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# Boomerang bias: Examining the effect of parental coresidence on Millennial financial behavior

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**Abstract**

Millennials, or those born between 1980 and 1998, face unique financial situations relative to the general population. With increasing levels of educational loans and debt, many choose to live with their parents as a means of financial support, thus resulting in differing financial behaviors when compared to Millennials who live independently. This paper analyzes the effect of parental coresidence on debt, asset ownership, and asset values. We find evidence linking parental coresidence with decreases in magnitude and likelihood of having debt, along with significant differences in "risky" and "safe" asset ownership and valuations. Moreover, we find causal evidence that parental coresidence is used as a mechanism to decrease general debt.

**KEYWORDS**

behavioral finance, investments, portfolio choice

**JEL CLASSIFICATION**

G11; G41

## 1 | INTRODUCTION

Generation Y, commonly referred to as "Millennials," are a subset of approximately one-third of the United States population who experience a myriad of behavioral characteristics that deviate from their predecessors (CEA, 2014).[1] Such deviations include, but are not limited to, living through a significant recession, having a higher propensity to enroll in college, living closer to family and friends, experiencing less gender biases in the workforce, and being less likely to own a home (CEA, 2014). Some of these deviations could have significant financial implications for Millennials. The fact that Millennials have higher enrollment rates in college implies that more student loans will be acquired. The Great Recession experienced by Millennials can affect risk tolerances with regard to financial investment decisions (Malmendier & Nagel, 2011). Further, the Housing Market Crisis which led to the Great Recession may affect mortgage behaviors, and an increased rate of coresidence with parents.

In 2016, 15% of Millennials age 25 to 35 years old were coresiding with their parents. This was an increase of 5 percentage points over the percent of Generation Xers who lived with their parents in 2000, when they were in the 25 to 35 age group (Fry, 2017). Many young adults have the option to continue living with their parents (or return after having left), thus creating different living scenarios which may alter financial gains, losses, and responsibilities (or lack thereof).[2] In this paper, we examine Millennial financial behaviors, placing emphasis on Boomerang Millennials, who return to live or continue to live with their parents after the age of 18. Specifically, we analyze how parental coresidence (Millennial Boomerang bias) affects asset and debt levels.

Our results indicate significant differences in the likelihood of holding certain asset or debt classes, along with

  

significantly different portfolio allocations between young adults who live with their parent(s) relative to those who are independent. Specifically, we find that individuals living with both parents are less likely to hold transaction accounts, are less likely to have general debt, are more likely to have educational loans, have lower general debt balances, and have higher educational loan balances. Individuals that live with both parents also have higher transaction account balances and higher stock/mutual fund values. Individuals that live with their mothers are more likely to own stocks/mutual funds, are less likely to own bonds, have lower bond account values, have higher educational loan values, and are more likely to have educational loans.

The rest of the paper is organized as follows. Section 2 discusses related literature. Section 3 presents the data. Section 4 presents the empirical framework and hypotheses. Section 5 discusses the results and Section 6 concludes.

## 2 | MILLENNIAL BACKGROUND

### 2.1 | Savings rates

It is estimated that 40% of young adults do not regularly contribute to a savings account, and 55% do not contribute to an Individual Retirement Account (IRA) or other retirement account (Lusardi, Mitchell, & Curto, 2009). Less than 33% of young adults lack basic knowledge of interest rates, inflation, and risk diversification (Lusardi et al., 2009). Numerous research studies cite formal financial education as being a crucial factor and directly linked to financial decision-making and net worth gains in an individual's lifetime (Bernheim, Garrett, & Maki, 2001; Lusardi, 2004; Lusardi et al., 2009). Lacking formal education is associated with lower stock market participation and retirement account ownerships. However, formal financial education does not always translate into financial literacy (see Gale & Levine, 2010; Willis, 2011).

Using the 2012 National Financial Capability Study, Friedline and West (2015) find that only 19% of Millennials aged 18 to 34 were categorized as being "financially capable," or owning a savings account and having received a financial education, whereas only 8% of lower-income (those with less than $25,000 per annum) Millennials were "financially capable." The findings also show that "financially capable" Millennials are 176% more likely to afford unforeseen expenses as well as 30% less likely to hold "burdensome debt" than not "financially capable" Millennials.

### 2.2 | Debt

Relative to the general population, a higher percentage of young adults (85% vs. 75%) hold debt (Chiteji, 2007). The percentage of young adults holding debt has been stable for several decades and thus is not Millennial-specific, yet average debt rose from approximately $8,000 to $25,000 per young adult between 1983 and 2001 (Chiteji, 2007). Added aggregate debt levels are caused by numerous factors, ranging from easier credit access to student debt. Dettling and Hsu (2014) find that between 2001 and 2013, Millennials have experienced a decline in net worth, a phenomena driven mostly by a decrease in asset holdings. However, they also find the median young adult held more debt relative to young adults in 1989.

Dwyer, McCloud, and Hodson (2012) focus on educational debt and graduation rates using the National Longitudinal Survey of Youth 1997 (NLSY97) to determine marginal benefits of obtaining debt and the ability of debt to increase the likelihood of graduating on-time. Making the distinction between public and private colleges, they find that for private colleges, attaining more educational debt leads to a linear increase in the likelihood of graduating. For public colleges, however, the relationship is parabolic. Increasing educational loans up to $10,000 leads to an increase in graduation rates, while borrowing more than $10,000 leads to a decrease in graduation rates. Such patterns are found to be a result of differences in socioeconomic status. Dwyer et al. (2012) find that attrition from public universities due to debt are a result of less advantaged students being unable to absorb the negative impacts of educational debts after a certain threshold.

Students can receive money from parental transfers to help ameliorate the burden of educational financing. However, many students find the need to obtain additional work hours to supplement their education financing. Kalenkoski and Pabilonia (2010) find that students in 4-year colleges are more reliant on parental transfers, whereas students in 2-year colleges find themselves more dependent on working to obtain funding.

Zhan and Xiang (2014) analyze relationships between educational loans and wealth, determining that increasing educational loans result in a decrease in future net worth, financial and nonfinancial assets, and the value of primary housing. Mirroring Elliott and Beverly (2011), an increase in educational loans appears to have an *initial* effect of increasing future wealth, until debt levels reach the upper quartile of the educational debt distribution, after which net worth decreases (Zhan & Xiang, 2014).

Bleemer, Brown, Lee, and Van der Klaauw (2014) find that young adults with student loan debt burdens are also more likely to exhibit parental coresidence. Dettling and Hsu (2018) also conclude that borrowing constraints of young adults lead to an increased likelihood of parental coresidence. While they find that increased student and auto loans actually are negatively related to the time a

young adult spends with his/her parent(s), the delinquency and mismanagement of debt is positively related to the time spent coresiding. Another factor contributing to the coresidence rate among Millennials is the housing market bubble prior to the Great Recession. Between 2003 and 2012, for individuals between 25 and 30 years of age, there was a steady increase in young adults choosing to coreside with their parents (Bleemer et al., 2014).

### 2.3 | Parental coresidence

Ex ante, it is not clear how the coresidence rates would differ between young adults coming from more affluent backgrounds versus young adults coming from less affluent backgrounds. While young adults from affluent families may have the resources to live independently, affluent parents would likely have the means to support the coresiding child. Additionally, young adults may be incentivized to coreside with their affluent parents, in order to maintain a higher standard of living compared to being independent. Conversely, young adults from less affluent families may choose to decrease the financial burden of their parents by living independently. However, by choosing to live with their parents, less affluent young adults may be able to pool resources with their parents and thereby obtain higher utility as a family unit. Thus, family wealth backgrounds lead to mixed determinants for offspring coresidence. For example, Kahn, Goldscheider, and García-Manglano (2013) find that non-Caucasian, lower education, unemployed, or lower than median personal income young adults were more likely to live with a parent (a reversal in the trend which was studied between 1960 and 2010). In contrast, Cobb-Clark and Gørgens (2014) find that young adults tend to leave their family residence earlier, if the families are welfare recipients. Cobb-Clark and Gørgens (2014) also substantiate that financial support of young adults coresiding may lead to financial irresponsibility in the form of not seeking employment or studying for college. These mixed results make it more pressing to determine not only the associations between financial decisions and parental coresidence, but also the direction in which the associations flow.

Sandberg-Thoma, Snyder, and Jang (2015) find young adults with less than a high school education were 45% more likely to return to their parents' home; those with some college education were 49% less likely; those with a college degree were 38% less likely; and those with more than a college degree were 69% less likely to return home upon initially leaving. Kahn et al. (2013) find that males were more likely than females to live with their parents, and cite wage stagnation and general delays in marriage.[3] The study also finds unemployment to influence young adults' decision to move back with their parents, as employed young adults were less likely than unemployed young adults to coreside with parent(s).

The current literature focuses on the characteristics of young adults that tend to coreside with parents. There are numerous open questions regarding how coresidence is related to financial behaviors. Given the unique characteristics and experiences of Millennials, we look at the connection between Millennial coresidence and financial behaviors. We specifically focus on financial behaviors related to debt, risky assets, and safe assets.

## 3 | HYPOTHESES

To develop our hypotheses, we consider a stylized, two period, utility maximization model of consumption, debt, investment, and savings behavior (similar to McElroy, 1985) in which the Millennial also chooses coresidence. At the beginning of Period 1, the young adult decides whether to be independent or live with parents. In Period 1, the young adult $i$ works and earns $y_{i1}$, consumes $c_i$, saves $s_i$, invests in a risky asset $a_i$, and incurs debt level $d_i$. The risk free rate on saving is $r_f$ and the risky asset $a$ has an expected return of $E[r_a] = \pi r_2 + (1 - \pi) r_1$ where $E[r_a] > r_f$, $r_2 > r_f > r_1$, and $0 < \pi < 1$. The utility of young adult $i$ is given as: $E[U] = ln(c_i + d_i) + ln(\bar{p}_i)\,\delta + F(1-\delta)$, where $\bar{p}_i$ is parental transfers, $d_i$ is debt level, and $F$ is utility from living alone. $\delta \in (0,1)$ where 1 indicates living with parent(s) and 0 indicates living alone. In the second period, the young adult pays off debt, consumes from both wages and investment income, and then dies at the end of Period 2. Young adults choose $s$, $a$, $d_i$, and $\delta$ to maximize utility. $\bar{p}_i$ and $F$ are given. The goal of our empirical analysis is to understand the relationship between parental coresidence ($\delta$) and the other choice variables $d$, $s$, and $a$.

Millennials may move in with their parents as a result of credit constraints (Dettling & Hsu, 2018). Millennials also could take advantage of less assumed financial responsibility as a result of coresidence and therefore accrue more unsecured debt and postpone financial independency. For our analysis, we make the distinction between educational loans and general debt (not including educational loans) with respect to the analysis. Specifically, we test three hypotheses related to debt: (H1) general debt (a) ownership levels and (b) valuation are correlated with parental coresidence; (H2) educational loan (a) ownership levels and (b) valuation are correlated with parental coresidence; and (H3) parental coresidence is used as a mechanism for general debt reduction.

With regard to asset accumulation, Kahn et al. (2013) find that individuals of lower socioeconomic status are more likely to move away from their parents at an earlier age, relative to those of higher socioeconomic status. Potentially

greater parental financial transfers from more affluent families may result in their coresiding children experiencing higher asset accumulations, higher asset values, and more debt reduction. In contrast, it is possible that those who coreside with their parents may be less likely to own certain assets than those who live independently, since accumulations and higher valuations of assets may be associated with total financial dependency. Correspondingly, we test two additional hypotheses:

(H4) "Risky" asset (a) ownership levels and (b) valuation are correlated with parental coresidence, and (H5) "Safe" asset (a) ownership levels and (b) valuation are correlated with parental coresidence. We define risky assets as stock or mutual funds held by households. We separately test two types of safe assets: bonds (corporate bonds, municipal bonds, treasury bills, and certificates of deposit, CD) and transaction accounts (savings, checking, and money market accounts). Detailed descriptions of the various asset types are found in the Appendix.

# 4 | METHODS

## 4.1 | Data overview

The data used for this study come from the National Longitudinal Survey of Youth 1997 (NLSY97) available from the Bureau of Labor Statistics. We use the NLSY97 due to its extensive financial and personal data pertaining to the Millennial generation, along with the availability of parental coresidence information. The NLSY97 is a comprehensive national survey of males and females born between 1980 and 1984 inclusive. Beginning in the year 1997, the NLSY obtained a wide breadth of information ranging from basic demographic information, to more advanced topics pertaining to socioeconomic and individual behavioral characteristics. This survey is preferable to other datasets because it enables a focus on a specific segment of the Millennial generation. (Those that have had the opportunity to both leave and return to their parents' home). The survey begins with 8,984 individuals in 1997, with attrition rates leading to a sample size of 7,423 individuals in 2011. Thus, between the course of 1997 and 2011, 134,760 person-year observations are recorded.

A key aspect of this dataset is that it contains information which allows coresidence status to be inferred. The NLSY97 asks participants where their parents live in relation to themselves. From this question four categorical variables were generated: *Lives with Mother Only*, *Lives with Father Only*, *Lives with Both Parents*, and *Lives with Neither.*[4] Moreover, the NLSY97 only asks respondents questions pertaining to coresidence between years 2003 to 2009. The restriction to years 2003 to 2009 (NLSY rounds 7 through 13) for available coresidence status therefore gives us an initial sample of 62,888 person-year observations. Furthermore, due to missing data pertaining to parental coresidence, the person-year sample size was decreased to 24,993. The NLSY97 also asks respondents questions regarding financial assets and debt only when the respondents are ages 20, 25, and 30, further decreasing the sample size for the analyses to 3,753 person-year observations.[5] *At most* three asset/debt observations could possibly be recorded per respondent. Within our sample, there are 3,080 respondents represented. Thus, only one observation for most respondents is included in the sample. In our analyses, we do cluster standard errors at the respondent level. However, we are limited in our ability to exploit the panel nature of the data. In accordance with Nielsen and Seay (2014), we use an unweighted sample since we have "structural goals[6]" with regard to our hypotheses tests.

## 4.2 | Summary statistics

Figure 1 and Tables 1–3 provide summary statistics relevant for the econometric analysis. From Figure 1, one can see that the majority of Millennials live independently (henceforth known as "Independents"). Table 1 represents the demographic and income distributions within the subsamples. Specifically, Table 1, Panel A shows racial demographics are distributed such that 15.59% are African American, 20.49% are Hispanic, 62.80% are Non-African/American Non-Hispanic, and 1.12% are mixed-ethnicity individuals. Table 1, Panel B shows mean and median incomes across the subgroups. Independents have larger reported incomes and difference in mean tests indicate that the difference is statistically significant between Independents and all parental coresidence subcategories ($p < 0.01$).

Table 2 represents percentages of asset and debt ownership by racial group and by gender. For our analysis, we

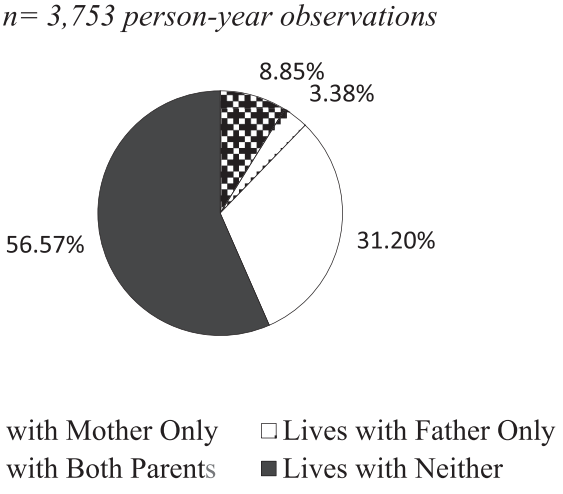


**FIGURE 1** Millennial coresidence status (2003–2009)

**TABLE 1** Demographic and income distributions

| | Lives with mom only | Lives with dad only | Lives with both parents | Lives with neither | % of *N* |
|---|---|---|---|---|---|
| Panel A | | | | | |
| Demographics | | | | | |
| Men | 8.47% | 4.06% | 34.22% | 53.24% | 53.80% |
| Women | 9.28% | 2.60% | 27.68% | 60.44% | 46.20% |
| African American | 16.75% | 2.74% | 26.15% | 54.36% | 15.59% |
| Hispanic | 8.58% | 3.12% | 43.04% | 45.25% | 20.49% |
| Non-AA/non-Hisp. | 6.87% | 3.61% | 28.68% | 60.84% | 62.80% |
| Mixed | 14.29% | 4.76% | 26.19% | 54.76% | 1.12% |
| $N = 3{,}753$ person-year observations<br>$n = 3{,}080$ respondents | | | | | |
| Panel B | | | | | |
| Average [median] income | | | | | |
| Men | 17,429.82 | 20,019.46 | 17,200.61 | 28,054.12 | |
| | [14,000.00] | [15,000.00] | [14,000.00] | [25,000.00] | |
| Women | 14,395.80 | 14,622.44 | 15,059.81 | 21,487.80 | |
| | [10,000.00] | [12,000.00] | [12,000.00] | [20,000.00] | |
| African American | 13,320.57 | 16,762.50 | 15,037.12 | 19,407.53 | |
| | [10,000.00] | [12,000.00] | [13,000.00] | [17,000.00] | |
| Hispanic | 17,817.20 | 15,500.42 | 18,781.34 | 22,713.31 | |
| | [15,000.00] | [12,500.00] | [16,000.00] | [22,000.00] | |
| Non-AA/non-Hisp | 16,906.62 | 17,622.98 | 15,424.60 | 26,545.26 | |
| | [13,660.00] | [15,000.00] | [11,000.00] | [24,000.00] | |
| Mixed | 13,000.00 | 64,996.50 | 15,454.55 | 23,289.43 | |
| | [4,500.00] | [64,996.50] | [12,000.00] | [14,000.00] | |
| $N = 3{,}753$ person-year observations<br>$n = 3{,}080$ respondents | | | | | |

*Note.* Read as "8.47% of men live with their mother only."

will differentiate between debt in the form of educational loans and general debt (not including educational loans).[7] Table 2 shows that independent women have a higher percentage of general debt holding, transaction (checking and savings) account ownership, bond holding, and stock/mutual fund holding than independent men. Table 3 represents the mean and median monetary values for each asset and debt class by racial group and by gender. Table 3, Panel A shows a larger amount of average and median debt held by Millennial Independents, and difference in means tests reveal these differences between Independents and all parental coresidence categories to be statistically significant ($p < 0.01$). Statistics for other asset classes and educational loans are reported in Panels B through E. Panel G shows that Independents have higher reported net worth when compared with all parental coresidence categories.

## 4.3 | Probit models

To determine the extent to which parental coresidence affects the probabilities of holding certain asset or debt categories, we first use univariate probit estimations in which the dependent variable is owning/having one of the following asset/debt classes: transaction accounts (safe assets), bonds (safe assets), stocks/mutual funds (risky assets), educational loans, or general debt. Each of these dependent asset/debt class variables are binary (yes to owning, no otherwise), and the independent variables include parental coresidence status dummy variables, and demographic and socioeconomic control variables that previously have been shown in the literature to affect ownership rates. We measure if there are any relationships between coresidence status and the specific dependent variables:

**TABLE 2** Asset/debt ownership rates

| | Lives with mom only | Lives with dad only | Lives with both parent | Lives with neither |
|---|---|---|---|---|
| Panel A | | | | |
| Has debt: | | | | |
| Men | 66.08% | 58.54% | 60.64% | 73.86% |
| Women | 70.81% | 73.33% | 71.04% | 81.20% |
| African American | 57.14% | 56.25% | 67.97% | 72.01% |
| Hispanic | 69.70% | 62.50% | 67.67% | 79.60% |
| Non-AA/non-Hisp | 73.46% | 65.88% | 63.17% | 78.17% |
| Mixed | 100.00% | 50.00% | 45.45% | 78.26% |
| $N = 3{,}753$ person-year observations<br>$n = 3{,}080$ respondents | | | | |
| Panel B | | | | |
| Transaction account ownership | | | | |
| Men | 62.96% | 77.78% | 66.21% | 68.89% |
| Women | 69.84% | 80.95% | 76.47% | 75.00% |
| African American | 44.12% | 60.00% | 48.00% | 59.52% |
| Hispanic | 64.71% | 83.33% | 59.62% | 56.41% |
| Non-AA/non-Hisp | 77.42% | 80.56% | 77.92% | 78.14% |
| Mixed | 100.00% | 100.00% | 33.33% | 66.67% |
| $N = 909$ person-year observations<br>$n = 909$ respondents | | | | |
| Panel C | | | | |
| Stock/mutual fund ownership | | | | |
| Men | 13.16% | 8.33% | 8.91% | 2.61% |
| Women | 10.00% | 17.65% | 5.03% | 6.93% |
| African American | 0.00% | N/A | N/A | N/A |
| Hispanic | 0.00% | 0.00% | 3.92% | 0.00% |
| Non-AA/non-Hisp | 14.75% | 13.89% | 8.57% | 5.62% |
| Mixed | 0.00% | N/A | N/A | N/A |
| $N = 752$ person-year observations<br>$n = 752$ respondents | | | | |
| Panel D | | | | |
| Bond ownership | | | | |
| Men | 0.00% | 0.00% | 9.03% | 6.02% |
| Women | 3.17% | 14.29% | 8.65% | 8.33% |
| African American | 0.00% | 0.00% | 8.00% | 2.38% |
| Hispanic | 0.00% | 0.00% | 0.97% | 2.56% |
| Non-AA/ non-Hisp | 3.23% | 5.56% | 11.78% | 9.39% |
| Mixed | 0.00% | 100.00% | 0.00% | 0.00% |
| $N = 903$ person-year observations<br>$n = 903$ respondents | | | | |
| Panel E | | | | |
| Educational loans | | | | |
| Men | 94.12% | N/A | 95.77% | 92.16% |
| Women | 100.00% | N/A | 98.75% | 90.38% |
| African American | 94.44% | N/A | 100.00% | 88.00% |

**TABLE 2** (Continued)

| | Lives with mom only | Lives with dad only | Lives with both parent | Lives with neither |
|---|---|---|---|---|
| Hispanic | 100.00% | N/A | 100.00% | 94.12% |
| Non-AA/non-Hisp | 100.00% | N/A | 96.26% | 91.80% |
| Mixed | N/A | N/A | N/A | N/A |

$N = 290$ person-year observations
$n = 266$ respondents

*Note.* Read as "66.08% of men who live with their mothers report as having debt."

$$Y_i = \beta_0 + \sum_{j=1}^{3} \beta_j X_{ij} + \sum_{k=4}^{21} \beta_k W_{ik} + \varepsilon_i \quad (1)$$

where $Y$ represents asset/debt class variables, $X$ represents parental coresidence status[8] and $W$ represents respondent characteristic control variables. Details on the individual characteristic variables can be found in the Appendix. As part of the verification process and consistent with the literature pertaining to risk tolerance affecting financial decision-making (Bogan, Just, & Wansink, 2013; Rabin & Thaler, 2001; Sharpe, 1964), we also use a model specification that controls for risk preferences.[9]

## 4.4 | Ordinary least-squares

We use an ordinary least-squares (OLS) model to analyze the relationship between parental coresidence and asset/debt value. For each specification, the log of the value of the asset or debt class is used as the dependent variable. Following a similar framework as the probit models, we create the following specification:

$$Y_i = \beta_0 + \sum_{j=1}^{3} \beta_j X_{ij} + \sum_{k=4}^{21} \beta_k W_{ik} + \varepsilon_i \quad (2)$$

where $Y$ represents the log of the monetary value of the asset or debt category, $X$ represents coresidence status, and $W$ includes respondent characteristics, including a risk aversion measure.[10]

## 4.5 | Tobit models

We also examine Millennial portfolio allocations by measuring the percent of financial assets held in specific asset classes (transaction accounts, stock/mutual funds, and bonds). To create the model, we generate three variables designating the percentage of financial assets each individual respondent holds in transaction accounts, bonds, and stocks/mutual funds. We use the following specification:

$$Y_i = \beta_0 + \sum_{j=1}^{3} \beta_j X_{ij} + \sum_{k=4}^{21} \beta_k W_{ik} + \varepsilon_i \quad (3)$$

where $Y$ represents transaction accounts, bonds, or stocks/mutual funds; $X$ denotes coresidence status; and $W$ contains the respondent characteristic variables.

## 4.6 | Control variables

The respondent characteristic control variables, $W$, include gender, race, number of respondents' siblings, marital status, number of children, educational level, log of income, unemployment, and managerial/professional occupation.[14] We include gender since prior research studies find strong evidence suggesting gender influences financial decision-making (Bajtelsmit & Bernasek, 1996; Bogan, 2013; McGee, McGee, & Pan, 2015), race since it has been shown to influence finances (Friedline & Elliott, 2011; Lusardi, 2005; Zhan & Xiang, 2014), and marital status since prior research shows it to affect household finances and risk tolerances (Bogan, 2013; Hallahan, Faff, & McKenzie, 2004; Yao & Hanna, 2005).[11] Given that the main independent variables are coresidence status, we also control for the number of respondents' siblings, as a higher number of siblings may make the process of moving back into a parental home or continued coresidence more difficult. We control for the number of respondents' children with dummy variables for one child, two children, and three or more children.[12] We also control for education level, log of income, and unemployment since higher education and larger incomes are correlated with owning more assets and higher net worth, whereas unemployment is correlated with owning fewer assets and lower net worth.

The NLSY97 also contains 33 different occupation codes, which we use to create a managerial/professional occupation dummy variable.[13] Managerial/professional occupations are more likely to receive benefits such as stock options, and thereby could increase the probability of stock ownership.

**TABLE 3** Mean and median asset/debt valuations

| | Lives with mom only | Lives with dad only | Lives with both parents | Lives with neither |
|---|---|---|---|---|
| Panel A: Average [median] debt | | | | |
| Men | 7,982.60 | 6,675.92 | 7,595.05 | 12,121.81 |
| | [1,800.00] | [1,525.00] | [1,400.00] | [5,500.00] |
| Women | 6,863.60 | 10,183.00 | 11,915.13 | 16,575.54 |
| | [2,000.00] | [4,000.00] | [5,550.00] | [10,000.00] |
| African American | 6,272.30 | 4,170.00 | 9,856.01 | 12,560.91 |
| | [750.00] | [235.00] | [2,200.00] | [4,251.50] |
| Hispanic | 9,409.61 | 7,006.67 | 9,912.37 | 12,553.17 |
| | [1,650.00] | [700.00] | [2,300.00] | [7,000.00] |
| Non-AA/non-Hisp. | 7,394.11 | 9,025.65 | 9,064.76 | 15,097.03 |
| | [3,000.00] | [3,500.00] | [2,500.00] | [9,000.00] |
| Mixed | 6,083.33 | 1,800.00 | 4,609.09 | 16,960.87 |
| | [6,150.00] | [1,800.00] | [0.00] | [3,750.00] |
| $N$ = 3,753 person-year observations<br>$n$ = 3,080 respondents | | | | |
| Panel B: Average [median] value of transaction accounts | | | | |
| Men | 567.99 | 1,440.91 | 1,291.52 | 541.86 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Women | 1,038.52 | 286.75 | 1,455.53 | 371.84 |
| | [0.00] | [12.50] | [100.00] | [0.00] |
| African American | 90.71 | 83.33 | 178.95 | 91.19 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Hispanic | 662.88 | 108.70 | 469.19 | 191.06 |
| | [0.00] | [3.50] | [0.00] | [0.00] |
| Non-AA/non-Hisp | 1,422.00 | 1,501.23 | 2,009.59 | 698.53 |
| | [52.50] | [6.50] | [227.00] | [0.00] |
| Mixed | 38.60 | 700.00 | 301.43 | 50.63 |
| | [37.00] | [700.00] | [0.00] | [0.00] |
| $N$ = 1,401 person-year observations<br>$n$ = 1,289 respondents | | | | |
| Panel C: Average [median] value of stocks/mutual funds | | | | |
| Men | 200.00 | 43.48 | 537.42 | 9.63 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Women | 97.62 | 26.00 | 446.94 | 11.27 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| African American | 0.00 | 0.00 | 0.00 | 0.00 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Hispanic | 0.00 | 0.00 | 25.61 | 0.00 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Non-AA/non-Hisp | 317.33 | 147.92 | 826.96 | 18.04 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Mixed | 0.00 | 0.00 | 0.00 | 0.00 |
| | [0.00] | [0.00] | [0.00] | [0.00] |

**TABLE 3** (Continued)

| | Lives with mom only | Lives with dad only | Lives with both parents | Lives with neither |
|---|---|---|---|---|
| $N = 829$ person-year observations<br>$n = 717$ respondents | | | | |
| Panel D: Average [median] value of bonds | | | | |
| Men | 0.00 | 0.00 | 175.39 | 257.21 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Women | 11.61 | 233.33 | 48.03 | 45.79 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| African American | 0.00 | 0.00 | 22.67 | 12.20 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Hispanic | 0.00 | 0.00 | 0.00 | 45.05 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Non-AA/non-Hisp | 12.63 | 122.45 | 209.67 | 251.22 |
| | [0.00] | [0.00] | [0.00] | [0.00] |
| Mixed | 0.00 | 300.00 | 0.00 | 0.00 |
| | [0.00] | [300.00] | [0.00] | [0.00] |
| $N = 1{,}425$ person-year observations<br>$n = 1{,}313$ respondents | | | | |
| Panel E: Average [median] educational loan value | | | | |
| Men | 2,590.48 | 2,700.00 | 3,555.22 | 3,788.67 |
| | [2,500.00] | [1,500.00] | [3,000.00] | [2,500.00] |
| Women | 3,473.33 | 3,525.00 | 4,822.26 | 4,587.01 |
| | [2,750.00] | [1,800.00] | [3,000.00] | [2,500.00] |
| African American | 2,521.91 | N/A | 6,047.22 | 2,721.09 |
| | [2,500.00] | N/A | [3,750.00] | [2,000.00] |
| Hispanic | 3,625.00 | 8,675.00 | 3,710.35 | 3,881.48 |
| | [2,750.00] | [8,675.00] | [3,000.00] | [3,700.00] |
| Non-AA/non-Hisp | 2,933.33 | 2,322.92 | 4,047.09 | 4,816.23 |
| | [2,500.00] | [1,250.00] | [3,000.00] | [2,500.00] |
| Mixed | 3,617.65 | N/A | 3,500.00 | 5,000.00 |
| | [3,000.00] | N/A | [3,500.00] | [5,000.00] |
| $N = 386$ person-year observations<br>$n = 344$ respondents | | | | |
| Panel F: Average [median] financial asset value | | | | |
| Men | 4,972.46 | 16,771.81 | 7,804.27 | 13,284.05 |
| | [500.00] | [600.00] | [600.00] | [2,000.00] |
| Women | 3,210.63 | 3,070.54 | 6,619.39 | 13,594.28 |
| | [500.00] | [500.00] | [700.00] | [1,550.00] |
| African American | 2,376.81 | 17,913.00 | 8,844.60 | 8,085.07 |
| | [32.00] | [0.00] | [300.00] | [500.00] |
| Hispanic | 6,455.69 | 16,292.24 | 4,538.22 | 12,308.14 |
| | [1,100.00] | [500.00] | [400.00] | [775.00] |
| Non-AA/non-Hisp | 4,251.95 | 9,381.11 | 8,216.02 | 14,926.15 |

**TABLE 3** (Continued)

| | Lives with mom only | Lives with dad only | Lives with both parents | Lives with neither |
|---|---|---|---|---|
| | [5,500.00] | [937.00] | [1,000.00] | [2,800.00] |
| Mixed | 2,032.17 | 28,000.00 | 14,806.00 | 14,096.75 |
| | [43.50] | [28,000.00] | [5.00] | [500.00] |
| $N = 3{,}388$ person-year observations<br>$n = 2{,}782$ respondents | | | | |
| Panel G: Average [median] net worth | | | | |
| Men | 10,497.32 | 39,395.51 | 18,999.04 | 32,290.43 |
| | [4,900.00] | [7,500.00] | [6,850.00] | [10,500.00] |
| Women | 9,450.34 | 7,952.61 | 10,465.31 | 31,190.58 |
| | [4,452.00] | [4,700.00] | [3,500.00] | [8,230.00] |
| African American | 7,316.54 | 30,118.33 | 13,292.75 | 13,470.21 |
| | [2,500.00] | [3,100.00] | [3,895.00] | [4,500.00] |
| Hispanic | 13,319.66 | 22,751.29 | 16,386.24 | 35,626.86 |
| | [7,500.00] | [5,600.00] | [4,650.00] | [9,400.00] |
| Non-AA/non-Hisp | 10,323.64 | 29,019.49 | 15,856.60 | 34,982.97 |
| | [5,600.00] | [7,425.00] | [6,000.00] | [10,800.00] |
| Mixed | 7,365.50 | 54,200.00 | 5,928.89 | 29,954.47 |
| | [3,403.00] | [54,200.00] | [4,600.00] | [9,500.00] |
| $N = 3{,}338$ person-year observations<br>$n = 2{,}735$ respondents | | | | |

## 5 | EMPIRICAL RESULTS

### 5.1 | Probit results

Table 4 presents the results of Equations (1). Standard errors are clustered at the individual respondent level. For each variable, a negative coefficient denotes being correlated with a decrease in the likelihood of having the debt or asset class, whereas a positive coefficient denotes being correlated with an increase in likelihood. Examining Millennial debt in Panel A shows that living with both parents is associated with a decrease in the likelihood of having debt relative to Independents ($p < 0.05$). Living with both parents or just one's mother is associated with an increase in the likelihood of having educational loans, relative to Independents ($p < 0.05$ and $p < 0.10$, respectively). It is notable that significant results for educational loans are found, despite the substantial subsample size reduction due to lack of intersectional response rates within the NLSY97 ($n = 290$).

In addition, respondents who live with both parents experience a statistically significant decrease in the likelihood of owning transaction accounts 0.202 (with $p < 0.10$ for each specification). When examining stock and mutual fund ownerships, those who live with both parents exhibit no significant difference in likelihood of owning stocks compared with Independents; however, those who live with their mothers are 0.479 and 0.462 more likely to own stocks compared with Independents (with $p < 0.05$ and $p < 0.10$, respectively). Those living with their mothers are also 0.694 and 0.701 less likely to own bonds compared with Independents (with $p < 0.05$ for both specifications).

The demographic control variables exhibit signs consistent with the literature. Females are significantly more likely to own transaction accounts ($p < 0.01$). African American and Hispanic Millennials are significantly less likely to own any of the asset classes.[15] Additionally, female Millennials are more likely to have debt compared to their male counterparts by a statistically significant margin ($p < 0.01$). Since females are more likely to attend college than males (Goldin, Katz, & Kuziemko, 2006), higher educational loans and postgraduation debt are expected.

### 5.2 | Ordinary least-squares

OLS results for Equation (2) are presented in Table 5. Consistent with the probit models showing the likelihood of owning debt to be significantly lower among individuals living with both parents, the results show only those who live with both parents to consistently have lower debt balances ($p < 0.05$). The results also show females having higher debt levels than their male counterparts in all specifications

**TABLE 4** Debt and asset holdings

| | H1a | | H2a | |
|---|---|---|---|---|
| **Variables** | **General debt** | | **Educational loans** | |
| Panel A: Debt holding (Y/N) | | | | |
| Lives with mother | −0.008 | −0.007 | 0.738* | 0.729* |
| | (0.084) | (0.084) | (0.389) | (0.393) |
| Lives with father | −0.123 | −0.124 | — | — |
| | (0.125) | (0.125) | | |
| Lives with both | −0.115** | −0.115** | 0.613** | 0.607** |
| | (0.056) | (0.056) | (0.292) | (0.288) |
| Female | 0.250*** | 0.249*** | 0.204 | 0.199 |
| | (0.049) | (0.049) | (0.267) | (0.269) |
| African American | −0.032 | −0.034 | −0.086 | −0.104 |
| | (0.067) | (0.067) | (0.273) | (0.273) |
| Hispanic | 0.073 | 0.072 | 0.394 | 0.387 |
| | (0.062) | (0.062) | (0.481) | (0.481) |
| Mixed | 0.073 | 0.072 | — | — |
| | (0.212) | (0.212) | | |
| Number of siblings | 0.026 | 0.026 | −0.046 | −0.050 |
| | (0.017) | (0.017) | (0.080) | (0.077) |
| Never married, cohabiting | 0.263*** | 0.262*** | — | — |
| | (0.072) | (0.072) | | |
| Married | 0.365*** | 0.364*** | 0.589 | 0.575 |
| | (0.073) | (0.073) | (0.386) | (0.398) |
| Separated, divorced, widowed | 0.307** | 0.305** | −0.536 | −0.469 |
| | (0.152) | (0.152) | (0.706) | (0.683) |
| One child | 0.031 | 0.031 | −0.450 | −0.446 |
| | (0.076) | (0.076) | (0.412) | (0.415) |
| Two children | −0.070 | −0.069 | −0.455 | −0.464 |
| | (0.103) | (0.103) | (0.618) | (0.614) |
| Three or more children | −0.469*** | −0.470*** | — | — |
| | (0.157) | (0.157) | | |
| High school/GED | 0.337*** | 0.337*** | −0.466 | −0.469 |
| | (0.090) | (0.090) | (0.352) | (0.353) |
| Associate/junior college | 0.786*** | 0.787*** | — | — |
| | (0.136) | (0.136) | | |
| Bachelor's | 0.603*** | 0.604*** | — | — |
| | (0.106) | (0.106) | | |
| Graduate (Master's, Professional, PhD) | 0.409* | 0.410* | — | — |
| | (0.210) | (0.210) | | |
| Log (income) | 0.147*** | 0.148*** | −0.008 | −0.011 |
| | (0.020) | (0.020) | (0.114) | (0.115) |
| Unemployed | −0.025 | −0.025 | 0.102 | 0.091 |
| | (0.054) | (0.054) | (0.293) | (0.298) |

**TABLE 4** (Continued)

| | H1a | | H2a | |
|---|---|---|---|---|
| **Variables** | **General debt** | | **Educational loans** | |
| Executive occupation | 0.164 | 0.166 | — | — |
| | (0.104) | (0.104) | | |
| Risk seeking | | −0.030 | | −0.212 |
| | | (0.068) | | (0.318) |
| Constant | −1.428*** | −1.428*** | 1.785 | 1.871 |
| | (0.213) | (0.213) | (1.204) | (1.196) |
| Person-year observations | 3,753 | 3,753 | 290 | 290 |
| Respondents | 3,080 | 3,080 | 266 | 266 |
| | **H4a** | | **H5a** | |
| **Variables** | **Stocks/mutual funds** | | **Bonds** | |
| Panel B: Asset holding (Y/N) | | | | |
| Lives with mother | 0.479** | 0.462* | −0.694** | −0.701** |
| | (0.242) | (0.243) | (0.309) | (0.306) |
| Lives with father | 0.480 | 0.451 | −0.133 | −0.139 |
| | (0.292) | (0.290) | (0.298) | (0.297) |
| Lives with both | 0.227 | 0.219 | 0.101 | 0.101 |
| | (0.175) | (0.174) | (0.154) | (0.154) |
| Female | −0.065 | −0.057 | 0.154 | 0.157 |
| | (0.143) | (0.144) | (0.131) | (0.131) |
| African American | — | — | −0.386* | −0.379* |
| | | | (0.230) | (0.230) |
| Hispanic | −0.553*** | −0.551*** | −0.922*** | −0.919*** |
| | (0.211) | (0.213) | (0.281) | (0.281) |
| Mixed | — | — | −0.085 | −0.089 |
| | | | (0.507) | (0.511) |
| Number of siblings | −0.029 | −0.027 | −0.061 | −0.061 |
| | (0.054) | (0.054) | (0.048) | (0.049) |
| Never married, cohabiting | −0.047 | −0.070 | −0.101 | −0.098 |
| | (0.303) | (0.298) | (0.279) | (0.279) |
| Married | 0.166 | 0.174 | −0.334 | −0.335 |
| | (0.335) | (0.338) | (0.310) | (0.311) |
| Separated, divorced, widowed | — | — | — | — |
| One child | −0.378 | −0.358 | 0.032 | 0.037 |
| | (0.410) | (0.411) | (0.313) | (0.314) |
| Two children | — | — | 0.502 | 0.502 |
| | | | (0.545) | (0.546) |
| Three or more children | — | — | — | — |
| High school/GED | 0.469 | 0.458 | 0.070 | 0.066 |
| | (0.434) | (0.434) | (0.286) | (0.286) |

**TABLE 4** (Continued)

| | H4a | | H5a | |
|---|---|---|---|---|
| **Variables** | **Stocks/mutual funds** | | **Bonds** | |
| Associate/junior college | 0.922 | 0.889 | 0.000 | 0.000 |
| | (0.642) | (0.635) | (0.572) | (0.571) |
| Bachelor's | — | — | — | — |
| Graduate (Master's, Professional, PhD) | — | — | — | — |
| Log (income) | 0.002 | −0.001 | 0.015 | 0.014 |
| | (0.057) | (0.057) | (0.054) | (0.054) |
| Unemployed | −0.114 | −0.117 | −0.083 | −0.084 |
| | (0.163) | (0.164) | (0.144) | (0.144) |
| Executive occupation | −0.250 | −0.245 | 0.035 | 0.029 |
| | (0.482) | (0.485) | (0.399) | (0.397) |
| Risk seeking | | 0.240 | | 0.082 |
| | | (0.182) | | (0.185) |
| Constant | −1.929*** | −1.928*** | −1.406** | −1.404** |
| | (0.709) | (0.713) | (0.608) | (0.608) |
| Person-year observations | 752 | 752 | 903 | 903 |
| Respondents | 752 | 752 | 903 | 903 |
| **Variables** | | **H5a** | | |
| Panel C: Transaction account holding (Y/N) | | | | |
| Lives with mother | | −0.142 | | −0.136 |
| | | (0.158) | | (0.158) |
| Lives with father | | 0.108 | | 0.119 |
| | | (0.238) | | (0.236) |
| Lives with both | | −0.202* | | −0.202* |
| | | (0.119) | | (0.119) |
| Female | | 0.292*** | | 0.285*** |
| | | (0.098) | | (0.098) |
| African American | | −0.717*** | | −0.739*** |
| | | (0.135) | | (0.136) |
| Hispanic | | −0.382*** | | −0.391*** |
| | | (0.124) | | (0.124) |
| Mixed | | −0.363 | | −0.340 |
| | | (0.356) | | (0.352) |
| Number of siblings | | −0.030 | | −0.029 |
| | | (0.034) | | (0.034) |
| Never married, cohabiting | | −0.236 | | −0.245 |
| | | (0.185) | | (0.185) |
| Married | | 0.092 | | 0.083 |
| | | (0.238) | | (0.237) |

**TABLE 4** (Continued)

| Variables | H5a | |
|---|---|---|
| Separated, divorced, widowed | — | — |
| One child | −0.326* | −0.329* |
| | (0.196) | (0.197) |
| Two children | −0.804** | −0.803** |
| | (0.349) | (0.349) |
| Three or more children | — | — |
| High school/GED | 0.725*** | 0.733*** |
| | (0.170) | (0.169) |
| Associate/junior college | 1.273*** | 1.312*** |
| | (0.414) | (0.410) |
| Bachelor's | — | — |
| Graduate (Master's, Professional, PhD) | — | — |
| Log (income) | −0.006 | −0.002 |
| | (0.037) | (0.037) |
| Unemployed | −0.211** | −0.214** |
| | (0.099) | (0.100) |
| Executive occupation | −0.019 | −0.024 |
| | (0.307) | (0.310) |
| Risk seeking | | −0.214 |
| | | (0.138) |
| Constant | 0.321 | 0.315 |
| | (0.385) | (0.385) |
| Person-year observations | 909 | 909 |
| Respondents | 909 | 909 |

*Note.* ***, **, * denote significance at 1%, 5%, and 10% level.
Abbreviation: GED, General Education Development.

($p < 0.01$). Those with higher education, those who are cohabiting with a significant other/married, and those with higher reported incomes also have higher debt levels ($p < 0.01$).

Monetary values of transaction and stock/mutual fund accounts produce similar findings. Those who live with both parents have higher valued transaction accounts and stock/mutual funds relative to Independents ($p < 0.05$). Those living with their mothers also hold lower amounts in bonds relative to Independents; this is in addition to lower likelihoods of owning bonds as discussed in Section 5.1. Females have significantly higher amounts in their transaction accounts ($p < 0.01$), yet do not have significantly different stock/mutual fund values. Consistent with prior literature are racial differences for stock/mutual fund amounts, with African Americans ($p < 0.01$) and Hispanics ($p < 0.01$) having lower amounts than Non-African American/Non-Hispanics (Bogan, 2014). Those with bachelor degrees or higher also have lower values in transaction accounts ($p < 0.01$).

## 5.3 | Tobit models

Using a Tobit specification, we test if coresidence status affects the percentage of total financial assets Millennials hold in transaction accounts and bonds. Table 6 presents results for Equation (3). The Tobit specifications show no statistically significant difference with transaction accounts

**TABLE 5** Debt and asset values

| | H1b | | H2b | |
|---|---|---|---|---|
| **Variables** | **General debt** | | **Educational loans** | |
| Panel A: Log of debt | | | | |
| Lives with mother | −0.240 | −0.241 | 0.485* | 0.485* |
| | (0.245) | (0.245) | (0.276) | (0.277) |
| Lives with father | −0.421 | −0.420 | 0.213 | 0.169 |
| | (0.394) | (0.395) | (0.338) | (0.330) |
| Lives with both | −0.355** | −0.354** | 0.673*** | 0.675*** |
| | (0.167) | (0.167) | (0.255) | (0.254) |
| Female | 0.849*** | 0.851*** | 0.191 | 0.166 |
| | (0.140) | (0.141) | (0.173) | (0.177) |
| African American | −0.113 | −0.111 | −0.115 | −0.132 |
| | (0.196) | (0.197) | (0.244) | (0.243) |
| Hispanic | 0.211 | 0.212 | 0.118 | 0.119 |
| | (0.175) | (0.175) | (0.211) | (0.212) |
| Mixed | 0.236 | 0.238 | 0.423 | 0.429 |
| | (0.635) | (0.636) | (0.346) | (0.377) |
| Number of siblings | 0.062 | 0.062 | −0.086 | −0.084 |
| | (0.050) | (0.050) | (0.054) | (0.055) |
| Never married, cohabiting | 0.729*** | 0.730*** | 0.499** | 0.471** |
| | (0.190) | (0.191) | (0.233) | (0.227) |
| Married | 1.192*** | 1.193*** | 0.489 | 0.461 |
| | (0.189) | (0.189) | (0.299) | (0.297) |
| Separated, divorced, widowed | 1.080*** | 1.082*** | −0.346 | −0.285 |
| | (0.402) | (0.402) | (1.348) | (1.298) |
| One child | 0.095 | 0.095 | −0.106 | −0.092 |
| | (0.195) | (0.195) | (0.272) | (0.275) |
| Two children | −0.267 | −0.267 | −0.613 | −0.620 |
| | (0.273) | (0.273) | (0.773) | (0.777) |
| Three or more children | −1.624*** | −1.624*** | −0.379 | −0.379 |
| | (0.493) | (0.493) | (0.367) | (0.367) |
| High school/GED | 1.335*** | 1.335*** | −0.195 | −0.170 |
| | (0.277) | (0.277) | (0.387) | (0.395) |
| Associate/junior college | 2.673*** | 2.672*** | 0.213 | 0.263 |
| | (0.355) | (0.355) | (0.479) | (0.492) |
| Bachelor's | 2.658*** | 2.657*** | 0.299 | 0.341 |
| | (0.315) | (0.315) | (0.443) | (0.456) |
| Graduate (Master's, Professional, PhD) | 2.567*** | 2.565*** | 1.379** | 1.686** |
| | (0.629) | (0.630) | (0.596) | (0.749) |
| Log (income) | 0.532*** | 0.532*** | −0.004 | −0.005 |
| | (0.062) | (0.062) | (0.085) | (0.085) |
| Unemployed | −0.213 | −0.213 | 0.081 | 0.066 |
| | (0.160) | (0.160) | (0.190) | (0.193) |

**TABLE 5** (Continued)

| | H1b | | H2b | |
|---|---|---|---|---|
| **Variables** | **General debt** | | **Educational loans** | |
| Executive occupation | 0.387 | 0.385 | 0.342 | 0.321 |
| | (0.247) | (0.247) | (0.290) | (0.287) |
| Risk seeking | | 0.035 | | −0.312 |
| | | (0.202) | | (0.298) |
| Constant | −0.959 | −0.959 | 7.450*** | 7.492*** |
| | (0.654) | (0.654) | (0.721) | (0.709) |
| Person-year observations | 3,753 | 3,753 | 386 | 386 |
| Respondents | 3,080 | 3,080 | 344 | 344 |
| | **H4b** | | **H5b** | |
| **Variables** | **Log of stock/mutual fund value** | | **Log of bond value** | |
| Panel B: Asset values | | | | |
| Lives with mother | 0.263 | 0.250 | −0.170** | −0.176** |
| | (0.182) | (0.181) | (0.073) | (0.072) |
| Lives with father | 0.478 | 0.488 | 0.031 | 0.029 |
| | (0.336) | (0.332) | (0.174) | (0.173) |
| Lives with both | 0.347*** | 0.350*** | 0.078 | 0.076 |
| | (0.123) | (0.123) | (0.088) | (0.088) |
| Female | −0.061 | −0.053 | 0.054 | 0.063 |
| | (0.127) | (0.127) | (0.078) | (0.078) |
| African American | −0.696*** | −0.663*** | −0.243*** | −0.226*** |
| | (0.116) | (0.116) | (0.074) | (0.072) |
| Hispanic | −0.612*** | −0.602*** | −0.318*** | −0.313*** |
| | (0.123) | (0.123) | (0.068) | (0.068) |
| Mixed | −0.601*** | −0.602*** | −0.057 | −0.057 |
| | (0.161) | (0.165) | (0.272) | (0.274) |
| Number of siblings | −0.026 | −0.027 | −0.035* | −0.036* |
| | (0.032) | (0.032) | (0.020) | (0.020) |
| Never married, cohabiting | −0.115 | −0.091 | −0.073 | −0.063 |
| | (0.102) | (0.104) | (0.083) | (0.082) |
| Married | −0.193 | −0.192 | −0.098 | −0.095 |
| | (0.120) | (0.121) | (0.076) | (0.076) |
| Separated, divorced, widowed | −0.513*** | −0.482*** | −0.313*** | −0.295*** |
| | (0.124) | (0.127) | (0.078) | (0.077) |
| One child | −0.192** | −0.178** | −0.057 | −0.049 |
| | (0.080) | (0.079) | (0.079) | (0.080) |
| Two children | −0.161* | −0.158* | −0.040 | −0.039 |
| | (0.093) | (0.094) | (0.083) | (0.084) |
| Three or more children | −0.063 | −0.048 | −0.111 | −0.104 |
| | (0.118) | (0.117) | (0.073) | (0.073) |
| High school/GED | 0.377*** | 0.385*** | 0.090 | 0.091 |
| | (0.081) | (0.081) | (0.058) | (0.059) |

**TABLE 5** (Continued)

| | H4b | | H5b | |
|---|---|---|---|---|
| **Variables** | **Log of stock/mutual fund value** | | **Log of bond value** | |
| Associate/junior college | 0.259 | 0.221 | 0.011 | −0.004 |
| | (0.235) | (0.224) | (0.167) | (0.169) |
| Bachelor's | 0.070 | 0.057 | −0.061 | −0.075 |
| | (0.195) | (0.190) | (0.199) | (0.194) |
| Graduate (Master's, Professional, PhD) | −0.248 | −0.209 | −0.361*** | −0.341** |
| | (0.186) | (0.191) | (0.138) | (0.138) |
| Log (income) | −0.083** | −0.086** | −0.022 | −0.024 |
| | (0.040) | (0.040) | (0.024) | (0.024) |
| Unemployed | −0.269** | −0.260** | −0.012 | −0.008 |
| | (0.109) | (0.109) | (0.074) | (0.074) |
| Executive occupation | 0.268 | 0.293 | 0.274 | 0.279 |
| | (0.421) | (0.422) | (0.360) | (0.358) |
| Risk seeking | | 0.323 | | 0.212 |
| | | (0.223) | | (0.149) |
| Constant | 1.248*** | 1.211*** | 0.568** | 0.552** |
| | (0.439) | (0.438) | (0.254) | (0.254) |
| Person-year observations | 829 | 829 | 1,425 | 1,425 |
| Respondents | 717 | 717 | 1,313 | 1,313 |
| **Variables** | | **H5b** | | |
| Panel C: Log of transaction accounts | | | | |
| Lives with mother | | 0.249 | | 0.250 |
| | | (0.260) | | (0.260) |
| Lives with father | | 0.285 | | 0.285 |
| | | (0.388) | | (0.388) |
| Lives with both | | 0.437** | | 0.438** |
| | | (0.197) | | (0.197) |
| Female | | 0.708*** | | 0.706*** |
| | | (0.170) | | (0.170) |
| African American | | −2.032*** | | −2.036*** |
| | | (0.195) | | (0.196) |
| Hispanic | | −1.080*** | | −1.081*** |
| | | (0.214) | | (0.214) |
| Mixed | | −1.354*** | | −1.354*** |
| | | (0.491) | | (0.491) |
| Number of siblings | | −0.103* | | −0.103* |
| | | (0.055) | | (0.055) |
| Never married, cohabiting | | −0.796*** | | −0.798*** |
| | | (0.231) | | (0.232) |
| Married | | −0.610** | | −0.610** |
| | | (0.291) | | (0.291) |
| Separated, divorced, widowed | | −2.494*** | | −2.497*** |
| | | (0.267) | | (0.268) |

**TABLE 5** (Continued)

| Variables | H5b | |
|---|---|---|
| One child | −0.937*** | −0.938*** |
| | (0.251) | (0.251) |
| Two children | −1.721*** | −1.721*** |
| | (0.248) | (0.248) |
| Three or more children | −1.930*** | −1.931*** |
| | (0.280) | (0.280) |
| High school/GED | 1.292*** | 1.292*** |
| | (0.212) | (0.212) |
| Associate/junior college | 0.979* | 0.982* |
| | (0.565) | (0.565) |
| Bachelor's | −1.356*** | −1.354*** |
| | (0.358) | (0.357) |
| Graduate (Master's, Professional, PhD) | −2.366*** | −2.370*** |
| | (0.309) | (0.312) |
| Log (income) | −0.264*** | −0.264*** |
| | (0.067) | (0.068) |
| Unemployed | −0.720*** | −0.721*** |
| | (0.166) | (0.167) |
| Executive occupation | 0.468 | 0.468 |
| | (0.431) | (0.432) |
| Risk seeking | | −0.041 |
| | | (0.263) |
| Constant | 4.952*** | 4.955*** |
| | (0.670) | (0.671) |
| Person-year observations | 1,401 | 1,401 |
| Respondents | 1,289 | 1,289 |

*Note.* ***, **, * denote significance at 1%, 5%, and 10% level.
Abbreviation: GED, General Education Development.

as a percentage of total financial assets held or bonds as a percentage of total financial assets.[16]

## 5.4 | Robustness checks—Two-Stage Least Squares (2SLS) IV model

We originally propose in hypothesis (H3) that Millennials use coresidence to reduce the effects of burdensome debt. In other words, it is a mechanism to reduce debt levels, mirroring the unemployment "insurance policy" concept from Kaplan (2012). However, young adults may have the incentive to accumulate more unsecured debt while living with their parents to smooth consumption, as the need for financial independency may not be an immediate concern.[17] Consequently, one potential concern may be that our main coresidence independent variables could have simultaneity issues with the dependent variables.

To address these issues of simultaneity, we utilize an instrumental variable (IV) probit model with a two-stage least-squares approach to address the question of causality between the coresidence and the debt variables. In order to disentangle parental coresidence from the debt simultaneity loop, we use sexual activity as an IV.[18] For this specification, we consolidate the three parental coresidence statuses to *Lives with a Parent* and accordingly assign the IV. Intuitively, young adult children are less likely to engage in sexual activity when coresiding with one or both of their parents, and engagement in such behaviors are likely to nudge the young adults towards independence or be a source of household contention (White, 2002).

**TABLE 6** Asset class as a percent of financial assets

| Variables | H5b | |
|---|---|---|
| Panel A: Transaction accounts as a percentage of financial assets | | |
| Lives with mother | 0.413 | 0.419 |
| | (0.466) | (0.466) |
| Lives with father | 0.588 | 0.601 |
| | (0.626) | (0.624) |
| Lives with both | 0.381 | 0.389 |
| | (0.323) | (0.323) |
| Female | 1.546*** | 1.532*** |
| | (0.308) | (0.308) |
| African American | −2.787*** | −2.813*** |
| | (0.457) | (0.460) |
| Hispanic | −1.186*** | −1.195*** |
| | (0.381) | (0.381) |
| Mixed | −0.533 | −0.518 |
| | (1.085) | (1.082) |
| Number of siblings | −0.065 | −0.063 |
| | (0.098) | (0.098) |
| Never married, cohabiting | −1.481*** | −1.497*** |
| | (0.480) | (0.481) |
| Married | −0.599 | −0.602 |
| | (0.595) | (0.595) |
| Separated, divorced, widowed | −21.480*** | −21.500*** |
| | (1.908) | (1.910) |
| One child | −2.003*** | −2.018*** |
| | (0.537) | (0.539) |
| Two children | −5.235*** | −5.237*** |
| | (1.249) | (1.248) |
| Three or more children | −22.350*** | −22.350*** |
| | (2.238) | (2.237) |
| High school/GED | 1.993*** | 1.996*** |
| | (0.546) | (0.545) |
| Associate/junior college | 0.811 | 0.833 |
| | (0.867) | (0.867) |
| Bachelor's | −5.573*** | −5.494*** |
| | (1.762) | (1.767) |
| Graduate (Master's, Professional, PhD) | −23.360*** | −23.380*** |
| | (2.183) | (2.185) |
| Log (income) | −0.459*** | −0.455*** |
| | (0.115) | (0.115) |
| Unemployed | −0.903*** | −0.906*** |
| | (0.297) | (0.297) |
| Executive occupation | 0.028 | 0.007 |
| | (0.714) | (0.719) |

**TABLE 6** (Continued)

| Variables | H5b | |
|---|---|---|
| Risk seeking | | −0.367 |
| | | (0.398) |
| Constant | 2.626** | 2.637** |
| | (1.145) | (1.145) |
| Person-year observations | 1,383 | 1,383 |
| Respondents | 1,271 | 1,271 |
| **Variables** | **H5b** | |
| Panel B: Bonds as a percentage of financial assets | | |
| Lives with mother | −1.008* | −1.047* |
| | (0.582) | (0.571) |
| Lives with father | 0.062 | 0.031 |
| | (0.541) | (0.536) |
| Lives with both | 0.196 | 0.195 |
| | (0.302) | (0.300) |
| Female | 0.299 | 0.317 |
| | (0.265) | (0.264) |
| African American | −1.122** | −1.085** |
| | (0.473) | (0.472) |
| Hispanic | −10.580*** | −10.530*** |
| | (0.817) | (0.818) |
| Mixed | −0.076 | −0.062 |
| | (0.866) | (0.873) |
| Number of siblings | −0.155* | −0.156 |
| | (0.094) | (0.095) |
| Never married, cohabiting | −0.571 | −0.547 |
| | (0.499) | (0.497) |
| Married | −0.348 | −0.332 |
| | (0.502) | (0.500) |
| Separated, divorced, widowed | −10.470*** | −10.390*** |
| | (1.069) | (1.118) |
| One child | −0.293 | −0.261 |
| | (0.582) | (0.584) |
| Two children | 0.179 | 0.185 |
| | (0.841) | (0.841) |
| Three or more children | −9.494*** | −9.460*** |
| | (1.018) | (1.010) |
| High school/GED | 0.321 | 0.310 |
| | (0.494) | (0.496) |
| Associate/junior college | 0.129 | 0.161 |
| | (0.940) | (0.937) |
| Bachelor's | −0.143 | −0.230 |
| | (0.995) | (0.961) |

**TABLE 6** (Continued)

| Variables | H5b | |
|---|---|---|
| Graduate (Master's, Professional, PhD) | −10.440*** | −10.360*** |
| | (1.126) | (1.130) |
| Log (income) | −0.126 | −0.132 |
| | (0.093) | (0.092) |
| Unemployed | −0.159 | −0.157 |
| | (0.292) | (0.291) |
| Executive occupation | −0.266 | −0.250 |
| | (0.902) | (0.910) |
| Risk seeking | | 0.429 |
| | | (0.346) |
| Constant | −1.969* | −1.969* |
| | (1.119) | (1.116) |
| Person-year observations | 1,422 | 1,422 |
| Respondents | 1,310 | 1,310 |

*Note.* ***, **, * denote significance at 1%, 5%, and 10% level.
Abbreviation: GED, General Education Development.

Correlation tests between the chosen IV and the coresidence status variable, presented in Table 7, indicate a clear positive correlation between sexual activity and living independently and indicate a clear negative correlation between sexual activity and living with a parent(s). Correspondingly, the Wald test for exogeneity (see Table 8) indicates the IV is exogenous with respect to the dependent debt variable of interest.[19] Neither existing literature nor correlation tests show any associations between sexual activity and propensity to have debt. Consequently, we assert that sexual activity is a suitable IV and we treat it as exogenous.

The IV probit specification is run using general debt as the dependent variable.[20] Table 8 presents the first and second-stage IV probit results. The results show being sexually active has a significant negative association with the coresidence variable ($p < 0.05$), and second stage results consistently show parental coresidence significantly decreasing the likelihood of having debt ($p < 0.05$). The causal inference derived is that coresidence decreases the likelihood of owning debt. These findings are consistent with the assertion that Millennials choose to reside with parents as a strategy to decrease debt.

**TABLE 7** Instrumental variable correlations

| | Lives with a parent | | Lives with neither | | |
|---|---|---|---|---|---|
| **Panel A: Coresidence** | **Standard correlation** | **Tetrachoric correlation** | **Standard correlation** | **Tetrachoric correlation** | ***N*** |
| Sex since DLI (Y/N) | | | | | |
| Female only | −0.153 | −0.287 | 0.153 | 0.287 | 1,231 |
| Male only | −0.171 | −0.305 | 0.171 | 0.305 | 1,486 |
| All person-years | −0.167 | −0.303 | 0.167 | 0.303 | 2,717 |

| **Panel B: Dependent variable** | **Female only sex since DLI (Y/N)** | **Male only sex since DLI (Y/N)** | **All person years sex since DLI (Y/N)** |
|---|---|---|---|
| Has debt (Y/N) | | | |
| Standard correlation | 0.091 | 0.070 | 0.084 |
| Tetrachoric correlation | 0.187 | 0.131 | 0.163 |
| Value of debt | 0.087 | 0.029 | 0.063 |

**TABLE 8** 2SLS—IV Probit regressions

| IV probit— Has debt (Y/N) using consolidated parental coresidence status | | | | |
|---|---|---|---|---|
| | (7) | | (7*) | |
| | First stage | Second stage | First stage | Second stage |
| Variables | Lives with a parent | Debt | Lives with a parent | Debt |
| Sex since DLI | −0.055** | | −0.055** | |
| | (0.026) | | (0.026) | |
| Lives with a parent | | −1.556** | | −1.554** |
| | | (0.711) | | (0.718) |
| Female | −0.003 | 0.213** | −0.004 | 0.213** |
| | (0.018) | (0.093) | (0.018) | (0.094) |
| African American | 0.027 | −0.045 | 0.026 | −0.045 |
| | (0.025) | (0.083) | (0.025) | (0.083) |
| Hispanic | 0.205*** | 0.332** | 0.204*** | 0.332** |
| | (0.022) | (0.152) | (0.022) | (0.153) |
| Mixed | 0.022 | 0.042 | 0.022 | 0.041 |
| | (0.094) | (0.244) | (0.094) | (0.244) |
| Number of siblings | −0.018*** | −0.006 | −0.018*** | −0.006 |
| | (0.006) | (0.027) | (0.006) | (0.027) |
| Never married, cohabiting | −0.394*** | −0.411 | −0.394*** | −0.410 |
| | (0.022) | (0.367) | (0.022) | (0.371) |
| Married | −0.393*** | −0.326 | −0.394*** | −0.325 |
| | (0.022) | (0.396) | (0.022) | (0.400) |
| Separated, divorced, widowed | −0.238*** | −0.149 | −0.240*** | −0.148 |
| | (0.052) | (0.287) | (0.052) | (0.290) |
| One child | −0.026 | 0.016 | −0.026 | 0.017 |
| | (0.024) | (0.087) | (0.024) | (0.087) |
| Two children | −0.112*** | −0.206* | −0.112*** | −0.206* |
| | (0.034) | (0.124) | (0.034) | (0.124) |
| Three or more children | −0.101* | −0.517*** | −0.101* | −0.517*** |
| | (0.053) | (0.162) | (0.053) | (0.162) |
| High school / GED | −0.010 | 0.241* | −0.010 | 0.241* |
| | (0.036) | (0.138) | (0.036) | (0.139) |
| Associate/junior college | −0.096** | 0.399 | −0.096** | 0.399 |
| | (0.046) | (0.289) | (0.046) | (0.291) |
| Bachelor's | −0.144*** | 0.225 | −0.143*** | 0.225 |
| | (0.040) | (0.274) | (0.040) | (0.275) |
| Graduate (Master's, Professional, PhD) | −0.212*** | −0.077 | −0.211*** | −0.076 |
| | (0.065) | (0.323) | (0.065) | (0.324) |
| Log (income) | −0.023*** | 0.062 | −0.023*** | 0.062 |
| | (0.008) | (0.054) | (0.008) | (0.054) |
| Unemployed | 0.023 | 0.016 | 0.023 | 0.016 |
| | (0.022) | (0.065) | (0.022) | (0.064) |

**TABLE 8** (Continued)

| IV probit— Has debt (Y/N) using consolidated parental coresidence status | | | | |
|---|---|---|---|---|
| | (7) | | (7*) | |
| | First stage | Second stage | First stage | Second stage |
| Variables | Lives with a parent | Debt | Lives with a parent | Debt |
| Executive occupation | −0.086*** | −0.013 | −0.085*** | −0.013 |
| | (0.029) | (0.143) | (0.029) | (0.143) |
| Risk seeking | | | −0.012 | 0.003 |
| | | | (0.024) | (0.072) |
| Constant | 0.886*** | 0.370 | 0.886*** | 0.368 |
| | (0.083) | (0.954) | (0.082) | (0.962) |
| Person-year observations | | 2,717 | | 2,717 |
| Respondents | | 2,054 | | 2,054 |
| Wald test of exogeneity | | | | |
| $\chi^2$ | 2.110 | | 2.070 | |
| Prob > $\chi^2$ | 0.146 | | 0.150 | |

*Note.* ***, **, * denote significance at 1%, 5%, and 10% level.
Abbreviation: GED, General Education Development.

## 6 | LIMITATIONS AND AREAS FOR FUTURE RESEARCH

These findings provide useful insights for future research conducted on Millennial investment decision-making. The analysis suggests parental coresidence is used as a mechanism for Millennial debt reduction, and upon living with parents, portfolio strategies and asset accumulation is affected. However, there are some key data limitations. Coresidency questions are only asked between 2003 and 2009 and there are no questions pertaining to coresidency duration in the NLSY97. We have no specific information regarding whether or not the option to return to a parents' home is even available to a particular respondent. Furthermore, we do not have data to enable us to quantify the threshold for which an individual chooses to move back with their parents, chooses to remain coresiding, or chooses to remain independent.

These key limitations about the nature of Millennial coresidency underscore the need for future research to unpack the critical links between young adult coresidence and financial decision-making behavior. This is critical for households, policymakers, and financial institutions with regard to financial education and management of assets and debt in order to encourage full financial independency of Millennials.

## 7 | CONCLUSION

The purpose of this paper is to analyze the effect of parental coresidence (Boomerang Bias) on Millennial financial decision-making. Through the use of a series of econometric models, we find strong evidence that living with a parent(s) affects debt behavior, asset account ownership, and asset levels.

We find Millennials coresiding with their mothers exhibit an increased likelihood of stock ownership, a decreased likelihood of bond ownership, and an increased likelihood of having educational loans. Our results also indicate that Millennials coresiding with their mothers have higher educational loans values and lower bond values. Further, probit results indicate that Millennials who live with both parents exhibit a lower probability of holding debt relative to Independents. Our OLS results indicate that those living with both parents have higher valued transaction accounts and stocks and this is combined with contemporaneous decreases in the likelihood of owning general debt and general debt value.

If debt tolerance levels are heterogeneous among the Millennial population, there can be many different strategies to compensate for debt (i.e., move back with parents and pay off debt with liquid assets, or remain independent and tackle debt in other ways, including but not limited to, liquidation of stocks/mutual funds). Our IV results provide further support for the concept of the "Boomerang Kids,"[21] or those who return to their parents after leaving, using the option of parental coresidence as an "insurance policy" to hedge against burdensome debt (Kaplan, 2012).

Upon returning to parental coresidence, or continual coresidence after having never left, the likelihood of having debt is thereby reduced relative to Independents.

However, growth in liquid asset accumulation is not exhibited as consequence. One possible explanation could be transaction accounts are first used to offset the debt levels. With aggregate debt, financial assets, and net worth valuations having no significant differences between the coresidence statuses, it can be inferred that debt tolerance levels are heterogeneous amongst the Millennial population, thus allowing for differing strategies to compensate for debt.

Overall, our findings provide useful insights for future research conducted on Millennial investment decision-making. Moreover, understanding behavioral factors that influence Millennial financial behavior could enable this generation to become less financially vulnerable and avoid financial pitfalls with potentially long-term negative effects. These results also have important implications with regard to household finance and financial planning. If this Millennial trend to coreside with parents is due to the desire to reduce leverage, parents should understand that their planning and investment horizon with regard to dependent children may be longer than was previously anticipated.

## ENDNOTES

[1] "Millennials" classified as those born between 1980 and 1998 per the Pew Research Center: http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/.

[2] Substantial literature and anecdotal evidence give reasons as to why many young adults return to dwell with their parents. While this paper discusses financial implications from living with parents, other studies including Johnson (2013) and Mitchell (1998) focus on psychological/family nurturing structures as reasons for young adult coresidence.

[3] Delays in marriage, which are not unique to Millennials and are noted in various literatures, result in delayed young adult independence, especially for males. More information on this sociological trend can be found in Glick and Lin (1986).

[4] No questions pertaining to coresidency duration are available in the NLSY97.

[5] The following data assumptions were made with regard to financial asset values. The NLSY97 separately asks if a respondent owns a specific account, and how much it is valued. "Financial Assets" is the sum of amounts in transaction accounts, stock/mutual funds, bonds, and pension/retirement accounts. However, some respondents report missing responses for amounts in some accounts, yet "Financial Assets" are reported as $0.00. As each asset class is a subset of "Financial Assets," $0.00 in "Financial Assets" implies $0.00 in transaction accounts, stock/mutual funds, bonds, and pension/retirement accounts, therefore overriding any missing values as $0.00. Whether or not the respondent answered "yes" or "no" to owning an individual account cannot be determined, since it is possible for respondents to "own" individual accounts, but with a $0.00 balance. More detail on ownership assumptions are found in Table A1 and Table A2.

[6] Structural goals are goals that focus on understanding the relationship among the independent and dependent variables, not goals focused on predicting population parameters.

[7] Descriptions of each asset/debt category can be found in the Appendix.

[8] "Lives with Neither" is the omitted variable.

[9] The NLSY97 measures risk aversion by asking respondents three rounds of lottery questions and scores responses based on the level of risk tolerance. Respondent scores range from 1 (*low risk tolerance*) to 4 (*high risk tolerance*). For this paper, we identify respondents as "risk seeking" if they received a score of 4. The full distribution of respondent scores is presented in Table A3.

[10] More details on these variables are found in the Appendix.

[11] Marital status is collapsed into four dummy variables. "Never Married, Not Cohabiting [with a significant other]" represent 59.29% of the sample, "Never Married, Cohabiting" represents 15.56% of the sample, "Married" represents 22.54% of the sample, and "Separated, Divorced, Widowed" were collapsed as it represents only 2.61% of the sample. "Never Married, Not Cohabiting [with a significant other]" is the omitted variable.

[12] Number of children is used to create dummy variables for no children, one child, two children, and three or more children, allowing for nonlinear effects of each additional child. "No Children" represents 76.93% of the sample, "One Child" represents 14.18% of the sample, "Two Children" represents 6.69% of the sample, and "Three or More Children" were collapsed as it represents only 2.21% of the sample. "No Children" is the omitted variable.

[13] The creation of the managerial/professional occupation dummy variable is described in the Appendix.

[14] More information about the construction of these variables can be found in Appendix Table A4.

[15] African American Millennials are less likely to own bonds ($p < 0.10$) and transaction accounts ($p < 0.01$); stock/mutual fund ownership results were indeterminable. Hispanic Millennials are less likely to own stock/mutual funds ($p < 0.01$), bonds ($p < 0.01$), and transaction accounts ($p < 0.01$).

[16] Results for stocks as a percentage of total financial assets were indeterminable.

[17] Recall Cobb-Clark and Gørgens (2014) which stated young adults receiving financial support were in some cases less likely to be employed, or studying [in college].

[18] The NLSY97 contains multiple questions pertaining to sexual activity. For this study, we use the variable "Sex Since the Date of Last Interview" (Or "Sex Since DLI") to create a dummy variable which is denoted by 1 for "yes" and 0 otherwise, as a sexually active IV.

[19] While the binary variable "Owns Debt (Y/N)" appears to have a weak correlation with "Sex Since DLI", the debt value variable has no correlation with "Sex Since DLI". Additionally, we perform the Wald test for exogeneity which suggests "Sex Since DLI" is in fact exogenous with respect to "Owns Debt (Y/N)" and the debt value variables.

[20] For the other asset and debt categories, the lack of intersectional response rates between sexual activity and parental coresidence

caused our end sample size to be too small for conclusive results. The private nature of the IV response, especially when tied to parental coresidence, explains this incongruence.

[21] The term "Boomerang Kid" was first coined by Okimoto and Stegall (1987).

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## APPENDIX

## LIST OF VARIABLES

### Asset, debt, and wealth variables

- Has debt: A dummy variable that takes on a value of 1 if the respondent has a positive debt balance and 0 otherwise. This does not include educational or housing debt.
- Log of debt: The natural logarithm of respondent's reported debt levels.
- Owns transaction account: A dummy variable that takes on a value of 1 if the respondent owns a savings, checking, or money market account, and 0 otherwise. This does not include bonds, treasury bills, or CDs.
- Log of transaction accounts: The natural logarithm of respondent's savings, checking, and money market account values.
- Owns stocks/mutual funds: A dummy variable that takes on a value of 1 if the respondent owns stock or mutual funds and 0 otherwise. This includes stock held in publically traded companies or investment trusts, but does not include stock held within IRAs, 401Ks, Keogh, or similar accounts.
- Log of stocks/mutual funds: The natural logarithm of respondent's reported market value stock/mutual funds.
- Owns bonds: A dummy variable that takes on a value of 1 if the respondent owns corporate or municipal bonds, treasury bills, or CDs.
- Log of bonds: The natural logarithm of the respondent's reported bond values.
- Has educational loan: A dummy variable that takes on a value of 1 if the respondent has reported borrowing any monetary value from the government, private lender, or family member for the purposes of education.
- Log of educational loan: The natural logarithm of the respondent's reported educational loan value.
- Log of financial assets: The natural logarithm of respondent's total reported financial assets as reported by the NLSY97 created variable. These assets include the value of transaction accounts, stocks/mutual funds, bonds, pension/retirement accounts, and tax-advantaged accounts. This does not include assets from real estate, land, or similar tangible assets.
- Log of net worth: The natural logarithm of the respondent's total financial assets, nonfinancial assets, primary housing, minus liabilities including housing debt, educational debt, and other debts.
- Percent in transaction accounts: The percentage of a respondent's financial assets held in transaction accounts, and is generated by taking the monetary value of the transaction accounts divided by the monetary value of financial assets.
- Percent in stocks/mutual funds: The percentage of a respondent's financial assets held in stocks/mutual funds, and is generated by taking the monetary value of stocks/mutual funds divided by the monetary value of financial assets.
- Percent in bonds: The percentage of a respondent's financial assets held in bonds, and is generated by taking the monetary value of bonds divided by the monetary value of financial assets.

### Respondent characteristic variables

- Lives with mother: A dummy variable which takes on a value of 1 if the respondent lives with his/her mother *only*, 0 otherwise.
- Lives with father: A dummy variable which takes on a value of 1 if the respondent Lives with his/her father *only*, 0 otherwise.
- Lives with both: A dummy variable which takes on a value of 1 if the respondent lives with both parents, 0 otherwise.
    - **Note:** A respondent who responds 0 to all three of the above is an Independent. The coresidence variables were generated using the NLSY97 question which *separately* asks the respondent the distance to father, and distance to mother from where he or she lives. In

addition to reported distances, reporting as "living with father" or "living with mother" (but not both) are also selections. From this coresidence statuses of the respondents with one or both parents were determined. If, however, one or both values for the mother/father distance is missing, it is inconclusive whether the respondent refused to report the parent who may also be coresiding, or if the parent in question is deceased, incarcerated, or other situation. As a result these incomplete responses were omitted from the analysis.

- Lives with a parent: A consolidated dummy variable which takes on a value of 1 if the respondent lives a parent (Mother, Father, or both), 0 otherwise.
- Female: A dummy variable which takes on a value of 1 if the respondent is female, 0 if male.
- African American: A dummy variable which takes on a value of 1 if the respondent is African American, 0 otherwise.
- Hispanic: A dummy variable which takes on a value of 1 if the respondent is Hispanic, 0 otherwise.
- Mixed: A dummy variable which takes on a value of 1 if the respondent is mixed-ethnicity, 0 otherwise.
- Non-African American non-Hispanic: A dummy variable which takes on a value of 1 if the respondent is non-African American non-Hispanic, 0 otherwise.
- Number of siblings: A variable which reports the number of siblings the respondent has. The rationale for including this variable is that having more siblings may make it more difficult for an individual to move back with his/her parents, or motivate him/her to move out.
- Marital status: A variable which reports the various marital statuses of the respondents. Separated, divorced, and windowed were collapsed due to the aggregate representing only 2.61% of the sample size.
- Number of biological children: A variable which reports the number of respondent's biological children. Having three or more children were collapsed due to the aggregate representing only 2.21% of the sample size.
- Highest degree obtained: A dummy variable which reports the educational levels of the respondents (high school/General Education Development (GED) certificate; Associate degree/junior college; undergraduate degree; graduate degree). While masters, doctoral, and professional degrees were separately reported variables in the NLSY97, they were collapsed (graduate degree) due to the aggregate representing only 1.57% of the sample, and to distinguish it from bachelor and lower degrees.
- Log of income: The natural logarithm of net income of the respondent. Includes wages, salaries, investment income, and other income.
- Unemployment: A dummy variable which takes on a value of 1 if the respondent was unemployed at any point during the survey year. The NLSY97 assigns "unemployed" to a respondent if in a given week he/she did not work and was either:
  - Looking or had looked for a job in the 4-week period prior to the survey.
  - Waiting to be recalled to a job from which they had been laid off.
  - Waiting to report to a new job within 30 days are considered to be unemployed.
- Executive occupation: The NLSY97 contains 33 different occupation codes. The executive occupation variable is a dummy variable which takes on a value of 1 if the respondent's employment code is categorized as "Executive, Administrative and Managerial" or "Management Related" and 0 otherwise, and is created in order to control for stock options commonly awarded in these professions.
- Risk seeking: A generated dummy variable which takes on the value of 1 if the respondent is risk seeking, and 0 otherwise. The NLSY97 asks respondents up to three lottery questions to proxy for respondent's levels of risk aversion. For each question, the respondent has a choice between keeping current income levels guaranteed for life, or a lottery where the respondent could double their income with a probability of 0.5, or face a cut in their income by 20, 33.33, or 50% respectively, with a probability of 0.5. Therefore the three lottery choices in order are:
  - Lottery A:(Current Income for Life, 1) versus (Double Pay, 0.5; 20% Reduction, 0.5)
  - Lottery B:(Current Income for Life, 1) versus (Double Pay, 0.5; 33.33% Reduction, 0.5)
  - Lottery C:(Current Income for Life, 1) versus (Double Pay, 0.5; 50% Reduction, 0.5)

  Choosing the risky option advances the respondent to the next lottery question. Moreover, when a respondent prefers keeping current income levels, the respondent does not advance to the next lottery question. Choosing current income in Lottery A denotes most risk averse, and advancing to choosing the risky choice in Lottery C denotes most risk seeking. The dummy variable takes on a value of 1 if the respondent advances to Lottery C and chooses the double pay versus 50% reduction choice.
- Sex since DLI: A dummy variable which takes on a value of 1 if the respondent has had sexual relations with a partner since the date of the last interview, 0 otherwise.

**TABLE A1** Original asset ownerships and variable manipulations

| |
|---|
| The following were categorized as "Yes" *prior* to variable manipulations |
| Yes, respondent has own account |
| Yes, respondent has own accounts and accounts jointly with spouse/partner |
| Yes, respondent only has accounts jointly with spouse/partner |
| The following were categorized as "No" *prior* to variable manipulations |
| No |
| Yes, spouse/partner has accounts separately from respondent |

**TABLE A2** Debt/asset variable manipulation assumptions

| Variable | Provided by NLSY | Variable manipulations |
|---|---|---|
| Has debt (Y/N) | Not provided | "Yes" if value of debt > \$0; "No" if value of debt = \$0 |
| Value debt | Provided | No manipulations |
| Owns transaction accounts (Y/N) | Provided | Missing data replaced as "Yes" if asset value > \$0[a] |
| Value transaction accounts | Provided | Missing data replaced as \$0 if total value of financial assets = \$0 |
| Owns stocks/mutual funds (Y/N) | Provided | Missing data replaced as "Yes" if asset value > \$0[a] |
| Value stocks/mutual funds | Provided | Missing data replaced as \$0 if total value of financial assets = \$0 |
| Owns bonds (Y/N) | Provided | Missing data replaced as "Yes" if asset value > \$0[a] |
| Value bonds | Provided | Missing data replaced as \$0 if total value of financial assets = \$0 |
| Has education loans (Y/N) | Not provided | "Yes" if value of loan > \$0; "No" if value of loan = \$0 |
| Value education loans | Provided | No manipulations |
| Value financial assets | Provided | No manipulations |

[a]All positive asset valuations are only recorded if the respondent owns his/her account, owns his/her own account and an account jointly with a spouse/partner, or if the respondent only has an account jointly a his/her spouse/partner per NLSY97 survey guidelines.

**TABLE A3** Risk assessment

| Response | Score | Category | Freq. | Percent |
|---|---|---|---|---|
| (Keep current income for life, 1) | 1 | Risk averse | 1,877 | 50.01% |
| (Double pay, 0.5; 20% reduction, 0.5) | 2 | Moderate risk aversion | 879 | 23.42% |
| (Double pay, 0.5; 33.33% reduction, 0.5) | 3 | Moderate risk aversion | 457 | 12.18% |
| (Double pay, 0.5; 50% reduction, 0.5) | 4 | Risk seeking | 540 | 14.39% |
| Total | | | 3,753 | 100.00% |

**TABLE A4** Justification of collapsed variables

| Number of siblings | Freq. | Percent |
|---|---|---|
| None | 215 | 5.73 |
| One sibling | 1,105 | 29.44 |
| Two siblings | 1,055 | 28.11 |
| Three siblings | 637 | 16.97 |
| Four siblings | 296 | 7.89 |
| Five or more siblings | 445 | 11.86 |
| Total | 3,753 | 100.00 |
| **Number biological children** | **Freq.** | **Percent** |
| Zero children | 2,887 | 76.93 |
| One child | 532 | 14.18 |
| Two children | 251 | 6.69 |
| Three or more | 83 | 2.21 |
| Total | 3,753 | 100.00 |
| **Highest degree obtained** | **Freq.** | **Percent** |
| None | 253 | 6.74 |
| High school/GED | 2,405 | 64.08 |
| Associate/junior college | 240 | 6.40 |
| Bachelor's | 796 | 21.21 |
| Graduate (Master's, Professional, PhD) | 59 | 1.57 |
| Total | 3,753 | 100.00 |
| **Marital status** | **Freq.** | **Percent** |
| Never married, not cohabiting | 2,225 | 59.29 |
| Never married, cohabiting | 584 | 15.56 |
| Married | 846 | 22.54 |
| Separated, divorced, widowed | 98 | 2.611 |
| Total | 3,753 | 100.000 |

Abbreviation: GED, General Education Development.