behavioral control (indirect effect = .04, $p < .001$). Second, perceived parental SES predicted foreclosure through subjective norms (indirect effect = .08, $p < .001$). Parental financial communication also predicted foreclosure through attitudes (indirect effect = -.02, $p < .01$) and through subjective norms (indirect effect = .22, $p < .001$). Third, parental financial communication predicted moratorium through perceived behavioral control (indirect effect = -.04, $p < .001$). Finally, perceived parental SES predicted diffusion through subjective norms (indirect effect = -.02, $p < .01$). Parental financial communication also predicted diffusion through attitudes (indirect effect = -.09, $p < .01$), through subjective norms (indirect effect = -.05, $p < .01$), and through perceived behavioral control (indirect effect = -.04, $p < .001$).

According to this method, the results suggest that financial beliefs mediate the association between financial socialization and financial identity formation. To further test these effects, I created a restricted or nested model by removing the three direct paths from the socializing factors (exogenous variables) to the financial identity variables (endogenous variables; Little et al., 2007). Next, I compared the models using the change in χ^2 relative to the change in degrees of freedom. That is, the χ^2 statistic and associated degrees of freedom calculated for the nested model was subtracted from the χ^2 statistic and degrees of freedom calculated for the baseline or CFA model. Using this information, the change in χ^2 was significant ($\Delta\chi^2_{(df=16)} = 306.92, p < .001$), and as such, the more parsimonious model did not fit the data as well as the baseline model. Hence, this test indicates that financial beliefs only partially mediated the association between the financial socializing constructs and the outcome constructs or financial identity formation.

Longitudinal (Panel) Model (Model 3)

Measurement Equivalence

In order to ensure meaningful comparisons among the study constructs at T1 and T2, tests of measurement equivalence are required (Little, Preacher, Selig, & Card, 2007). Hence, I fit a series of three confirmatory factor analysis models in which I successively evaluated configural, weak, and strong invariance between T1 and T2 measures of the financial identity construct. In the first model (configural invariance), I imposed no equality constraints across the two time points other than equivalence of factor structure. This model closely fit the data: $\chi^2_{(212, N=2,098)} = 1,166.72$, RMSEA = .046, 90% CI = .04

to .05, CFI = .97. In the second model (weak invariance), I imposed relative factor loading equality across the two samples. This model also closely fit the data: $\chi^2_{(220, N = 2,098)} = 1,180.40$, RMSEA = .045, 90% CI = .043 to .048, CFI = .965. Inspection of the practical fit indices (RMSEA and CFI) indicated that the weak invariance model resulted in negligible model misfit relative to the configural model. That is, the RMSEA (.045) from the more restricted (weak invariance) model fell within the 90% confidence interval of the previous less-restrictive (configural invariance) model (.044 to .049). In addition, the change in CFI between the configural invariance model (.965) and the weak invariance model (.965) was zero, which is less than .01 as recommended by Cheung & Rensvold (2002). In the final most restrictive model (strong invariance), I constrained the intercepts to be equal across T1 and T2. This model also closely fit the data: $\chi^2_{(228, N = 2,098)} = 1,197.99$, RMSEA = .045, 90% CI = .042 to .047, CFI = .96. Similar calculations were performed to compare the strong invariance model to the weak invariance model, which yielded acceptable results. Hence, these findings indicated that invariance held across measurement occasions, thereby suggesting that the latent financial identity constructs were measured in the same way (i.e., have the same meaning) across testing occasions.

Confirmatory Factor Analysis

Once measurement equivalence was established between T1 and T2 financial identity variables, I evaluated the hypothesized measurement structure in the longitudinal (panel) model including T1 measures of socialization, beliefs, and financial identity, as well as T2 measures of financial identity. The latent variances were fixed at 1.0 for scale setting purposes. All latent constructs in the model were allowed to correlate. The model

closely fit the data: $\chi^2_{(524, N=2,098)} = 2,226.47$, RMSEA = .04, 90% CI = .038 to .041, CFI = .97. All hypothesized factor loadings were substantial and significant. Completely standardized factor loadings are summarized in Table 1. Means and standard deviations for the latent variables are shown in Table 2. Latent bivariate correlations among T1 and T2 constructs are shown in Table 5. As depicted in Table 5, the identity variables were highly stable across time. That is, the latent associations were as follows: achievement ($r = .47, p < .001$), foreclosure, ($r = .62, p < .001$), moratorium ($r = .50, p < .001$), and diffusion ($r = .47, p < .001$). The results also indicated that the pattern of associations among the identity variables at T1 was similar to the pattern of associations at T2.

Structural Equation Model

To fit the proposed structural equation model (SEM) of the predictive relations among the constructs, I allowed all seven T1 independent variables (four socialization variables: perceived parental SES, parental financial communication, formal financial education, and work experience; and three belief variables: attitude, subjective norm, and perceived behavioral control) and all four T1 financial identity variables to predict all four T2 financial identity variables (achievement, foreclosure, moratorium, and diffusion). The latent variances were fixed at 1.0 for scale setting purposes. The seven T1 independent variables and the four T1 identity variables were allowed to correlate with one another as were the four T2 identity (outcome) variables. The model closely fit the data: $\chi^2_{(524, N=2,098)} = 2,226.47$, RMSEA = .04, 90% CI = .038 to .041, CFI = .97. Results are shown in Table 6.

T1 socialization factors and T1 financial beliefs (controlling for T1 financial identity) predicting T2 financial identity outcomes. As expected, T1 financial identity was the strongest predictor of T2 financial identity. All T1 financial identity scores significantly and positively predicted all T2 financial identity scores as follows: achievement ($\beta = .39, p < .01$), foreclosure ($\beta = .66, p < .01$), moratorium ($\beta = .46, p < .01$), and diffusion ($\beta = .41, p < .01$). The magnitude of the associations between T1 and T2 financial identity suggests the presence of change in financial identity over time.

In addition to the T1 financial identity predictors, I found the following significant predictors. First, higher T2 achievement scores were predicted by higher T1 parental financial communication ($\beta = .14, p < .01$). Second, higher T2 foreclosure scores were predicted by higher T1 perceived parental SES ($\beta = .10, p < .01$), higher T1 parental financial communication ($\beta = .14, p < .01$), more T1 formal financial education ($\beta = .12, p < .01$), and higher T1 subjective norms ($\beta = .15, p < .01$). Compared to the cross-sectional model, the emergence of formal financial education as a significant predictor of foreclosure may represent a sleeper or delayed effect. Finally, higher T2 diffusion scores were predicted by lower T1 subjective norms ($\beta = -.08, p < .05$). These findings represent changes in financial identity across time.

Longitudinal Mediation Model (Model 4)

To fit the proposed structural equation model (SEM) of the predictive relations among the constructs, I allowed all four T1 socializing constructs (perceived parental SES, parental financial communication, formal financial education, and work experience) to predict all three T1 beliefs (attitude, subjective norm, and perceived behavioral

control) and all four T2 outcome variables (achievement, foreclosure, moratorium, and diffusion). I also allowed all four T1 identity variables and all three T1 beliefs to predict all four T2 outcome variables. The latent variances were fixed at 1.0 for scale setting purposes. The four T1 socializing variables, the three T1 belief variables, and the four T1 identity variables were allowed to correlate with one another. In addition, the three T1 belief variables were allowed to correlate with one another as were the four T2 outcome variables. The model closely fit the data: $\chi^2_{(524, N=2,098)} = 2226.47$, RMSEA = .0395, 90% CI = .0378 to .0411, CFI = .97.

Socializing factors predicting financial belief outcomes. As these predictors were all measured at T1, the results in this section of the model mirrored those found in the cross-sectional mediation model (M2). That is, higher perceived parental SES predicted higher scores on subjective norms ($\beta = .17, p < .001$). In addition, higher parental financial communication predicted higher financial attitudes ($\beta = .31, p < .001$), higher subjective norms ($\beta = .51, p < .001$), and higher perceived behavioral control ($\beta = .15, p < .001$). Similarly, formal financial education and work experience remained nonsignificant predictors of financial beliefs.

Financial belief outcomes predicting financial identity formation. In contrast to the cross-sectional mediation model (M2), none of the T1 financial beliefs were significant predictors of the T2 financial identity variables. Hence, in the longitudinal model, given the absence of significant direct effects, I found no support for mediation. Accordingly, no tests of indirect effects were conducted.

CONCLUSION

A primary goal of this study was to extend Erikson's (1950, 1968) theory of identity formation to the domain of finance. To do so, I analyzed the contribution of four socialization factors (perceived parental SES, parental financial communication, formal financial education, and high school work experience) and three beliefs (attitudes, subjective norms, and perceived behavioral control) to financial identity formation (achievement, foreclosure, moratorium, and diffusion) in a sample of young adults who were surveyed at two time points approximately 2.5 years apart. I tested four models: a cross-sectional model, a cross-sectional mediation model, a longitudinal (panel) model, and a longitudinal mediation model using SEM. Cross-sectionally, the vast majority of associations (79%) were as expected theoretically. Cross-sectional evidence also suggested that financial beliefs partially mediated the association between parental financial communication and financial identity. Using longitudinal data, T1 financial identity was the most robust predictor of T2 financial identity. Additionally, after controlling for T1 financial identity, T1 variables were most predictive of changes in T2 foreclosure: Increases in foreclosure were predicted by perceived parental SES, parental communication, formal education, and subjective norms. Finally, T1 financial beliefs did not mediate the association between T1 socialization factors and T2 financial identity. I discuss these results as well as the limitations and implications of this study in the paragraphs that follow.

Parental Social Class and Financial Identity Formation

In this study, perceived parental SES was predictive of financial identity formation as suggested by the theoretical dimensions of exploration and commitment (Erikson, 1950, 1968; Marcia, 1966). That is, crosssectionally, resource rich environments, which may require less financial exploration, were associated with less fully formed financial identities (higher foreclosure, moratorium, and diffusion). Conversely, resource challenged environments, which may require more financial exploration, were associated with a more fully formed financial identity (higher achievement). However, across time, perceived parental SES only remained predictive of increases in foreclosure. Findings from the longitudinal model may challenge the view that young adults who approach identity formation with a strong sense of agency (proactively) may be more apt to achieve upward mobility than those that take a less agentic or more passive approach (Côté, 1996, 1997, 2002; Côté & Levine, 2002; Schwartz, Côté, & Arnett, 2005).

Parental Financial Communication and Financial Identity Formation

Identity formation has been associated with different parenting practices (e.g., Berzonsky, 2004; Grotevant & Cooper, 1985). Crosssectionally, parental financial communication was predictive of financial identity formation as expected theoretically. That is, parental financial communication was positively associated with more fully formed identities (higher achievement and foreclosure), and negatively associated with a less fully formed identities (higher moratorium and diffusion). Moreover, across time, parental financial communication was predictive of financial identity commitments

(higher achievement and foreclosure). These findings lend additional support to the extant literature that suggests the lasting impact of parental socialization, including parental communication, on identity development (e.g., Adams, Ryan, & Keating, 2000; Campbell, Adams, & Dobson, 1984; Frank, Pirsch, & Wright, 1990; Fullinwider-Bush & Jacobvitz, 1993; Grotevant & Cooper, 1985; Papini, Micka, & Barnett, 1989; Perosa, Perosa, & Tam, 1996).

Formal Financial Education and Financial Identity Formation

A number of financial education programs have been designed to enhance financial literacy (Mandell, 2008). Although little is known about the role of formal education in identity development, in this study, financial courses taken during high school were positively predictive of identity achievement crosssectionally. However, across time, formal education was no longer predictive. These findings are in line with empirical studies that indicate formal financial education classes have little impact on the growth of financial competencies (McCormick, 2009; Huston, 2010; Mandell & Klein, 2009). Of note, across time, formal financial education did emerge as a potential sleeper or delayed effect among more foreclosed students. The emergence of this significance association may be due (in part) to anticipatory socialization, or the process of learning the expectations of a role prior to assuming it, which is postulated to ease role transition (Burr, 1972). Hence, the values, attitudes, and skills learned in adolescence through high school financial courses may have become not only more salient but also more relevant as more foreclosed students assumed additional adult-like responsibilities, including

financial management as is typical during the transition to adulthood (i.e., between their first and third year of college).

Work Experience and Financial Identity Formation

In this study, cross-sectionally, work experience was predictive of financial identity formation as hypothesized. That is, more work experience (more opportunity for exploration) was predictive of a more fully formed financial identity (higher achievement), whereas less work experience (less opportunity for exploration) was associated with less fully formed financial identities (higher foreclosure, moratorium, and diffusion). However, across time, the effects of work experience became nonsignificant. These findings may echo those from a recent review of the literature on paid work during adolescence. Monahan, Lee, and Steinberg (2011) concluded that although working too much may have negative consequences for development, the types of work typically available to most adolescents (e.g., low paying, monotonous) does not appear to support adolescent development.

Financial Beliefs and Financial Identity Formation

Identity scholars have long recognized the importance of beliefs and values in identity formation. Hence, in this study, I explored three beliefs as suggested by the theory of planned behavior (Ajzen, 1991). Based on dimensions of exploration and commitment, I expected positive attitudes would predict the presence of financial identity commitments (higher achievement and foreclosure), whereas negative attitudes would predict the absence of financial identity commitments (higher moratorium and diffusion). Cross-sectionally, these expectations were partially supported. More achievement was

positively predicted by attitudes; however, more foreclosure, like more diffusion, was negatively predicted by attitudes. Perhaps positive attitudes require the presence of exploration *and* commitment, rather than just commitment as I had originally hypothesized.

In addition, crosssectionally, financial attitudes partially mediated the association between parental financial communication and achievement; between parental financial communication and foreclosure; and between financial communication and diffusion. These findings suggest that beliefs (attitudes) may represent one mechanism by which the cumulative effects of family communication patterns affect identity formation among young adults. That is, although parental financial communication is positively associated with financial attitudes, it appears that the lessons learned from parents may result in positive as well as negative financial attitudes. In turn, financial attitudes may be uniquely and partially reflected in financial identity formation. However, the effect of financial attitudes on financial identity formation did not stand the test of time. Hence, it appears that contextual factors such as parental communication may play a stronger role, compared to attitude formation, in identity development.

I expected subjective norms to predict the presence of commitments without exploration (higher foreclosure). In line with previous research, using concurrent data, I found support for this hypothesis (Berzonsky, 2004, Dunkel, Papini, & Berzonsky, 2008, Soenens, Berzonsky, Dunkel, & Papini, 2011). In addition, unexpectedly, I found a negative association between subjective norms and diffusion crosssectionally. Upon reflection, however, it stands to reason that an absence of social pressure to engage in

healthy behaviors and/or an inclination to reject such social pressure could underpin many of the risky behaviors typically associated with identity diffusion (e.g., drug and alcohol problems, and delinquency; Adams, Munro, Munro, Doherty-Poirer, & Edwards, 2005; Luyckx et al., 2005; Schwartz et al. 2011; Schwartz, Côté, & Arnett, 2005).

In addition, cross-sectionally, subjective norms partially mediated the association between parental financial communication and foreclosure; and between parental financial communication and diffusion. As with attitudes, these findings suggest that beliefs (subjective norms) may represent one mechanism by which the cumulative effects of family communication patterns affect identity formation among young adults. That is, although parental financial communication is positively associated with subjective norms, it appears that the lessons learned from parents may result in different expectations. In turn, these financial expectations may be uniquely and partially reflected in financial identity formation. However, unlike attitudes, the impact of subjective norms may stand the test of time.

Finally, as identity achievement has been associated with self-determined regulatory efforts, self-esteem, internal locus of control, and ego strength (Schwartz, Côté, & Arnett, 2005; Soenens, Berzonsky, et al., 2005), I expected higher levels of perceived behavioral control to predict higher levels of identity formation (higher achievement). Conversely, given the absence of such psychosocial assets, I expected lower levels of perceived behavioral control to predict lower levels of identity formation (higher foreclosure, moratorium, and diffusion). Cross-sectionally, these expectations were partially supported. Higher levels of perceived behavioral control did predict higher

achievement, whereas lower levels of perceived behavioral control did predict higher moratorium and higher diffusion. However, unexpectedly, perceived behavioral control did not predict foreclosure. Taken together, these findings suggest that feelings of perceived behavioral control may develop during processes of identity exploration and commitment making.

In addition, cross-sectionally, perceived behavioral control partially mediated the association between parental financial communication and achievement; between parental financial communication and moratorium; and between parental financial communication and diffusion. As with attitudes and subjective norms, these findings suggest that beliefs (perceived behavioral control) may represent one mechanism by which the cumulative effects of family communication patterns affect identity formation among young adults. That is, although parental financial communication is positively associated with perceived behavioral control, it appears that the lessons learned from parents may result in different perceptions of behavioral control. In turn, such perceptions may be uniquely and partially reflected in financial identity formation. However, as with attitudes, the effect of perceived behavioral control on identity formation may not stand the test of time.

In sum, the pattern of beliefs found in the cross-sectional data may shed light on the dynamics that underpin patterns of identity formation. For instance, identity achievement may reflect healthy behaviors given favorable attitudes toward such behaviors as well as a strong sense of behavioral control derived from a wealth of personal experience. This pattern of beliefs lends additional support to associations found in the extant literature

between identity achievement and positive psychological adjustment including self-esteem, internal locus of control, and ego strength (Soenens, Berzonsky, et al., 2005; Kroger & Marcia, 2011; Meeus, 2011; Schwartz, Côté, & Arnett, 2005). These findings also provide additional theoretical support as identity achievement, which encompasses both exploration and commitment, is considered the most developmentally advanced identity (Waterman, 1999).

The protective effects often associated with identity commitment, even in the absence of exploration (identity foreclosure; Schwartz et al., 2011), may stem from a willingness to adhere to socially prescribed healthy practices (subjective norm) even in the face of unfavorable attitudes toward such practices. These findings are also in line with the theoretical assumption that the effective use of commitments based on parental prescriptions may undermine the need for exploration given the absence of challenges that might cast doubt on the appropriateness of such commitments (Waterman, 1999).

In contrast, the risky behaviors often associated with identity diffusion (Adams, Munro, Munro, Doherty-Poirer, & Edwards, 2005; Luyckx et al., 2005; Schwartz et al., 2011; Schwartz, Côté, & Arnett, 2005) may stem from unfavorable attitudes toward healthy behaviors, a sense of negativity or resistance toward healthy expectations, as well as a lack of perceived behavioral control. These findings may challenge the idea that theoretically, risky behavior is attributed to a lack of internalized values, goals, and commitments (Marcia, 1966). Instead, these findings may suggest the presence of internalized beliefs; however, such beliefs have a negative (rather than a positive) valence. In either case, operating from the constellation of beliefs associated with identity

diffusion in this study is apt to lead to poor choices and undermine opportunities for healthy identity formation (Waterman, 1999).

Finally, identity moratorium is often associated with anxiety in the extant literature (Kroger & Marcia, 2011; Schwartz et al., 2009). This association might be related to a belief that one lacks control over the behaviors required to manage daily activities (perceived behavioral control). Nevertheless, however temporarily debilitating, from a developmental perspective, the process of exploration represents an essential step toward identity achievement (Erickson, 1960, 1968; Marcia, 1966; Waterman, 1999).

In terms of identity change overtime, the greatest number of effects clustered around foreclosure. Increases in foreclosure were predicted by perceived parental SES, parental communication, formal education, and subjective norms. These results suggest that over time students scoring high on identity foreclosure strengthen commitments to the financial prescriptions of authority figures; namely, parents and teachers. These results also suggest the absence of experiences that might cast doubt on the appropriateness of such commitments.

Identity foreclosure may increase over time for a variety of reasons. For instance, although Erikson (1968) described severe, prolonged, and aggravated forms of identity crisis (exploration), he also asserted that “the vast majority of young people...can go along with their parents in a kind of fraternal identification” (1968, p. 33). Hence, Erikson (1968) believed that, even in modern societies, most young people work their identity crisis in muted and barely discernible ways.

Moreover, Erikson (1968) stressed the importance of identity commitments, suggesting that commitments represent the “cornerstone of identity” (p. 125). This assertion has been demonstrated empirically as the presence of identity commitments, with or without exploration, appears sufficient to protect against a variety of health-compromising behaviors (e.g., Schwartz et al., 2011). More recently, scholars have suggested that the functional utility of identity commitments, with or without exploration, may depend on how well such commitments fit the demands individuals face (Berzonsky, 2011, Côté & Levine, 2002). Thus, in relatively stable, tradition-oriented contexts, identity foreclosure may prove sufficient, whereas contexts characterized by rapid change and transition may favor identity achievement.

Alternatively, rather than adhering to parental prescriptions “in a kind of fraternal identification,” high foreclosure may indicate the continued need to rely on parents for social as well as financial support during the transition to adulthood. As such it would prove hazardous to challenge parental prescriptions at this juncture (i.e., during the third year of college). If so, identity exploration may begin for students scoring high on identity foreclosure after graduation, once some financial independence has been attained. Such questions could be addressed using the APLUS dataset given additional waves of data collection.

Limitations, Future Research, and Implications

Although this study found support for several hypotheses not previously evaluated in the extant identity formation literature, there are limitations that merit consideration. First, using Cohen’s (1988) benchmarks, the magnitude of many of the effects found in

this study are small. Hence, some may question the usefulness of these findings.

However, Abelson (1985) contends that the processes through which variables operate in the real world should also be taken into consideration. That is, “the degree to which the effects of the explanatory factor cumulate in practice... In such cases, it is quite possible that small variance contributions of independent variables in single-shot studies grossly understate the variance contribution in the long run” (Abelson, 1985, p. 133). Surely, the decisions students repeatedly make regarding money management can be considered cumulative. Consider, for example, the effects of compound interest. A single \$5,000 contribution to an IRA at the age of 20, earning an average 8% annually, grows to \$160,000 by age 65; whereas the same \$5,000 contribution made at age 40 grows to \$40,000 by age 65. Moreover, yearly contributions of \$5,000 made between the ages of 20 and 65, earning an average 8% annually, would result in over \$1.93 million. Inversely, leaving a balance on a high interest credit card could end up costing almost double the original amount spent. For example, paying \$60 per month, it would take roughly eight years to pay off a \$3,000 balance on a credit card with an 18% interest rate, costing a total of \$5,600. Hence, although failing to save for retirement or to pay a credit card balance in full one month may prove inconsequential, repetition of this pattern, month after month, year after year, would have substantial consequences in the long run. Hence, even small shifts in parental financial communication (for example) could influence financial identity formation in ways that could result in sizable payoffs (or shortfalls) over time.

Second, the sample was predominantly Caucasian traditionally-aged undergraduate students living in a Western industrialized society. Hence, caution should be exercised when generalizing these results to groups other than postsecondary students. Relatedly, future studies should examine identity processes as they occur in the large number of youth who do not attend college; those Halperin (1998) referred to as the “forgotten half.” Indeed, the process of identity formation among such young adults during the transition to adulthood remains unexplored. Nevertheless, the use of college students provides a strategic place to begin as the college period includes the transition to adulthood within a setting that offers an institutionalized moratorium.

Third, this study relied on retrospective self-report questionnaires. Meaningful inaccuracies may result if only one method of data collection or informant is used. Future studies might address both issues by bringing parents and students into the lab where conversations about financial matters could be observed and coded for a range of communication indicators. Such methods could provide insight into why the presence of parental financial communication predicts different types of financial identity formation. The inclusion of parents would also provide opportunities to secure more accurate reports on variables associated with SES (i.e., parental income, parental education).

Fourth, the range of some measures were restricted especially those related to formal financial education and work related experiences. These restrictions could diminish statistical associations among variables. Quantitatively, researchers could address this limitation by expanding the range and the number of questions. Researchers could include measures designed to investigate the qualitative aspects of participants’

educational (e.g., lecture vs. hands-on learning) and employment (e.g., level of autonomy and opportunities for training) experiences.

Finally, these data were collected during a recession that clearly impacts the lives of young adults today as they seek to locate themselves in a broader social and professional community. Although an asset in many respects, this uniqueness also makes it difficult to distinguish the extent to which these findings reflect historical trends rather than developmental trends. Future studies should sample additional cohorts in an effort to investigate this potential confound.

The findings from this study could have practical implications for parents, employers, and educators. First, the findings underscore the central role of parents in young adult financial socialization (Allen, 2008). Accordingly, if parents had a better understanding of how their efforts influence financial identity formation, they might be more inclined to promote financial education at home. Indeed, opportunities to discuss financial management seem embedded in nearly every facet of life. For example, rather than just say, “we can’t afford that,” parents could allow their children to see the family’s budget in an effort to help them grasp the cost of living. Parents could encourage their offspring to create a personal budget, help them set priorities (identity wants versus needs), provide an income stream, and teach them how to comparison shop. Parents could also provide adolescents with small loans. Such practices could open topics such as interest rates, payment plans, late penalties, as well as conversations about the stiff penalties associated with debt default. Participation in such low risk activities at home,

with parents may serve to better prepare young adults to bear the more risky, less forgiving, responsibilities associated with student loans, credit cards, and mortgage debt.

Given the importance of parents and communication patterns within the family of origin (Allen, 2008; Koerner & Fitzpatrick, 2006), interventions designed to support financial identity formation should include a component that helps parents not only grasp the importance of their role but also provides practical strategies by which parents might enhance their offspring's involvement in financial decision making. Parental financial education should stress the importance of an open communication environment where any topic or point of view is open for consideration and discussion (Koerner & Fitzpatrick, 2006). Open communication environments are indicative of the well documented and highly successful authoritative parenting style (Baumrind, 1971, 1991; Steinberg, 2001).

Relatedly, within the realm of work, parents should be alerted to the dangers associated with premature affluence (Bachman, 1983): "Affluence because \$200 or more per month represents a lot of 'spending money' for a high school student, and premature because many of these individuals will not be able to sustain that level of discretionary spending once they take on the burden of paying for their own necessities" (p. 65). Empirically, adolescents who earned and spent a lot from their jobs were found to be less satisfied with their financial situations as young adults (Bachman, 1983). Hence, if parents would see their adolescents reap the skills associated with fiscal responsibility from their work experiences, they might discourage discretionary spending on personal items such as designer clothing, expensive stereo equipment, movies, and eating out

(Steinberg, Fegley, & Dornbusch, 1993). Instead, parents could encourage their teens to budget (e.g., account for income and expenditures), save (e.g., for college, home ownership, child rearing, transportation), invest (e.g., in education, certificates of deposit, stocks, bonds), and pay for necessities (e.g., insurance).

Second, employers could lend additional support for fiscal responsibility among their adolescent employees through a public service campaign. Such efforts might include “financial tidbits” or “financial food for thought” posters in the break room or employee common areas. These messages might encourage comparison shopping, budgeting, saving, and investing. Companies might reward healthy financial behaviors through incentive programs as well.

Finally, in terms of formal education, efforts aimed at financial literacy have met with mixed results (Huston, 2010; McCormick, 2009). Although interventions designed to facilitate identity development are in their infancy (Kroger & Marcia, 2011), perhaps identity formation could be profitably applied to programs aimed at financial literacy. For example, efforts targeted toward more identity diffusion might begin with messages designed to promote positive attitudes toward healthy financial behaviors, an increased awareness of societal expectations related to financial matters (e.g., negative consequences), as well as opportunities to practice a variety of behaviors associated with financial success (e.g., budgeting). More identity foreclosure may require opportunities to explore the rationale behind societal prescriptions in an effort to make daily financial behaviors more personally meaningful. More identity achievement may require more sophisticated information, whereas more identity moratorium may require reassurance

and additional support during exploratory efforts. Hence, financial identity formation could allow educators to tailor the curriculum to meet the needs of specific young adults.

In conclusion, this study demonstrates that identity formation within the financial domain is consistent with identity formation in other important life domains (e.g., occupation, education, politics, relationships, and religion). A well-developed sense of identity acts as both a stabilizing force and a compass, helping individuals navigate the ever increasing demands of modern living (Côté & Levine, 2002; Erikson, 1950, 1968). A rich extant literature supports this assertion (see Kroger & Marcia, 2011). Hence, given the importance of financial independence coupled with the current social and economic uncertainty, an understanding of financial identity formation could inform the development of fiscal responsibility among the next generation of adults.

APPENDIX A: TABLES

Table 1.

Completely Standardized Factor Loadings for T1 and T2 Variables

<i>Construct/indicator</i>	<i>Crossectional models</i>	<i>Longitudinal model</i>
Socializing Factors (T1)		
Perceived parental SES	1.00	1.00
Parental financial communication		
Parcel 1 (2 items)	.82	.82
Parcel 2 (2 items)	.87	.87
Parcel 3 (2 items)	.82	.82
High school finance classes	1.00	1.00
High school work experience	1.00	1.00
Financial Beliefs (T1)		
Attitudes		
Parcel 1 (2 items)	.87	.89
Parcel 2 (2 items)	.91	.91
Parcel 3 (2 items)	.74	.74
Subjective norms		
Parcel 1 (2 items)	.95	.95
Parcel 2 (2 items)	.97	.97
Parcel 3 (2 items)	.90	.90
Perceived behavioral control	1.00	1.00
Financial Identity (T1)		
Achievement		
Item 1	.68	.68
Item 2	.80	.79
Item 3	.60	.60
Foreclosure		
Item 1	.74	.72
Item 2	.70	.71
Item 3	.67	.70
Moratorium		
Item 1	.52	.55
Item 2	.78	.77
Item 3	.60	.59
Diffusion		
Item 1	.54	.53
Item 2	.68	.68
Item 3	.71	.72

Table continues

Table 1.

Completely Standardized Factor Loadings (continued)

<i>Construct/indicator</i>	<i>Crossectional models</i>	<i>Longitudinal model</i>
Financial Identity (T2)		
Achievement		
Item 1	-	.73
Item 2	-	.81
Item 3	-	.60
Foreclosure		
Item 1	-	.70
Item 2	-	.70
Item 3	-	.72
Moratorium		
Item 1	-	.57
Item 2	-	.82
Item 3	-	.61
Diffusion		
Item 1	-	.56
Item 2	-	.72
Item 3	-	.75

Note: T1 = time one, T2 = time two. All loadings are statistically significant ($p < .001$). All paths between each latent variable and its respective error term were fixed at 1.0 to aid identification.

Table 2.

Latent Variables: Means and Standard Deviations (N = 2,098)

<i>Variables</i>	<i>M</i>	<i>SD</i>	<i>Range</i>
1. Perceived parental SES	9.66	2.61	3–14
2. Parental financial instruction	3.57	.83	1–5
3. Formal instruction	1.73	.65	1–4
4. Work experience	2.33	.78	1–3
5. Attitudes	3.91	.76	1–5
6. Subjective norms	14.03	5.77	1–25
7. Behavioral control	4.50	1.52	1–7
8. Achievement T1	3.16	.73	1–5
9. Foreclosure T1	3.21	.84	1–5
10. Moratorium T1	3.04	.69	1–5
11. Diffusion T1	2.46	.76	1–5
12. Achievement T2	3.15	.88	1–5
13. Foreclosure T2	2.79	1.02	1–5
14. Moratorium T2	3.00	.91	1–5
15. Diffusion T2	2.23	.92	1–5

Table 3.

Intercorrelations among T1 Latent Constructs (N = 2,098)

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>
1. Perceived parental SES	-										
2. Parent communication	.16**	-									
3. HS courses	-.04	.09**	-								
4. HS work	-.06**	-.02	.03	-							
5. Attitude	.06**	.29**	.02	.02	-						
6. Subjective norm	.27**	.58**	.04	-.02	.36**	-					
7. Perceived behavioral control	.03	.17**	-.00	.01	.23**	.14**	-				
8. Achievement	-.04	.35**	.11**	.06**	.30**	.21**	.30**	-			
9. Foreclosure	.33**	.40**	-.02	-.14**	.12**	.48**	.03	.08*	-		
10. Moratorium	.04	-.15**	-.05	-.08**	-.10*	-.09**	-.40**	-.60**	.19**	-	
11. Diffusion	.08**	-.25**	-.07**	-.14**	-.38**	-.24**	-.30**	-.41**	.26**	.53**	-

* $p < .05$. ** $p < .01$.

Table 4.

Crossectional SEM: Predictions of Financial Identity

<i>Predictor</i>	<i>Achievement T1</i>	<i>Foreclosure T1</i>	<i>Moratorium T1</i>	<i>Diffusion T1</i>
SES	-.08**	.20***	.06**	.13**
PFC	.30***	.21***	-.10**	-.10**
HS courses	.08**	-.04	-.04	-.05*
HS work	.07**	-.12***	-.07**	-.12**
Attitude	.18***	-.06**	.02	-.28***
SBJN	-.04	.33***	.00	-.08**
PBC	.22***	-.04	-.39***	-.21***
R^2	.23	.32	.18	.24

* $p < .05$. ** $p < .01$. *** $p < .001$. *Note.* For clarity of presentation, only completely standardized Beta coefficients are presented. SEM = structural equation model, PFC = parental financial communication T1, FA = financial attitude T1, SBJN = subjective norm T1, PBC = perceived behavioral control T1, HS = high school T1, T1 = time one

Table 5.

Intercorrelations among T1 and T2 Latent Constructs (N = 2,098)

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>
1. A1	-														
2. F1	.07*	-													
3. M1	-.60**	.20**	-												
4. D1	-.41**	.27**	.52**	-											
5. A2	.47**	-.09**	-.38**	-.31**	-										
6. F2	.01	.62**	.05	.17**	.02	-									
7. M2	-.31**	.20**	.50**	.27**	-.57**	.30**	-								
8. D2	-.28**	.14**	.29**	.47**	-.43**	.36**	.52**	-							
9. SES	-.04	.32**	.04	.08**	-.03	.27**	.06*	.08**	-						
10. FPC	.35**	.39**	-.16**	-.25**	.25**	.32**	-.03	-.15**	.16**	-					
11. HSC	.11**	-.02	-.05	-.07**	.11**	.04	-.05*	-.05	-.04	.09**	-				
12. HSW	.08**	-.14**	-.07*	-.14**	.05*	-.13**	-.06*	-.10**	-.06**	-.02	.03	-			
13. FA	.29**	.11**	-.09**	-.38**	.17**	.00	-.09**	-.19**	.06**	.29**	.02	.02	-		
14. SBJN	.21**	.47**	-.09**	-.23**	.13**	.37**	.01	-.13**	.27**	.58**	.04	-.02	.36**	-	
15. PBC	.30**	.03	-.40**	-.29**	.22**	.05	-.23**	-.16**	.03	.17**	-.00	.00	.23**	.14**	-

* $p < .05$. ** $p < .01$. *Note.* T1 = time one, T2 = time two, PFC = parental financial communication (T1), FA = financial attitude (T1), SBJN = subjective norm (T1), PBC = perceived behavioral control (T1), HSC = high school courses (T1), HSW = high school work experience (T1), A1 = achievement (T1), F1 = foreclosure (T1), M1 = moratorium (T1), D1 = diffusion (T1), A2 = achievement (T2), F2 = foreclosure (T2), M2 = moratorium (T2), and D2 = diffusion (T2).

Table 6.

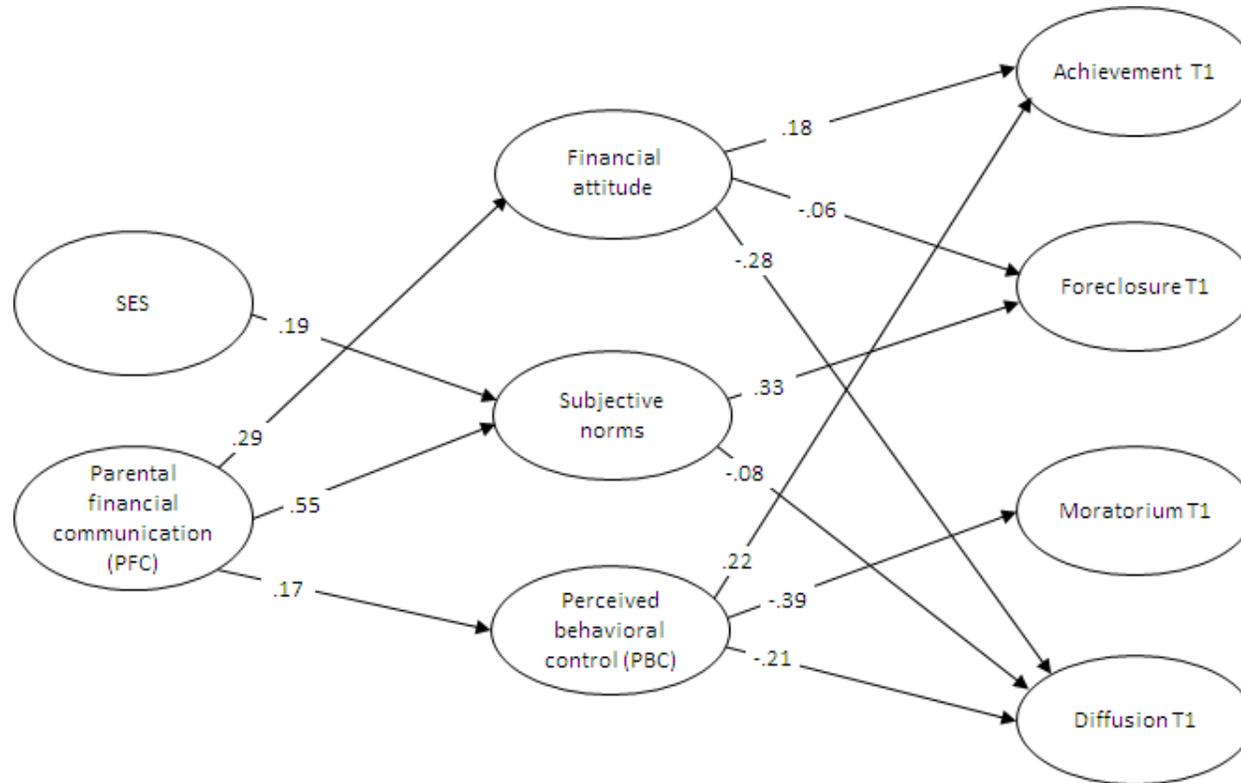
Longitudinal SEM: Predictions of T2 Financial Identity with T1 Background Variables

<i>Predictor</i>	<i>Achievement T2</i>	<i>Foreclosure T2</i>	<i>Moratorium T2</i>	<i>Diffusion T2</i>
Achievement T1	.39**	-.08**	-.09*	-.08*
Foreclosure T1	-.12**	.66**	-.16**	.03
Moratorium T1	-.05	.12**	.46**	-.03
Diffusion T1	-.11**	.04	.00	.41**
SES	.00	.10*	-.05	.03
PFC	.14*	.14*	.08	-.07
HS courses	.03	.12*	-.04	-.02
HS work	-.01	-.04	.01	-.04
Attitude	.02	-.06	-.08	.06
SBJN	.06	.15**	.03	-.08*
PBC	.04	.02	-.06	.02

* $p < .05$. ** $p < .01$. *Note.* For clarity of presentation, only completely standardized Beta coefficients are presented. SEM = structural equation model, PFC = parental financial communication T1, FA = financial attitude T1, SBJN = subjective norm T1, PBC = perceived behavioral control T1, HS = high school T1, T1 = time one, T2 = time two

APPENDIX B: FIGURE

Figure 1. Socialization factors predicting financial identity as mediated by financial beliefs (crosssectional data)



Note: For clarity of presentation, only significant mediated paths are presented. All values are completely standardized. The latent variances were fixed at 1.0 for scale setting purposes.

APPENDIX C: DATA COLLECTION INSTRUMENT

DATA COLLECTION INSTRUMENT

I am a _____ Male _____ Female

My primary ethnic background is...

- _____ African American/Black
 _____ Asian/Asian American
 _____ Pacific Islands
 _____ Hispanic/Latino
 _____ Native American
 _____ White
 _____ Other; Please specify _____

What is your father's level of education?

- _____ Less than high school diploma
 _____ Completed high school
 _____ Some college
 _____ College degree (B.A., B.S.)
 _____ Graduate school or professional degree (i.e., M.A., M.B.A., Ph.D.)

What is your mother's level of education?

- _____ Less than high school diploma
 _____ Completed high school
 _____ Some college
 _____ College degree (B.A., B.S.)
 _____ Graduate school or professional degree (i.e., M.A., M.B.A., Ph.D.)

What is YOUR PARENT(S') combined annual income?

- _____ Less than \$50,000
 _____ \$50,000-\$99,999
 _____ \$100,000-\$200,000
 _____ Over \$200,000
 _____ 100,000-\$124,999
 _____ 125,000-\$150,000
 _____ Over \$150,000

Before coming to college and while growing up at home, indicate to what degree you think your parents did the following: Scale: 1 = *Strongly disagree* to 5 = *Strongly agree*

1. Discussed family financial matters with me.
2. Spoke to me about the importance of saving.
3. Taught me how to be a smart shopper.
4. Taught me how to use a credit card appropriately.
5. Discussed how to establish a good credit rating.
6. Discussed how to finance my college education with me

While in high school, how many courses did you take related to financial management, consumer education, economics or business courses?

- None
- 1 course
- 2 courses
- 3 or more

During your high school years, how many seminars, workshops, or after school programs that taught financial management did you attend?

- None
- 1 seminar/workshop
- 2 seminars/workshops
- 3 or more

Were you employed outside of the home during high school (including summer jobs)?

- No, I did not work outside of the home.
- Yes, summers only
- Yes, throughout the school year, including summer

Indicate how favorably or unfavorably you feel toward each of the following activities:

Scale: 1 = *Very unfavorably* to 5 = *Very favorably*

1. Tracking monthly expenses
2. Spending within the budget
3. Paying credit card balances in full each month
4. Saving money each month for the future
5. Investing for long-term financial goals regularly
6. Learning about money management regularly

Indicate the extent to which you agree or disagree with the following statements:

Scale: 1 = *Strongly disagree* to 5 = *Strongly agree*

My parent(s) think that I should:

1. Track monthly expenses
2. Spend within the budget
3. Pay credit card balances in full each month
4. Save money each month for the future
5. Invest for long-term financial goals regularly
6. Learn about money management regularly

When it comes to money matters, to what degree do you think your own behaviors are influenced by your parents? Scale: 1 = *Not influenced at all* to 5 = *Strongly influenced*

When it comes to managing my money, how easy or difficult it is for you to stick to your plans? Scale: 1 = *Extremely difficult* to 7 = *Very easy*

Please read each of the following statements about attitudes towards money management and indicate to what degree it reflects your own thoughts and feelings. If a statement has more than one part, please indicate your reaction to the statement as a whole. Scale: 1 = *Strongly disagree* to 5 = *Strongly agree*

1. I haven't really thought much about a money management style. I'm not too concerned about credit ratings or paying bills.
2. There are so many different ways to manage money. I haven't decided which to follow but I'm trying to figure it out.
3. I have tried different ways to manage my personal finances and now I have a clear idea of what makes sense for me.
4. My parents know what's best for me in terms of how I should take care of my finances.
5. I've spent time thinking about financial goals, credit cards, and spending habits, and I've decided on a money management method that will work best for me.
6. I really don't know what kind of financial management style is best for me. I'm still trying to figure out what sort of savings and spending patterns feel right to me.
7. I make decisions about credit cards and bank accounts only if my parents would approve.
8. I've never really questioned my views about saving and spending. If it's right for my parents, it must be right for me.
9. Based on past experiences, I've chosen the type of money management style I want for now.
10. I don't think about money much. I just kind of take it as it comes.
11. I'm still trying to decide how capable I am as a person and what financial goals will be right for me.
12. I haven't really considered whether I am more of a saver or a spender. Finances just don't interest me much.

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