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Research Paper

Sexual orientation and financial well-being in the United States

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ABSTRACT

We study the relationship between financial well-being and sexual orientation using the Survey of Household Economics and Decisionmaking (SHED) data for 2019–2022. We document that sexual minorities (people who are lesbian, gay, and bisexual, or LGB) have significantly more difficulty managing financially than similarly situated heterosexual individuals—and this pre-dated the COVID-19 pandemic. Differences are found across a broad array of current and future financial well-being outcomes, including retirement savings, rainy-day funds, credit card and schooling debts, and the use of alternative financial services such as payday loans. Differences in partnership, financial assistance from parents, financial knowledge, and risk preferences cannot explain these differences. Instead, we document that some social vulnerabilities, such as exposure to discriminatory behavior and violence, are differentially experienced by LGB people, which may play a role. Our results demonstrate that despite considerable improvements in attitudes and policies over time, sexual minorities in the United States experience significantly more financial insecurity than previously understood.

1. Introduction

A large body of research has examined labor market earnings of sexual minorities relative to otherwise comparable heterosexual individuals, intending to understand the relative importance of household specialization, labor market discrimination, and other socioeconomic factors in driving earnings differences. The studies found that lesbian women earn significantly more than similarly situated heterosexual women; in contrast, gay men, bisexual men, and bisexual women earn significantly less than similarly situated heterosexual individuals (see Badgett et al., 2024 for a comprehensive review).

In this paper, we complement the literature on sexual orientation-based differences in labor market earnings by examining a less studied outcome: overall financial well-being. Financial well-being is an independently interesting and important outcome for several reasons. First, while labor market earnings contribute to overall financial well-being, financial well-being reflects how financially secure an individual is regarding their present and future. This includes whether they can successfully meet their financial obligations. Second, financial well-being inherently encompasses different time dimensions than labor market earnings; while earnings and current expenses relate to current liquidity that can be adjusted relatively quickly, there are also medium-term measures of financial well-being such as savings and debts, as well as longer-term aspects such as homeownership and retirement. Overall financial well-being is also relevant because it may be more strongly tied to the risk of depending on public support through tax and transfer

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programs than labor market earnings. This may be particularly relevant for sexual minorities who face labor market vulnerabilities, including discrimination.

We provide new evidence on sexual orientation and a broad array of financial well-being outcomes such as credit card debt, schooling debt, use of alternative financial services such as payday loans, retirement savings, and the ability to manage overall financial affairs. These analyses are made possible by the data from the 2019–2022 Survey of Household Economics and Decision-making (SHED). The SHED is a large, nationally representative survey sponsored by the Federal Reserve Board. While the SHED was first administered in 2013, information about sexual orientation of respondents was first included in the 2019 survey. Across numerous demographic characteristics, we first confirm that the SHED information on sexual orientation matches patterns observed in other high-quality nationally representative surveys that also include information on sexual orientation, thereby increasing our confidence in these data. Moreover, we are able to replicate the basic descriptive findings on homeownership (see Appendix Table A.1), which have been studied extensively by economists using data from the US Census Bureau, including the American Community Survey and Decennial Census (Leppel 2007a, b; Jepsen and Jepsen, 2009). Specifically, we show that the SHED data indicate that sexual minorities are significantly less likely to be homeowners than comparable heterosexual individuals, and these differences are especially large for bisexual people (Badgett et al., 2021).

We report several new results. First, we show that sexual minorities report significantly worse ability to manage financially compared with otherwise similar heterosexuals. In particular, sexual minorities are significantly less likely to report that they are managing financially 'okay' (or better). This is a key overall financial well-being outcome that is most commonly referenced from the SHED data.[1] These differences are driven by particularly large effects for bisexual men and women. Second, we find that many other financial well-being outcomes display the same pattern: sexual minorities are significantly more likely to have credit card debt or schooling debt, significantly less likely to say that their retirement savings are on track, significantly less likely to report access to a three-month rainy day/emergency fund, and significantly more likely to report use of alternative financial services (AFS) such as check cashing, pawnshop or payday loans, or overdraft fee payments in the prior year.[2] Many of these differences are statistically significant for self-identified lesbian women and gay men relative to similarly situated heterosexual individuals, and most differences for bisexual people are even larger. We also demonstrate that these differences occur throughout the socioeconomic status distribution (not just at the lower end) and pre-date the COVID-19 pandemic. Thus, our headline result is that sexual minorities in the US experience significantly more financial vulnerability than previously understood: even in the presence of a longstanding and robust lesbian earnings advantage (Badgett et al., 2024) and recent estimates of gay male income advantages (Carpenter and Eppink, 2017), there is consistent evidence that gay men, lesbian women, bisexual men, and bisexual women are all in significantly worse overall financial health than comparable heterosexual people.

We then go further by investigating some of the possible mechanisms that might underlie the differential risk of poor financial well-being faced by sexual minorities. We examine five candidate hypotheses. First, we document that the patterns described above do not appreciably vary by partnership status, which suggests that there is something unique about minority sexual orientation that is related to financial insecurity. This is important because it is well documented that sexual minorities are less likely to be in romantic partnerships than heterosexual people (Carpenter and Gates, 2008), and access to a partner's resources should be strongly protective for overall financial health. Second, we show that sexual minorities are not significantly less likely to say they get financial help from their parents. This is important because it could be that sexual minorities have more difficult and/or strained relationships with their parents compared to heterosexual people. Given that parental financial assistance is common among young adults, this could have contributed to the disparities we document above. Third, we find that sexual minorities are not less knowledgeable about financial issues than heterosexual people and controlling for financial knowledge does not change our main findings. This is important because it could be that sexual minorities are interested in learning about financial issues less or because they faced discrimination in financial education environments (e.g., personal finance classes in high school or college). Fourth, we find that although gay men and bisexual women are both significantly less likely than heterosexual individuals to be willing to take financial risks, controlling for these differences does not change our core findings. This is important because prior research has established that sexual minorities are less competitive, which may be related to risk preferences (Aksoy and Chadd, 2023; Buser et al., 2018).

Finally, we try to understand the role of discrimination (a summary of labor market discrimination for sexual minorities can be found in summarized in Badgett et al., 2024 forthcoming). For this channel, we do find some suggestive evidence. The gaps in financial well-being are larger for sexual minorities in the South compared to their observationally similar heterosexual counterparts in the South. At the same time, they are smaller in the Northeast and the West. Given differences in LGB-related attitudes in the Northeast and the West compared to the South, this is consistent with a role for attitudes. We also directly observe reports of discrimination in one year of the SHED data, and we do find evidence that sexual minorities are significantly more likely to report sexual orientation-based discrimination (but not discrimination based on other demographic characteristics) than otherwise similar heterosexual people. We also examine reports of violent victimization and find evidence that bisexual individuals are significantly more likely to report having been the victim of a violent crime in their lifetime than similarly situated heterosexual individuals, suggesting that violence may also

[1] We construct our dichotomous indicator of overall financial well-being based on the Federal Reserve Board's annual report Economic Well-being of U.S. Households in 2022, May 2023 (Accessed on December 28, 2023 from https://www.federalreserve.gov/publications/files/2022-report-economic-well-being-us-households-202305.pdf).

[2] Research has shown that users of AFS products like payday loans, pawn shops, and vehicle title loans tend to be economically vulnerable and credit-constrained (Bollen et al., 2020). For a broad understanding of key products and services covered under alternative financial services, see the Federal Deposit Insurance Corporation's (FDIC) article by Bradley et al. (2009).

play a role in their increased financial insecurity.

Our results provide novel evidence that sexual minorities report significantly more financial insecurity than heterosexual individuals. This is important, as it contextualizes findings in the literature on labor market earnings that lesbian women experience a large earnings premium compared to observationally similar heterosexual women, a finding that has also been observed in recent datasets for gay men's incomes (Carpenter and Eppink, 2017). Additionally, while prior research has shown that sexual minorities are more likely to be in poverty than heterosexual individuals (Badgett et al., 2013), our results indicate that even higher in the financial distribution, sexual minorities report significantly more financial insecurity than similarly situated heterosexual people.

The remainder of the paper proceeds as follows. In Section 2, we provide a review of the literature on sexual orientation and financial well-being. Section 3 describes our data and methods. Section 4 presents the results, and Section 5 concludes.

2. Literature review

Our study extends a large literature examining labor market earnings differences related to minority sexual orientation (for an overview, see Badgett et al., 2024). The studies generally find that lesbian women experience a significant earnings premium compared to otherwise comparable heterosexual women.[3] For gay men, the findings are more mixed: most research documents a labor market earnings penalty compared to similarly situated heterosexual men, though some studies find either no difference (Carpenter, 2005) or evidence of an income premium for gay men (Carpenter and Eppink, 2017). Most research that has had information on bisexual people also documents significant earnings penalties for bisexual workers compared to comparable heterosexual workers. These patterns are found not only in the US but in most developed countries where information on sexual orientation, earnings, and income is available from large surveys.

A smaller strand of literature has examined financial well-being outcomes other than labor market earnings. Most of these studies have examined two particular domains: poverty status and homeownership.[4] Regarding poverty status, Badgett et al. (2013) use four datasets to show that individuals in same-sex couples face a higher risk of poverty than individuals in different-sex couples, particularly women in same-sex couples and self-identified bisexual women. Badgett (2018) uses the 2013–2016 National Health Interview Surveys and confirms that bisexual women are significantly more likely to be in poverty, regardless of relationship status, though having a partner reduces this risk.

Regarding homeownership, several US-based studies use data from the Decennial Census and the American Community Surveys to examine homeownership for individuals in same-sex couples. The studies document that homeownership rates are significantly lower for those in same-sex couples than for comparable people in different-sex couples (Leppel 2007a, b; Jepsen and Jepsen, 2009). Badgett et al. (2021) also use data from the National Health Interview Survey with individual-level information on sexual orientation and find that sexual minorities are significantly less likely to be homeowners than heterosexual individuals, and this difference was especially large for bisexual people. There are several possible explanations for the homeownership gap, including that sexual minorities are more likely to live in densely populated cities with higher housing prices, and most studies cannot sufficiently control for these geographic differences. Another possible explanation, which Sun & Gao (2019) find evidence supporting, is that same-sex couples experience discrimination in the mortgage lending market.

Related to the homeownership disparity, Delhommer and Hamermesh (2021) show that legal access to same-sex marriage is predictably related to the increased likelihood of homeownership among same-sex couples. This is consistent with evidence from Miller and Park (2018), who show that legal access to same-sex marriage is associated with significant increases in mortgage applications from same-sex applicants. However, Hagendorff et al. (2022) also show that legal same-sex marriage is associated with an increase in the mortgage denial gap experienced by same-sex applicants relative to their different-sex counterparts.

Our research is also related to government reports that have used the SHED data to describe the overall financial well-being of other minority groups. One study by researchers at the Federal Reserve Bank of St. Louis examined sexual minorities directly, finding that LGBTQ+ individuals have fewer savings and investments, including homes, than heterosexual people (Kent and Scott, 2022a). They also were more likely to report difficulty managing financially than heterosexual people (Kent and Scott, 2022b). Moreover, the annual "Economic Well-Being of US Households" report by the Board of Governors of the Federal Reserve System confirmed in recent years that LGBTQ+ people had a significantly lower likelihood of doing 'okay' (or better) financially (Board of Governors of the Federal Reserve System, 2023). These reports provide important insight into sexual orientation and overall financial well-being, but they are limited in important ways that our research addresses. Specifically, relative to this prior work, we: 1) separately identify lesbian and gay individuals from bisexual individuals who may face different financial market constraints and opportunities; 2) test the extent to which the raw mean differences survive adjustment for well-documented differences in age, education, partnership status, and other variables that vary by sexual orientation group; 3) consider a much wider range of financial well-being outcomes, including: credit

[3] There are exceptions, however. Medina (2023) uses recent data from the General Social Surveys with information on self-reported sexual orientation and does not find a lesbian earnings advantage.

[4] An exception is Klawitter (2008) who provides descriptive evidence on differences in how same-sex couples and different-sex couples hold their money using data from the U.S. Survey of Consumer Finances.

card debt, student loan debt, access to emergency/rainy day funds, and retirement savings; and 4) examine a range of possible mechanisms for why sexual orientation-based differences in financial outcomes exist.

Finally, our study is related to recent work by Martell & Roncolato (2023), who used the Census Bureau Household Pulse survey to study the economic outcomes of sexual minorities in the context of recovery from the COVID-19 pandemic. They document that households with lesbian women, bisexual women, and bisexual men experienced significantly more pandemic-related job loss and were more likely to report food insecurity and difficulty paying expenses than otherwise similar households. They also found that all sexual minorities – including gay men – were significantly more likely to take on debt to pay expenses and to report borrowing from friends and family. Our study complements and extends Martell & Roncolato (2023) in important ways. First, we examine a larger set of financial well-being outcomes that are not measured in the Household Pulse survey, such as credit card debt, schooling debt, use of alternative financial services, and perceptions of whether retirement savings are on track. Second, the SHED data includes questions that allow us to directly examine possible mechanisms for these disparities in financial outcomes, including financial risk tolerance, financial knowledge, and experiences of sexual orientation discrimination. Third, our data pre-date the COVID-19 pandemic, thus allowing us to examine if pandemic difficulties caused or changed financial vulnerability for sexual minorities. Finally, we use a different data source – the SHED – a large-scale survey conducted by the Federal Reserve Board for measuring rhe overall financial well-being of US households.[5] This allows us to confirm some of the findings in prior work about outcomes for economically vulnerable people and extend the focus to people throughout the income distribution.

3. Data and methods

We use data from the 2019–2022 Survey of Household Economics and Decisionmaking (SHED). The SHED is sponsored by the Federal Reserve Board and is a large nationally representative survey fielded since 2013. The survey's primary aim is to measure American households' financial and economic well-being. The survey focuses on a wide range of topics, including personal finances, economic vulnerability, emergency preparedness, savings and expenditure behavior, housing and living arrangements, access and usage of banking and credit services, education and student loans, and retirement.

The annual surveys incorporate a nationally representative sample of adults aged 18 and above. The survey questions in the SHED are prepared by the Federal Reserve Board staff in consultation with Federal Reserve System staff, academics, and professional survey experts. Each year, the survey is administered online by the consumer research firm Ipsos using a nationally representative probability-based online panel selected from address-based sampling. The SHED respondents are then selected from that panel.[6]

It is important to note that the sampling and weighting methodology implemented to select the resulting sample in each annual survey ensures that the sample was designed to represent the adult population residing in the United States. Larrimore et al. (2015) provide a useful analysis comparing some of the SHED's important overlapping questions included from other surveys with some well-established data sources. Specifically, the authors use large-scale US Census Bureau surveys to verify if responses to the SHED are consistent with commonly used data sets.[7] The responses considered for comparison are related to demographic characteristics, employment, banking, health insurance, housing, retirement, savings, and income stability. The descriptive evidence broadly indicates that the aggregate responses to the SHED are closely similar to the Census Bureau datasets considered.

Our main outcome of interest follows other SHED-based research and is based on a question asking respondents: "Overall, which one of the following best describes how well you are managing financially these days?" Response options include: Finding it difficult to get by; Just getting by; Doing okay; or Living comfortably. We code an outcome that equals one if individuals report they are 'Doing okay' or 'Living comfortably' and zero otherwise. Individuals are also asked whether they have student loan debt and/or if they have credit card debt. We create two separate indicator variables for individuals who have either type of debt. We also examine an indicator for the use of any alternative financial services in the past year; specifically, individuals are asked if they or their spouse/partner have purchased a money order from a place other than a bank, cashed a check at a place other than a bank, took out a payday loan or payday advance, took out a pawn shop loan or an auto title loan, or obtained a tax refund advance to receive a refund faster in the past year. Individuals who used any of these services in the past year are coded as having used alternative financial services. To measure access to rainy day funds, we use responses to a question that asks: "Have you set aside emergency or rainy day funds that would cover your expenses for 3 months in case of sickness, job loss, economic downturn, or other emergencies?" Regarding retirement savings, individuals are asked: "Do you think that your retirement savings plan is currently on track?" We create an indicator variable equal to

[5] The SHED data offer another important advantage over the Household Pulse with respect to the response rate. The SHED participants are drawn from a pre-existing nationally representative probability-based online panel (the Knowledge Panel managed by the consumer research firm Ipsos). The SHED's final stage completion rate ranged from 61 to 65 percent from 2019 to 2022, and these data also provide person-level weights to correct for non-response, under-coverage, and sampling errors to ensure that the SHED is representative of the US adult population. The Household Pulse dataset has a response rate that has not exceeded 7 percent since the survey began in April 2020. Some recent research has called into question the representativeness of the Household Pulse data (see, for example, Bradley et al. 2021 in the context of COVID vaccination).

[6] Further information on the survey background including details regarding participation, sampling and weighting, and financial incentives extended to select groups to ensure sufficient representation of under-represented populations can be accessed from yearly reports on "Economic Wellbeing of U.S. Households". Accessed from https://www.federalreserve.gov/consumerscommunities/shed_publications.htm on December 5, 2023.

[7] The U.S. Census Bureau surveys considered in the analysis includes the Current Population Survey, American Community Survey, and the Survey of Income and Program Participation.

one for individuals who respond 'Yes'.[8]

The SHED's subjective financial well-being indicator for managing financially at least "okay" is one of the key financial well-being measures used in the Federal Reserve Board's annual report on "Economic Well-Being of U.S. Households" (e.g., see Board of Governors of the Federal Reserve System, 2023). Apart from being strongly correlated with the official employment statistics such as employment and income measures, the indicator of managing at least okay financially exhibits similar patterns when compared with other common measures of financial well-being, such as the Consumer Financial Protection Bureau's (CFPB) Financial Well-Being Scale scores (Board of Governors of the Federal Reserve System, 2023).

Recent studies also suggest that the SHED's subjective financial well-being measure can provide additional information regarding changes in individuals' financial conditions compared to objective measures such as administrative data on individuals' credit scores (Dobridge et. al., 2024). Additionally, this subjective measure of financial condition allows researchers to explore important heterogeneities regarding individuals' economic well-being conditional on having similar employment status including differences by educational attainment, family size, race, ethnicity, location, and for young adults and retired individuals (Larrimore, 2015; Lockwood and Webber, 2023). Moreover, access to liquid savings that could cover three months of expenses (often referred to as an emergency or rainy-day fund) is often recommended by financial planners as a measure of financial stability (Lusardi, 2011; Lusardi et al., 2011; Bhutta and Dettling, 2018).

Beginning in 2019, the SHED included a question about sexual orientation, which enables our research. Specifically, to document individuals' sexual orientation, respondents are asked: "Which of the following best describes how you think of yourself?". Response options include: Gay or Lesbian; Straight, that is not gay; Bisexual; Something else. We create an indicator variable called GAY OR LESBIAN equal to one for individuals who reported a gay or lesbian sexual orientation (and zero otherwise); we create an indicator for BISEXUAL accordingly.[9] SHED respondents can only mark one response to the sexual orientation question, so these indicator variables are mutually exclusive.

Our estimation sample includes adults aged 25–64.[10] It is also worth noting that to avoid overcounting in our sample, which could affect the shares of the sexual minority populations relative to the overall sample, we consider only the most recent observation for individuals who are interviewed in multiple survey years in the SHED.

We estimate standard OLS regressions separately for men and women. These models take the form:

$$y_{it} = \alpha + \beta_1 . \mathbf{X_i} + \beta_2 (GAY\ OR\ LESBIAN) + \beta_3 (BISEXUAL) + Survey\_Year_t + \varepsilon_{it} \quad (1)$$

where y_{it} are various binary outcomes for individual i at survey year t. The vector $\mathbf{X_i}$ includes demographic and characteristics, including: age (bins of age for 25–34, 45–54, and 55–64, excluding 35–44 -year-olds as the reference group); education (high school degree or less, some college, associate degree, bachelor's degree, master's or professional degree, and PhD with high school as the reference group); race/ethnicity (Hispanic, Black non-Hispanic, Asian non-Hispanic, White non-Hispanic, and other); region (9 Census region dummies); an indicator for being currently enrolled in school; and an indicator for being married or living with a partner. The binary indicator $(GAY\ OR\ LESBIAN)$ equals 1 if individual i reports being gay or lesbian and 0 otherwise; the binary indicator $(BISEXUAL)$ equals 1 if individual i reports being bisexual and 0 otherwise. $Survey\_Year_t$ is a vector of survey year dummies to account, for example, for pandemic-related secular shocks. The coefficients of interest are β_2 and β_3. We estimate White standard errors robust to heteroskedasticity. We estimate weighted regressions using the SHED sample weights to make the results nationally representative.

4. Results

4.1. Descriptive statistics

Table 1 presents descriptive statistics for our sample of individuals aged 25–64.[11] We report means for lesbian women in column 1,

[8] The questions asked in the SHED change throughout survey years. Thus, all results included are not necessarily from the entire 2019-2022 SHED survey years. Questions about the following topics were asked in all four years in the 2019-2022 SHED surveys: how respondents are managing financially, presence of student loan debt, presence of a 3-month emergency fund, presence of credit card debt, use of an AFS in the past year, whether respondents' retirement savings are on track, answers to financial quiz questions, and whether respondents own a home. Whether parents provide respondents with financial help was asked in 2019 and 2020 only. How respondents rate themselves regarding financial riskiness was asked in 2019 and 2021 only. Whether respondents experienced discrimination on various dimensions was asked in 2020 and 2021 only. Whether a respondent was a victim of a violent crime was asked in 2019 only. For additional information on the exact question wording, see the codebooks at https://www.federalreserve.gov/consumerscommunities/shed_data.htm.

[9] The SHED data also include information on transgender status, but sample sizes of transgender people are too small for meaningful analysis. Specifically, individuals in the SHED can identify as cisgender, transgender, other, or non-binary. In any given year, samples of transgender and nonbinary individuals are typically fewer than 100 combined. Moreover, the SHED data do not include information on sex at birth, so it is not obvious if someone who is both 'transgender' and 'male' is an individual assigned female at birth who identifies as a transgender man or an individual assigned male at birth who identifies as transgender. This would pose a significant challenge for choosing the relevant comparison group for transgender and nonbinary respondents.

[10] Results are not sensitive to adding in younger adults (aged 18-24) and/or to adding older individuals (aged 65+)

[11] In Appendix Table A.1, we similar descriptive statistics for all adults aged 18 and above. The differences observed in Table 1 across individuals with respect to sexual orientation do not vary in the wider sample of adults (18+).

bisexual women in column 2, heterosexual women in column 3, gay men in column 4, bisexual men in column 5, and heterosexual men in column 6. Each row is a different variable. The patterns in Table 1 match those from other large population representative surveys such as the Census Bureau's Household Pulse, the National Health Interview Survey, and the Centers for Disease Control's Behavioral Risk Factor Surveillance System. For example, we find that sexual minorities are younger and more highly educated on average than heterosexual individuals. Sexual minority men are also significantly less likely to be partnered.

Regarding financial outcomes, we see that sexual minorities are significantly more likely than heterosexual people to report credit card debt or schooling debt, and they are significantly less likely to say that their retirement savings are on track and that they have access to a rainy-day fund for unexpected expenses. We also confirm that the SHED data replicate patterns in prior research that sexual minorities are significantly less likely to be homeowners than heterosexual people (Dilmaghani and Dean, 2020; Delhommer and Hamermesh, 2021).[12] Regarding mechanisms, the means in Table 1 indicate that sexual minorities are much more likely than heterosexual people to report LGB discrimination and to report ever having been the victim of a violent crime.

4.2. *Regression results: sexual orientation and financial well-being*

Table 2 examines whether the mean difference in the key overall financial well-being outcome related to minority sexual orientation documented in Table 1 – whether the individual reports managing financially at least 'okay' – is robust to controlling for individual demographic covariates. We report results for women in the top panel and results for men in the bottom panel of Table 2. Within each panel, we report the coefficient on the GAY OR LESBIAN indicator and on the BISEXUAL indicator. Column 1 reports results from a model with no controls, column 2 adds year fixed effects, column 3 adds demographics, and column 4 adds 9 Census division dummies.

The results in Table 2 indicate that some sexual minorities are significantly less likely than comparable heterosexual individuals to report managing financially at least 'okay'. Specifically, we estimate that bisexual men and women are 15–17 percentage points less likely than comparable heterosexual people of the same sex to report managing financially at least 'okay'. When we control for survey year fixed effects, demographics, and Census division fixed effects, these differences attenuate but remain sizable in magnitude (11–13 percentage points) and statistically significant. Interestingly, we do not find significant differences for gay men or lesbian women compared to heterosexual men and women, respectively, and this null finding is not sensitive to controls.[13]

We extend our attention to other financial well-being outcomes in Table 3. Each outcome is in a separate column, and all models include the full set of controls from column 4 of Table 2. As before, we report results for women in the top panel and for men in the bottom panel of Table 3. In Column 1, we report results for an outcome that is an indicator for having any student loan debt; in column 2, we examine an indicator for having any credit card debt; in column 3, we examine an indicator for having used alternative financial services such as payday loans in the prior 12 months; in column 4, we examine an indicator for having a rainy day fund of at least 3 months' worth of expenses; and in column 5, we examine an indicator for whether the respondent thinks her retirement savings is on track.

The results in the top panel of Table 3 for women indicate that the overall financial insecurity experienced by sexual minority women is widespread and not limited to bisexual individuals. While bisexual women are significantly more likely to have student loan debt and credit card debt, significantly more likely to have used alternative financial services in the past year, and significantly less likely to have a rainy day fund or to think their retirement savings are on track, we also estimate that lesbian women are significantly more likely to have credit card debt and are significantly less likely to report access to a rainy day fund or to think their retirement savings are on track compared to similarly situated heterosexual women. That is, the top panel of Table 3 reveals a very large amount of financial insecurity experienced by sexual minority women in general that is not limited to bisexual women.

[12] Appendix Table A.2 shows that these differences in homeownership for all sexual minority groups relative to heterosexual individuals survive controls for demographic characteristics.

[13] Appendix Table A.3 reports a full set of coefficients on the control variables and indicates that the likelihood of managing financially at least 'okay' or better is lower for Black Non-Hispanic and Hispanic people than White Non-Hispanic people, higher for individuals with more education, lower for individuals currently enrolled in school, higher for 55-64 year olds compared to 35-44 year olds, and higher for people who are married or living with a partner. Appendix Table A.4 reports results for 'finding it difficult to get by' and 'living comfortably' in addition to our main outcome and shows that the patterns in Table 2 are not sensitive to which outcome we use, with the exception that bisexual men are not significantly more likely to report they are finding it difficult to get by. Returning to the outcome of managing financially at least 'okay' or better, Appendix Table A.5 shows that our results are not sensitive to using Probit estimation. Appendix Table A.6 estimates models separately for the 2019 wave and the 2020-2022 waves and confirms that these patterns pre-dated the COVID-19 pandemic. Appendix Table A.7 estimates models separately by education and shows that differential for bisexual women in managing financially is largest when we examine individuals with a bachelor's degree or more, while the differential for bisexual men is largest for those with a high school degree or less and those with some college. Appendix Table A.8 estimates models separately by region and shows that the differences in bisexual women's ability to manage financially is largest in the Midwest and South, while for bisexual men the difference is largest in the West and the South. Appendix Table A.9 estimates models separately for people residing inside or outside Metropolitan Statistical Areas. We find the sexual orientation-based gaps are estimated to be larger outside of MSAs.

Table 1
Descriptive Statistics, SHED 2019–2022- Weighted, adults aged 25–64.

	Lesbian women	Bisexual women	Heterosexual women	Gay men	Bisexual men	Heterosexual men
25–34 years old	0.370 (0.037) [c]	0.608 (0.024) [c]	0.246 (0.005)	0.284 (0.024)	0.455 (0.040) [c]	0.266 (0.006)
55–64 years old	0.248 (0.031)	0.053 (0.011) [c]	0.293 (0.005)	0.248 (0.022)	0.220 (0.029)	0.267 (0.005)
White, non-Hispanic	0.526 (0.038) [b]	0.646 (0.025)	0.617 (0.006)	0.601 (0.027)	0.630 (0.041)	0.619 (0.007)
Black, non-Hispanic	0.190 (0.032) [a]	0.115 (0.017)	0.136 (0.004)	0.086 (0.014)	0.079 (0.022)	0.105 (0.004)
Asian, non-Hispanic	0.025 (0.013) [b]	0.021 (0.008) [c]	0.058 (0.003)	0.039 (0.011) [a]	0.006 (0.006) [c]	0.058 (0.003)
Other race, non-Hispanic	0.045 (0.016)	0.053 (0.011) [b]	0.028 (0.002)	0.046 (0.015)	0.027 (0.009)	0.030 (0.003)
Hispanic	0.213 (0.033)	0.165 (0.021)	0.161 (0.005)	0.228 (0.025)	0.259 (0.039) [a]	0.187 (0.006)
Married or Living w/partner	0.634 (0.036) [b]	0.630 (0.024) [c]	0.724 (0.005)	0.505 (0.027) [c]	0.490 (0.040) [c]	0.731 (0.006)
Has children in the household	0.162 (0.029) [c]	0.375 (0.024)	0.384 (0.006)	0.045 (0.011) [c]	0.133 (0.027) [c]	0.347 (0.006)
High school degree or less	0.182 (0.031)	0.186 (0.022) [b]	0.233 (0.005)	0.218 (0.026) [c]	0.305 (0.042)	0.286 (0.007)
Some college, no Associate's degree	0.253 (0.034)	0.288 (0.022) [b]	0.241 (0.005)	0.247 (0.024)	0.240 (0.033)	0.243 (0.006)
Associate's degree	0.103 (0.023)	0.102 (0.014)	0.100 (0.003)	0.091 (0.015)	0.097 (0.021)	0.084 (0.003)
Bachelor's degree	0.208 (0.029)	0.277 (0.021)	0.248 (0.005)	0.261 (0.021)	0.230 (0.030)	0.230 (0.005)
Master's or Professional degree	0.222 (0.030) [b]	0.125 (0.015) [b]	0.160 (0.004)	0.158 (0.017)	0.111 (0.021)	0.135 (0.004)
Doctoral degree (PhD/MD)	0.032 (0.012)	0.022 (0.007)	0.019 (0.002)	0.025 (0.006)	0.017 (0.008)	0.022 (0.002)
Mother's years of education	13.421 (2.366) [b]	13.652 (2.433) [c]	13.023 (2.279)	13.234 (2.479)	13.405 (2.522)	13.141 (2.293)
Father's years of education	13.298 (2.394)	13.629 (2.443) [c]	13.190 (2.507)	13.379 (2.551)	13.598 (2.504) [a]	13.274 (2.524)
Owns a home	0.528 (0.038) [c]	0.397 (0.024) [c]	0.666 (0.005)	0.511 (0.027) [c]	0.408 (0.038) [c]	0.659 (0.006)
Managing financially at least 'okay'	0.676 (0.036)	0.579 (0.024) [c]	0.731 (0.005)	0.727 (0.024)	0.570 (0.040) [c]	0.739 (0.006)
Has any student loan debt	0.310 (0.035) [c]	0.358 (0.023) [c]	0.203 (0.004)	0.238 (0.022) [c]	0.228 (0.031) [b]	0.151 (0.004)
Has any credit card debt	0.539 (0.040) [a]	0.531 (0.028) [b]	0.464 (0.006)	0.489 (0.028) [c]	0.457 (0.044)	0.412 (0.007)
Retirement savings on track	0.267 (0.035) [c]	0.186 (0.019) [c]	0.360 (0.006)	0.390 (0.027)	0.274 (0.036) [c]	0.397 (0.007)
Has 3 month rainy day fund	0.416 (0.037) [c]	0.395 (0.024) [c]	0.513 (0.006)	0.500 (0.027) [a]	0.462 (0.039) [b]	0.545 (0.006)
Used alternative financial services, past year	0.250 (0.034)	0.360 (0.024) [c]	0.225 (0.005)	0.201 (0.023)	0.332 (0.039) [c]	0.199 (0.005)
Parents provide financial help	0.098 (0.032)	0.111 (0.020) [c]	0.048 (0.003)	0.041 (0.011)	0.066 (0.022)	0.042 (0.003)
Perfect financial quiz score	0.365 (0.035)	0.338 (0.023)	0.363 (0.005)	0.513 (0.027)	0.468 (0.039)	0.515 (0.006)
Willingness to take financial risk (of 10)	3.863 (2.464)	3.403 (2.504) [c]	3.936 (2.563)	4.424 (2.852) [c]	4.592 (2.697)	4.887 (2.685)
Experienced LGB discrimination	0.116 (0.033) [c]	0.077 (0.018) [c]	0.006 (0.001)	0.103 (0.020) [c]	0.047 (0.021) [a]	0.007 (0.001)
Ever victim of violent crime	0.137 (0.043)	0.265 (0.038) [c]	0.099 (0.006)	0.132 (0.030) [a]	0.184 (0.054) [a]	0.080 (0.006)
N (2019–2022)	200	485	8810	464	211	7684

Notes: Authors' calculations. The descriptive statistics are calculated using survey weights. The availability of the above variables may vary across survey years considered in our analysis (2019–2022). The sample size refers to maximum sample of individuals of each sexual orientation between ages 25–64 from 2019 to 2022. [a,b,c] indicate significant differences from heterosexual individuals of the same sex at $p < 0.10$; $p < 0.05$; $p < 0.01$, respectively.

Turning to sexual minority men in the bottom panel of Table 3, we find similar patterns: while bisexual men are significantly more likely to have student loan debt and to have used alternative financial services and are significantly less likely to report thinking their retirement savings are on track compared to heterosexual men, it is also true that gay men are significantly more likely to have student loan debt, significantly more likely to have credit card debt, and are significantly less likely to have access to a 3-month emergency fund than comparable heterosexual men.[14] Thus, as with sexual minority women, the evidence in the bottom panel of Table 3 for sexual minority men uncovers much more financial insecurity than previously understood.[15]

4.3. *Mechanisms: partnership, parental assistance, financial knowledge, risk preferences, and discrimination/violence*

Next, we investigate mechanisms that may underlie the empirical patterns documented in Tables 2, 3. We present direct evidence on mechanisms in Table 4, the format of which follows Table 3. In each case, we report the coefficients on the GAY OR LESBIAN and BISEXUAL indicators from models estimated on different outcomes or different samples. For example, in columns 1–2 of Table 4, we present results for partnered and non-partnered people, respectively, for the 'managing financially at least 'okay' outcome to examine whether the sexual minorities' much lower likelihood of being in a romantic union explains their increased financial insecurity. Column 3 examines an indicator for whether the individual receives financial assistance from their parents; column 4 examines an indicator for whether the individual answered all the financial quiz questions correctly; and column 5 examines an outcome that is the willingness to take financial risks on a scale of 1 to 10 (where 10 is most willing to take financial risks).

The results in Table 4 provide evidence broadly inconsistent with each of these hypothesized mechanisms as explaining the financial insecurity results described in Tables 2 and 3. Specifically, columns 1–2 of Table 4 provide no evidence that partnership status is meaningfully related to the sexual orientation differential in the ability to manage at least 'okay' financially. In each case, the BISEXUAL coefficient is similar in magnitude regardless of partnership status, and in fact for women, the pattern is opposite to what we would have expected if partnership explained the difference in the overall ability of bisexual women to manage financially (since the difference is somewhat smaller for non-partnered bisexual women than it is for partnered bisexual women).[16] Moreover, we find no evidence that differential access to parental financial resources can explain the findings in column 3, as in fact, sexual minorities are not differentially likely to report access to financial assistance from parents.[17]

Focusing on the surveys' financial literacy questions that were originally developed by Lusardi & Mitchell (2011), in column 4 of Table 4, we find no evidence that sexual minorities have differential financial knowledge. Additionally in column 5, we find that gay men and bisexual women are significantly *less* willing to take on financial risks than otherwise similar heterosexual individuals of the same sex.[18] Both findings are inconsistent with the results of their increased financial insecurity, documented above in Table 3, regarding credit card debt and alternative financial services.

Overall, the results in Table 4 suggest that the significantly more financially vulnerable LGB people in the US are not due to differences in romantic partnership, access to parental resources, financial knowledge, or willingness to take on financial risk.

What explanations remain, then? In Table 5, we investigate two possibilities that are testable with the SHED data: sexual orientation discrimination and violence. Specifically, in a subset of years, SHED respondents were asked about whether they experienced various types of discrimination in the prior 12 months, including discrimination based on their sexual orientation, discrimination based on their gender, discrimination based on their race/ethnicity, and discrimination based on their age. We examine each of these

[14] In results not reported, we also found that controlling for presence of children in the household did not change the core findings for women or men.

[15] A possible explanation for our findings of systematically worse overall financial well-being experienced by sexual minorities relative to comparable heterosexual individuals is selective disclosure: it could be that only those sexual minority individuals experiencing financial insecurity are the ones who are self-identifying as lesbian, gay, or bisexual in the SHED survey. If so, then selective disclosure of LGB status could drive our findings. We test this in the spirit of Black et al. (2000) who examined own education and father's education for sexual minority individuals and heterosexual individuals from the General Social Surveys. The intuition behind their test is that educational attainment is well-documented to be extremely positively correlated within families intergenerationally. Thus, if selective disclosure were driving differences in outcomes, then the more highly educated gay men should also have more highly educated fathers than the fathers of their less educated heterosexual male counterparts. We perform a test in this same spirit using the SHED data, which also asked about parental education. Table 1 shows that self-identified sexual minorities have average father education distributions that are broadly similar to those of self-identified heterosexual men. This suggests that selective disclosure is unlikely to explain our main findings.

[16] An important limitation of the SHED data is that we do not observe other measures of minority sexual orientation, such as attraction or behavior. Nor do we observe which sexual minorities are out versus in the closet. Moreover, because the SHED does not include a household roster, we do not have information on whether individuals are in same-sex or different-sex romantic partnerships. Other data show that the vast majority of gay men and lesbians in partnerships are in same-sex partnerships while the majority of bisexual women are in different-sex partnerships (Badgett et al. 2021). Several of the mechanisms we consider are likely to vary systematically with whether an individual is in a same- or different-sex partnership. Our inability to measure this in the SHED is an important limitation.

[17] In a related exploration of family-based heterogeneity, we also estimated models separately for people with and without children present in the household. Appendix Table A.10 shows that the bisexual disadvantage with respect to our main 'managing financially at least okay' outcome is much larger in the sample with children present than in the sample without children present. As bisexual people are much more likely than gay or lesbian people to have a child present in the home, this pattern is consistent with the possibility of compounding effects of being a sexual minority and being a parent on financial well-being.

[18] This finding is also robust to including a control for savings and investments.

Table 2
Bisexual People Are Significantly Less Likely to Report Managing Financially At Least 'Okay', SHED 2019–2022, adults aged 25–64.

	(1) No Covariates	(2) Year FE	(3) Year FE + Demographics	(4) Year FE + Demographics + Census Division FE
Women				
Lesbian	−0.056	−0.057	−0.041	−0.041
	(0.036)	(0.036)	(0.032)	(0.033)
Bisexual	−0.153***	−0.150***	−0.112***	−0.112***
	(0.025)	(0.025)	(0.024)	(0.024)
Observations	9494	9494	9494	9494
R-squared	0.006	0.008	0.130	0.132
Sample Mean	0.722	0.722	0.722	0.722
Men				
Gay	−0.013	−0.011	0.000	0.001
	(0.025)	(0.025)	(0.023)	(0.023)
Bisexual	−0.169***	−0.167***	−0.132***	−0.130***
	(0.041)	(0.041)	(0.037)	(0.036)
Observations	8537	8537	8537	8537
R-squared	0.004	0.007	0.111	0.113
Sample Mean	0.734	0.734	0.734	0.734
Year FE		YES	YES	YES
Demographic controls			YES	YES
Census division FE				YES

Notes: Robust standard errors in parentheses. Demographic controls include: age (bins of age for 25–34, 45–54, and 55–64, with 35–44 -year-olds as the reference group); education (high school degree or less, some college, associate degree, bachelor's degree, master's or professional degree, and PhD, with high school as the reference group); race/ethnicity (Hispanic, Black non-Hispanic, Asian non-Hispanic, and other race non-Hispanic, with White non-Hispanic as the reference group); an indicator for being currently enrolled in school; and an indicator for being married or living with a partner. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3
Sexual Minorities Experience Significantly More Economic Precarity on Specific Financial Outcomes, SHED 2019–2022, adults aged 25–64.

	(1) Has any student loan debt	(2) Has any credit card debt	(3) Has used Alternative Financial Services (e.g., payday loans) in the past 12 months	(4) Has rainy day fund of 3 months expenses	(5) Thinks retirement savings is on track
Women					
Lesbian	0.037	0.083**	0.003	−0.075**	−0.078**
	(0.033)	(0.041)	(0.032)	(0.033)	(0.033)
Bisexual	0.056**	0.077***	0.104***	−0.059**	−0.137***
	(0.022)	(0.028)	(0.024)	(0.024)	(0.019)
Observations	9433	7998	9443	9430	8098
R-squared	0.187	0.081	0.121	0.156	0.129
Sample Mean	0.214	0.469	0.233	0.504	0.348
Men					
Gay	0.066***	0.096***	0.003	−0.050**	0.003
	(0.022)	(0.027)	(0.022)	(0.025)	(0.024)
Bisexual	0.051*	0.054	0.117***	−0.044	−0.091***
	(0.027)	(0.045)	(0.037)	(0.038)	(0.034)
Observations	8499	7310	8507	8498	7391
R-squared	0.131	0.061	0.098	0.142	0.124
Sample Mean	0.158	0.417	0.202	0.541	0.394

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

indicators as outcomes in columns 1–4 of Table 5, the format of which follows that of Tables 3 and 4 in that we present results for women in the top panel and results for men in the bottom panel.

The results in column 1 provide clear evidence that sexual minorities are significantly more likely to report discrimination based on sexual orientation in the past 12 months than similarly situated heterosexual individuals. Moreover, the results in columns 2–4 confirm that this association is largely specific to discrimination based on sexual orientation: lesbian women, gay men, and bisexual men are no more likely to report discrimination based on gender, race/ethnicity, or age compared to otherwise similar heterosexual individuals of the same sex, though an exception is that bisexual women are significantly more likely than similarly situated heterosexual women to report discrimination based on gender and based on age in the past 12 months. Overall, these patterns are consistent with the possibility that sexual orientation discrimination may be a mechanism behind the increased risk of financial insecurity documented in Tables 2 and 3.

Finally, column 5 of Table 5 shows results for an indicator equal to one if the individual reports ever being the victim of a violent

Table 4
Sexual Orientation Differences in Financial Well-Being are Similar for Partnered and Non-Partnered People, and There are Not Systematic Differences in Family Assistance, Financial Knowledge, or Financial Risk Tolerance by Sexual Orientation, SHED 2019–2022, adults aged 25–64.

	(1) Managing financially at least 'okay', sample is partnered people	(2) Managing financially at least 'okay', sample is non-partnered people	(3) Receives financial assistance from parents	(4) Answered all financial literacy questions correctly	(5) Willingness to take financial risks on a scale of 1–10
Women					
Lesbian	−0.019	−0.072	0.036	0.010	−0.145
	(0.038)	(0.060)	(0.031)	(0.031)	(0.227)
Bisexual	−0.120***	−0.096**	0.027	0.011	−0.458***
	(0.030)	(0.041)	(0.021)	(0.022)	(0.159)
Observations	6592	2902	5934	9495	6260
R-squared	0.103	0.111	0.043	0.157	0.085
Sample Mean	0.775	0.588	0.0512	0.361	3.910
Men					
Gay	0.006	−0.002	−0.005	−0.016	−0.558***
	(0.031)	(0.035)	(0.012)	(0.024)	(0.181)
Bisexual	−0.132***	−0.134***	0.014	−0.015	−0.182
	(0.050)	(0.052)	(0.022)	(0.034)	(0.250)
Observations	6178	2359	5835	8539	6213
R-squared	0.089	0.125	0.034	0.223	0.101
Sample Mean	0.776	0.630	0.0425	0.514	4.858

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5
Sexual Orientation Discrimination and Violent Victimization May Be Mechanisms Underlying Sexual Orientation Differences in Financial Well-Being, SHED 2019–2022, adults aged 25–64.

	(1) Experienced discrimination based on sexual orientation in past 12 months	(2) Experienced discrimination based on gender in past 12 months	(3) Experienced discrimination based on race/ethnicity in past 12 months	(4) Experienced discrimination based on age in past 12 months	(5) Ever a victim of a violent crime
Women					
Lesbian	0.108***	0.039	−0.004	0.024	0.038
	(0.032)	(0.031)	(0.028)	(0.028)	(0.044)
Bisexual	0.064***	0.075***	0.014	0.048**	0.162***
	(0.018)	(0.022)	(0.018)	(0.019)	(0.039)
Observations	5792	5793	5794	5794	3668
R-squared	0.060	0.024	0.075	0.018	0.036
Sample Mean	0.0117	0.0543	0.0677	0.0390	0.106
Men					
Gay	0.098***	−0.003	−0.026*	0.002	0.036
	(0.020)	(0.008)	(0.014)	(0.011)	(0.031)
Bisexual	0.041*	0.006	−0.001	0.020	0.102*
	(0.021)	(0.015)	(0.021)	(0.019)	(0.055)
Observations	5703	5703	5703	5703	3913
R-squared	0.045	0.005	0.036	0.013	0.033
Sample Mean	0.0123	0.0209	0.0686	0.0273	0.0845

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

crime, which was only asked in one of the SHED survey waves during our sample period. Notably, we do estimate that bisexual women and men are significantly more likely to report being the victim of a violent crime, which matches prior public health evidence (Bender and Lauritsen, 2021).[19] Moreover, research shows that bisexual women are at increased risk of intimate partner violence and sexual violence (Walters et al. 2013), and there is also evidence that such violence is associated with worse economic outcomes (Tolman et al. 2011). Given the potentially long-lasting life course effects of violent victimization, the pattern in column 5 of Table 5 could constitute a mechanism through which sexual orientation is associated with increased financial insecurity.

5. Conclusion

We provide novel evidence on sexual orientation and overall financial well-being using new data from the 2019–22 Federal Reserve Board's Survey of Household Economics and Decisionmaking (SHED). These data allow us to examine a wide array of current and future financial outcomes that have not been studied in prior work, including: credit card debt, schooling debt, retirement savings, access to an emergency fund, use of alternative financial services such as payday loans, and overall ability to manage financially.

We document several new facts that complement existing literature on sexual orientation and labor market differentials. Our main finding is that sexual minorities are significantly more likely to experience difficulty managing financially than otherwise similar heterosexual individuals. These differences are concentrated among bisexual men and women and are large in magnitude, on the order of 11–13 percentage points. When we explore specific financial outcomes, we find that the overall financial precarity experienced by sexual minorities is widespread and not limited to bisexual individuals. While we do find that bisexual people are more likely to have student loan debt and credit card debt, are more likely to have used alternative financial services, and are less likely to have rainy-day funds or to think their retirement savings are on track, we also find that gay men and lesbian women are both significantly more likely to have credit card debts and are less likely to have access to a rainy day fund. We also find that lesbian women are significantly less likely to think their retirement savings are on track relative to heterosexual women and that gay men are significantly more likely to have student loan debt than similarly situated heterosexual men. We also find that these differences in financial precarity pre-dated the COVID-19 pandemic and that they are observed throughout the education distribution.

When we examine mechanisms, we do not find that differences in access to romantic partners or parental financial help explain these differences. Nor do we find that differences in financial knowledge or risk tolerance can account for the higher likelihood of financial insecurity experienced by sexual minorities. Instead, we find that sexual minorities are significantly more likely to report sexual orientation based discrimination than similarly situated heterosexual individuals, and we also find that bisexual men and women are significantly more likely to report ever having experienced violent victimization than heterosexual people.

Our research suggests that a comprehensive picture of sexual minority well-being should take into account more than labor market earnings. Future research may complement our results by using administrative data to examine whether our survey data-based patterns replicate and whether the relationships we identify here are observed in other countries or are related to observable aspects of the policy environment, such as nondiscrimination policy.

Declaration of competing interest

Christopher S. Carpenter declarations of interest: None.
Kabir Dasgupta declarations of interest: None.
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[19] Appendix Tables A.11a and A.11b for women and men, respectively, show that if we control for these 'mechanism' variables directly, despite that they are clearly endogenous to the financial outcomes, it does not change the core finding that sexual minorities are less likely to be managing financially at least 'okay' or better. Because the SHED survey does not include all of the mechanism questions in all of the years, this exercise is limited by statistical power, but the overall pattern remains clear: even controlling directly for romantic partnership, access to parental resources, financial knowledge, willingness to take on financial risk, and violent victimization, it remains true that sexual minorities are more likely to report difficulty managing financially. Appendix Tables A.12a and A.12b for women and men, respectively, show that if we control for the discrimination variables directly in the same spirit as in Appendix Tables A.11a and A.11b our core findings are similarly not sensitive: we continue to find that bisexual women are significantly less likely to be managing financially at least 'okay' relative to similarly situated heterosexual women. Moreover, Appendix Tables A.12a and A.12b show that the experiences of discrimination are predictably and significantly negatively related to the ability to manage financially at least 'okay' in the full sample. These patterns, like those in Appendix Tables A.11a and A.11b, provide useful descriptive evidence for understanding the implications of the results in Table 5.

Appendix

Table A.1
Descriptive statistics, SHED 2019–2022, weighted, all adults (18+).

	Lesbian women	Bisexual women	Heterosexual women	Gay men	Bisexual men	Heterosexual men
25–34 years old	0.269 (0.029) [c]	0.421 (0.020) [c]	0.171 (0.004)	0.233 (0.020) [c]	0.324 (0.032) [c]	0.178 (0.004)
55–64 years old	0.180 (0.023)	0.037 (0.008) [c]	0.204 (0.004)	0.204 (0.018)	0.156 (0.021)	0.179 (0.004)
White, non-Hispanic	0.576 (0.032) [b]	0.616 (0.021)	0.649 (0.005)	0.612 (0.025) [a]	0.670 (0.033)	0.655 (0.005)
Black, non-Hispanic	0.141 (0.024)	0.118 (0.015)	0.128 (0.003)	0.078 (0.012) [a]	0.079 (0.019)	0.101 (0.003)
Asian, non-Hispanic	0.022 (0.010) [c]	0.024 (0.007) [c]	0.053 (0.003)	0.047 (0.012)	0.009 (0.006) [c]	0.051 (0.003)
Other race, non-Hispanic	0.057 (0.015) [b]	0.048 (0.009) [b]	0.026 (0.002)	0.041 (0.012)	0.026 (0.008)	0.026 (0.002)
Hispanic	0.203 (0.027) [b]	0.193 (0.019) [c]	0.144 (0.004)	0.221 (0.023) [b]	0.215 (0.031)	0.167 (0.005)
Married or Living w/partner	0.566 (0.032) [c]	0.534 (0.021) [c]	0.667 (0.004)	0.471 (0.024) [c]	0.464 (0.033) [c]	0.708 (0.005)
Has children in the household	0.122 (0.022) [c]	0.293 (0.019)	0.279 (0.004)	0.040 (0.009) [c]	0.100 (0.020) [c]	0.244 (0.005)
High school degree or less	0.179 (0.026) [c]	0.203 (0.019) [c]	0.255 (0.004)	0.199 (0.022) [c]	0.258 (0.034)	0.286 (0.005)
Some college, no Associate's degree	0.307 (0.030) [a]	0.326 (0.020) [c]	0.258 (0.004)	0.274 (0.023)	0.297 (0.030)	0.265 (0.005)
Associate's degree	0.080 (0.017)	0.105 (0.013)	0.096 (0.003)	0.083 (0.013)	0.102 (0.018)	0.084 (0.003)
Bachelor's degree	0.183 (0.023) [a]	0.254 (0.017) [a]	0.225 (0.004)	0.253 (0.019) [b]	0.218 (0.024)	0.208 (0.004)
Master's or Professional degree	0.221 (0.025) [c]	0.096 (0.011) [c]	0.149 (0.003)	0.167 (0.016) [b]	0.110 (0.017)	0.133 (0.003)
Doctoral degree (PhD/MD)	0.029 (0.010)	0.017 (0.005)	0.017 (0.001)	0.025 (0.006)	0.015 (0.006)	0.024 (0.001)
Mother's years of education	13.581 (2.477) [c]	13.683 (2.512) [c]	12.826 (2.253)	13.347 (2.533) [c]	13.451 (2.570) [c]	12.942 (2.280)
Father's years of education	13.360 (2.497) [c]	13.672 (2.556) [c]	12.967 (2.503)	13.375 (2.586) [c]	13.569 (2.505) [c]	13.034 (2.501)
Owns a home	0.527 (0.032) [c]	0.320 (0.019) [c]	0.682 (0.004)	0.524 (0.024) [c]	0.423 (0.032) [c]	0.674 (0.005)
Managing financially at least 'okay'	0.704 (0.030) [a]	0.605 (0.020) [c]	0.755 (0.004)	0.758 (0.021)	0.631 (0.034) [c]	0.770 (0.005)
Has any student loan debt	0.267 (0.028) [c]	0.325 (0.019) [c]	0.162 (0.003)	0.230 (0.020) [c]	0.223 (0.027) [c]	0.123 (0.003)
Has any credit card debt	0.475 (0.034)	0.492 (0.024) [c]	0.423 (0.005)	0.452 (0.026) [c]	0.443 (0.036) [a]	0.374 (0.005)
Retirement savings on track	0.252 (0.031) [c]	0.165 (0.015) [c]	0.350 (0.005)	0.367 (0.025)	0.241 (0.03) [c]	0.383 (0.006)
Has 3-month rainy day fund	0.453 (0.031) [c]	0.379 (0.02) [c]	0.555 (0.005)	0.518 (0.024) [c]	0.480 (0.033) [c]	0.585 (0.005)
Used alternative financial services, past year	0.232 (0.028)	0.328 (0.02) [c]	0.197 (0.004)	0.188 (0.020)	0.278 (0.031) [c]	0.179 (0.004)
Parents provide financial help	0.095 (0.028) [a]	0.130 (0.019) [c]	0.045 (0.003)	0.042 (0.011)	0.079 (0.024)	0.042 (0.003)
Perfect financial quiz score	0.383 (0.030)	0.339 (0.020) [a]	0.376 (0.004)	0.532 (0.024)	0.478 (0.033)	0.523 (0.005)
Willingness to take financial risk (of 10)	3.822 (2.496)	3.427 (2.489) [b]	3.783 (2.575)	4.411 (2.821) [b]	4.571 (2.739)	4.715 (2.696)
Experienced LGB discrimination	0.129 (0.028) [c]	0.081 (0.016) [c]	0.005 (0.001)	0.101 (0.018) [c]	0.058 (0.020) [c]	0.005 (0.001)
Ever victim of violent crime	0.146 (0.039)	0.237 (0.032) [c]	0.088 (0.004)	0.126 (0.028) [a]	0.184 (0.049) [b]	0.072 (0.004)
N (2019–2022)	287	677	13,557	578	308	12,580

Notes: Authors' calculations. The descriptive statistics are calculated using survey weights. The availability of the above variables may vary across survey years considered in our analysis (2019–2022). The sample size refers to maximum sample of individuals of each sexual orientation between ages 25–64 from 2019 to 2022.[ab,c] indicate significant difference from heterosexual individuals at $p < 0.10$; $p < 0.05$; $p < 0.01$, respectively.

Table A.2
SHED data produce same patterns as prior literature regarding homeownership, SHED 2019–2022, adults aged 25–64.

	(1)
	Owns a home
Women	
Lesbian	−0.065**
	(0.033)
Bisexual	−0.118***
	(0.024)
Observations	9488
R-squared	0.267
Sample Mean	0.650
Men	
Gay	−0.079***
	(0.024)
Bisexual	−0.123***
	(0.034)
Observations	8534
R-squared	0.262
Sample Mean	0.645
Year FE	YES
Demographic controls	YES
Census division FE	YES

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.3
Expanded set of coefficients from Table 2, column 3, SHED 2019–2022, adults aged 25–64, outcome is managing financially at least 'Okay'.

	(1) Men	(2) Women
Gay or Lesbian	0.001	−0.041
	(0.023)	(0.033)
Bisexual	−0.130***	−0.112***
	(0.036)	(0.024)
Black, non-Hispanic	−0.060***	−0.060***
	(0.021)	(0.016)
Hispanic	−0.041**	−0.043***
	(0.018)	(0.016)
Asian, non-Hispanic	0.009	0.015
	(0.023)	(0.021)
Other race, non-Hispanic	−0.152***	−0.041
	(0.041)	(0.034)
Some college, no associate degree	0.108***	0.063***
	(0.018)	(0.016)
Associate Degree	0.177***	0.124***
	(0.021)	(0.019)
Bachelor's Degree	0.267***	0.271***
	(0.016)	(0.014)
Master's or Professional Degree	0.286***	0.316***
	(0.017)	(0.015)
Doctoral Degree	0.330***	0.286***
	(0.021)	(0.029)
Currently enrolled in school	−0.067***	−0.067***
	(0.026)	(0.021)
Age 25–34	0.006	0.016
	(0.016)	(0.014)
Age 45–54	−0.011	0.041***
	(0.016)	(0.014)
Age 55–64	0.040***	0.093***
	(0.014)	(0.013)
Married or living with spouse/partner	0.104***	0.150***
	(0.013)	(0.011)

(*continued on next page*)

Table A.3 (*continued*)

	(1) Men	(2) Women
Observations	8537	9494
R-squared	0.113	0.132
Year FE	YES	YES
Census division FE	YES	YES
Sample Mean	0.734	0.722

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.4
Associations with finding it difficult to get by and 'living comfortably'.

	Finding it difficult to get by	Managing financially at least 'okay'	Living Comfortably
Women			
Lesbian	0.023	−0.041	−0.049
	(0.023)	(0.033)	(0.030)
Bisexual	0.064***	−0.112***	−0.074***
	(0.018)	(0.024)	(0.021)
Observations	9494	9494	9494
R-squared	0.048	0.132	0.129
Sample mean	0.082	0.722	0.327
Men			
Gay	0.009	0.001	0.002
	(0.015)	(0.023)	(0.023)
Bisexual	0.011	−0.130***	−0.093***
	(0.022)	(0.036)	(0.028)
Observations	8537	8537	8537
R-squared	0.047	0.113	0.105
Sample mean	0.073	0.734	0.331
Year FE	YES	YES	YES
Demographic controls	YES	YES	YES
Census division FE	YES	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.5
Robustness to using probit, outcome is 'managing financially at least okay'.

	OLS	Probit results
Women		
Lesbian	−0.041	−0.037
	(0.033)	(0.033)
Bisexual	−0.112***	−0.107***
	(0.024)	(0.023)
Observations	9494	9494
Sample mean	0.722	0.722
Men		
Gay	0.001	−0.001
	(0.023)	(0.022)
Bisexual	−0.130***	−0.124***
	(0.036)	(0.035)
Observations	8537	8537
Sample mean	0.734	0.734
Year FE	YES	YES
Demographic controls	YES	YES
Census division FE	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.6
Sexual orientation difference in ability to manage financially pre-dated COVID pandemic, SHED 2019–2022, adults aged 25–64.

	(1) Managing Financially at least 'Okay', Pre-pandemic (2019)	(2) Managing Financially at least 'Okay', Pandemic + Aftermath (2020–2022)
Women		
Lesbian	0.016	−0.052
	(0.084)	(0.035)
Bisexual	−0.113*	−0.113***
	(0.063)	(0.026)

(*continued on next page*)

Table A.6 (*continued*)

	(1) Managing Financially at least 'Okay', Pre-pandemic (2019)	(2) Managing Financially at least 'Okay', Pandemic + Aftermath (2020–2022)
Observations	1937	7557
R-squared	0.136	0.132
Sample Mean	0.702	0.727
Men		
Gay	−0.059	0.008
	(0.064)	(0.025)
Bisexual	−0.263***	−0.109***
	(0.093)	(0.039)
Observations	1500	7037
R-squared	0.128	0.116
Sample Mean	0.711	0.739
Year FE	YES	YES
Demographic controls	YES	YES
Census division FE	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.7
Sexual minorities' financial insecurity is observed throughout the education distribution, SHED 2019–2022, adults aged 25–64.

	(1) Sample is Individuals with High School Degree or Less	(2) Sample is Individuals with Some College, but less than a Bachelor's degree (include Associate degree and vocational/technical degree holders here)	(3) Sample is Individuals with Bachelor's degree or more
Women			
Lesbian	0.046	−0.086	−0.031
	(0.094)	(0.063)	(0.035)
Bisexual	−0.080	−0.081**	−0.152***
	(0.070)	(0.040)	(0.031)
Observations	1910	3328	4256
R-squared	0.075	0.065	0.054
Sample Mean	0.569	0.646	0.867
Men			
Gay	0.005	0.005	−0.004
	(0.068)	(0.042)	(0.023)
Bisexual	−0.220***	−0.173***	−0.001
	(0.074)	(0.064)	(0.038)
Observations	1562	2696	4279
R-squared	0.055	0.049	0.029
Sample Mean	0.572	0.706	0.876
Year FE	YES	YES	YES
Demographic controls	YES	YES	YES
Census division FE	YES	YES	YES

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.8
Regional differences in the relationship between sexual orientation and managing financially at least 'Okay', SHED 2019–2022, adults aged 25–64.

	(1) West	(2) Midwest	(3) South	(4) Northeast
Women				
Lesbian	−0.019	−0.042	−0.107**	0.153**
	(0.066)	(0.061)	(0.054)	(0.070)
Bisexual	−0.062	−0.171***	−0.124***	−0.088
	(0.047)	(0.051)	(0.041)	(0.062)
Observations	2114	2285	3507	1588
R-squared	0.136	0.146	0.149	0.098
Sample Mean	0.725	0.747	0.707	0.723
Men				
Gay	0.000	0.031	−0.040	0.056

(*continued on next page*)

Table A.8 (*continued*)

	(1) West	(2) Midwest	(3) South	(4) Northeast
	(0.046)	(0.048)	(0.039)	(0.054)
Bisexual	−0.172**	−0.046	−0.183***	−0.081
	(0.075)	(0.079)	(0.059)	(0.075)
Observations	1954	2113	2996	1474
R-squared	0.125	0.122	0.109	0.132
Sample Mean	0.728	0.777	0.710	0.740
Year FE	YES	YES	YES	YES
Demographic controls	YES	YES	YES	YES
Census division FE	NO	NO	NO	NO

Notes: See notes to Table 2. Specification is Table 2 Column 3. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.9
Results by MSA status, outcome is managing financially at least 'Okay'.

	(1) Managing financially at least 'okay', sample living in a Metropolitan Statistical Area	(2) Managing financially at least 'okay', sample outside a Metropolitan Statistical Area
Women		
Lesbian	-0.054	0.093
	(0.034)	(0.107)
Bisexual	-0.103***	-0.179**
	(0.025)	(0.074)
Observations	8,138	1,356
R-squared	0.128	0.165
Sample mean	0.731	0.667
Men		
Gay	0.007	-0.094
	(0.024)	(0.097)
Bisexual	-0.128***	-0.173*
	(0.039)	(0.102)
Observations	7,452	1,085
R-squared	0.113	0.098
Sample mean	0.746	0.657

See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table A.10
Results by presence of children, outcome is managing financially at least 'Okay'.

	Managing financially at least 'okay', sample with no children present	Managing financially at least 'okay', sample with children present
Women		
Lesbian	−0.072**	0.064
	(0.036)	(0.080)
Bisexual	−0.091***	−0.161***
	(0.029)	(0.043)
Observations	6193	3249
R-squared	0.124	0.153
Sample mean	0.737	0.696
Men		
Gay	−0.007	0.060
	(0.024)	(0.109)
Bisexual	−0.119***	−0.268***
	(0.039)	(0.103)
Observations	5810	2696
R-squared	0.127	0.112
Sample mean	0.731	0.741
Year FE	YES	YES
Demographic controls	YES	YES
Census division FE	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.11a
Controlling directly for the mechanisms in Table 4 does not change the core result that sexual minorities are significantly less likely to be managing financially at least 'Okay', SHED 2019–2022, women aged 25–64.

	(1) Managing financially at least 'okay'	(2) Managing financially at least 'okay'	(3) Managing financially at least 'okay'	(4) Managing financially at least 'okay'	(5) Managing financially at least 'okay'
Women					
Lesbian	−0.023	−0.042	−0.008	−0.013	0.023
	(0.041)	(0.033)	(0.039)	(0.054)	(0.079)
Bisexual	−0.074**	−0.113***	−0.129***	−0.108**	−0.082
	(0.032)	(0.024)	(0.031)	(0.045)	(0.061)
Receives financial assistance from parents	−0.291***				−0.233***
	(0.030)				(0.049)
Answered all financial quiz questions correctly		0.072***			0.076***
		(0.010)			(0.021)
Financial risk tolerance score			0.026***		0.025***
			(0.002)		(0.005)
Ever a victim of violence				−0.091***	−0.109***
				(0.027)	(0.036)
Observations	5930	9494	6259	3664	1917
R-squared	0.155	0.137	0.155	0.140	0.184
Sample Mean	0.723	0.722	0.741	0.720	0.702
Year FE	YES	YES	YES	YES	YES
Demographic controls	YES	YES	YES	YES	YES
Census division FE	YES	YES	YES	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.11b
Controlling directly for the mechanisms in Table 4 does not change the core result that sexual minorities are significantly less likely to be managing financially at least 'Okay', SHED 2019–2022, men aged 25–64.

	(1) Managing financially at least 'okay'	(2) Managing financially at least 'okay'	(3) Managing financially at least 'okay'	(4) Managing financially at least 'okay'	(5) Managing financially at least 'okay'
Men					
Gay	−0.054*	0.002	−0.022	−0.043	−0.042
	(0.029)	(0.023)	(0.027)	(0.036)	(0.062)
Bisexual	−0.070	−0.129***	−0.100**	−0.155***	−0.279***
	(0.045)	(0.036)	(0.043)	(0.054)	(0.089)
Receives financial assistance from parents	−0.318***				−0.212***
	(0.040)				(0.073)
Answered all financial quiz questions correctly		0.066***			0.031
		(0.012)			(0.030)
Financial risk tolerance score			0.030***		0.029***
			(0.003)		(0.005)
Ever a victim of violence				−0.064**	−0.089*
				(0.032)	(0.051)
Observations	5832	8537	6213	3913	1492
R-squared	0.134	0.118	0.160	0.124	0.176
Sample Mean	0.742	0.734	0.759	0.753	0.714
Year FE	YES	YES	YES	YES	YES
Demographic controls	YES	YES	YES	YES	YES
Census division FE	YES	YES	YES	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.12a
Controlling directly for experiences of discrimination does not change the core result that sexual minorities are significantly less likely to be managing financially at least 'Okay', SHED 2020–2022, women aged 25–64.

	(1) Managing financially at least 'okay'	(2) Managing financially at least 'okay'	(3) Managing financially at least 'okay'	(4) Managing financially at least 'okay'	(5) Managing financially at least 'okay'
Women					
Lesbian	−0.026	−0.034	−0.039	−0.035	−0.035
	(0.038)	(0.037)	(0.037)	(0.037)	(0.038)
Bisexual	−0.120***	−0.119***	−0.125***	−0.120***	−0.120***

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Table A.12a (*continued*)

	(1) Managing financially at least 'okay'	(2) Managing financially at least 'okay'	(3) Managing financially at least 'okay'	(4) Managing financially at least 'okay'	(5) Managing financially at least 'okay'
	(0.031)	(0.031)	(0.031)	(0.031)	(0.031)
Experienced discrimination: sexual orientation	−0.111				−0.008
	(0.070)				(0.075)
Experienced discrimination: gender		−0.105***			−0.025
		(0.028)			(0.035)
Experienced discrimination: race/ethnicity			−0.121***		−0.086***
			(0.027)		(0.030)
Experienced discrimination: age				−0.139***	−0.075*
				(0.032)	(0.041)
Observations	5791	5792	5793	5793	5791
R-squared	0.132	0.134	0.136	0.135	0.138
Sample Mean	0.748	0.748	0.748	0.748	0.748
Year FE	YES	YES	YES	YES	YES
Demographic controls	YES	YES	YES	YES	YES
Census division FE	YES	YES	YES	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.12b
Controlling directly for experiences of discrimination does not change the core result that sexual minorities are significantly less likely to be managing financially at least 'Okay', SHED 2020–2022, men aged 25–64.

	(1) Managing financially at least 'okay'	(2) Managing financially at least 'okay'	(3) Managing financially at least 'okay'	(4) Managing financially at least 'okay'	(5) Managing financially at least 'okay'
Men					
Gay	−0.023	−0.039	−0.043	−0.038	−0.037
	(0.030)	(0.029)	(0.029)	(0.029)	(0.030)
Bisexual	−0.059	−0.064	−0.066	−0.061	−0.061
	(0.041)	(0.041)	(0.042)	(0.041)	(0.041)
Experienced discrimination: sexual orientation	−0.160***				−0.045
	(0.056)				(0.064)
Experienced discrimination: gender		−0.190***			−0.036
		(0.048)			(0.061)
Experienced discrimination: race/ethnicity			−0.160***		−0.117***
			(0.030)		(0.034)
Experienced discrimination: age				−0.203***	−0.103**
				(0.044)	(0.051)
Observations	5701	5701	5701	5701	5701
R-squared	0.129	0.132	0.136	0.134	0.138
Sample Mean	0.757	0.757	0.757	0.757	0.757
Year FE	YES	YES	YES	YES	YES
Demographic controls	YES	YES	YES	YES	YES
Census division FE	YES	YES	YES	YES	YES

Notes: See notes to Table 2. Specification is Table 2 Column 4. Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Data availability

Data will be made available on request.

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