



HOW DOES DIVORCE AFFECT RETIREMENT SECURITY?

BY ALICIA H. MUNNELL, WENLIANG HOU, AND GEOFFREY T. SANZENBACHER*

Introduction

Divorce is disruptive, pervasive, and expensive. Although the divorce rate is no longer rising, about 40 percent of marriages will end in divorce. Divorcing couples must pay legal fees, split illiquid assets, and lose the economies of scale from having one instead of two households. These changes almost certainly inhibit each spouse's ability to save for retirement. The questions are: 1) how severely does divorce affect retirement readiness? and 2) how do the effects vary by household type?

To answer these questions, this *brief* investigates how divorce impacts the National Retirement Risk Index (NRRI). The NRRI is calculated by comparing households' projected replacement rates – retirement income as a percentage of pre-retirement income – with target replacement rates that would allow them to maintain their standard of living in retirement. These calculations are based on the Federal Reserve's triennial *Survey of Consumer Finances* (SCF), which uses a nationally representative sample of U.S. households. As of 2016, the NRRI showed that, even if households worked to age 65 and annuitized all their financial assets (including the proceeds from reverse mortgages on their homes), half of working-age households were "at risk."

The discussion proceeds as follows. The first section briefly describes the nuts and bolts of the NRRI. The second section discusses the many mechanisms through which divorce can affect a household's current and future finances. The third section uses regression analysis to explore the actual impacts. The final section concludes that, as expected, divorce substantially increases the likelihood of being at risk in retirement. The unexpected result is that the effects vary by type of household: large effects for divorced single men and couples with a previously divorced spouse, but no effect for divorced single women.

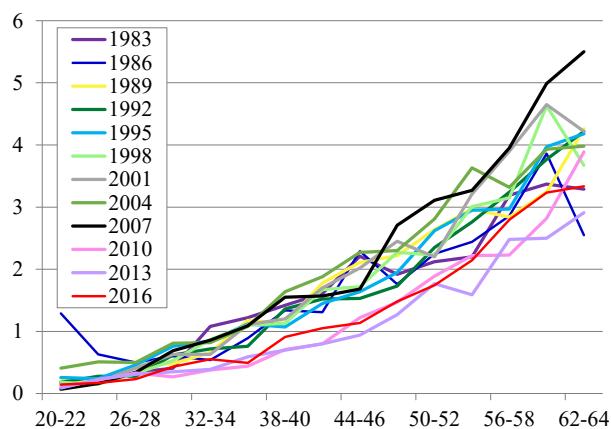
Nuts and Bolts of the NRRI

Calculating the NRRI involves three steps: 1) projecting a replacement rate for each household; 2) constructing a target replacement rate that would allow each household to maintain its pre-retirement standard of living in retirement; and 3) comparing the projected and target replacement rates to find the percentage of households "at risk."

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Retirement income at age 65, which is defined broadly to include all of the usual suspects plus housing, is derived by projecting the assets that each household will hold at retirement, based on the stable relationship between wealth-to-income ratios and age evident in the 1983-2016 SCFs. As shown in Figure 1, the wealth-to-income lines from each survey rest virtually on top of one another, bracketed by the 2007 values on the high side and the 2010-2016 values on the low side.

FIGURE 1. RATIO OF WEALTH TO INCOME BY AGE FROM THE SURVEY OF CONSUMER FINANCES, 1983-2016



Source: Authors' calculations based on U.S. Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (SCF) (1983-2016).

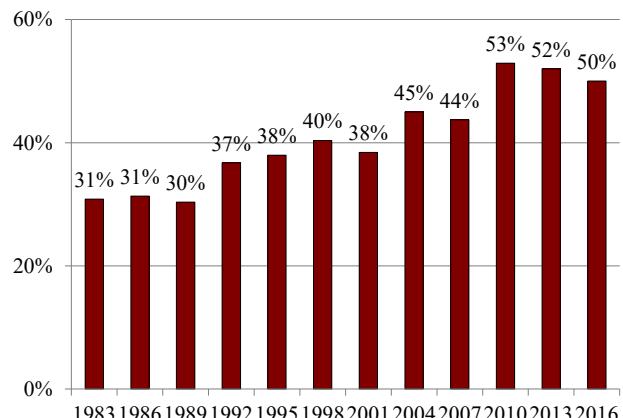
Sources of retirement income that are not derived from SCF-reported wealth are estimated directly. For defined benefit pension income, the projections are based on the amounts reported by survey respondents who have already retired. For Social Security, benefits are calculated directly based on estimated earnings histories for each member of the household.

A calculation of projected replacement rates also requires income *prior* to retirement, which is comprised of earnings, the returns on taxable financial assets, and imputed rent from housing. In essence, with regard to wealth, income in retirement equals the annuitized value of all financial and housing assets; income before retirement is simply the return on those same assets.¹ Average lifetime income then serves as the denominator for each household's replacement rate.

Determining the share of the population at risk requires comparing each household's projected replacement rate with its target rate. Target replacement rates are estimated for different types of households assuming that households spread their income so as to have the same level of consumption in retirement as they had before they retired. A household whose projected replacement rate falls more than 10 percent below its target is deemed at risk of having insufficient income to maintain its pre-retirement standard of living. The NRRI is simply the percentage of *all* households that fall more than 10 percent short of their target.

In 2016, the year of the most recent SCF, the overall share at risk was 50 percent – down slightly from 2013 (see Figure 2).

FIGURE 2. THE NATIONAL RETIREMENT RISK INDEX, 1983-2016



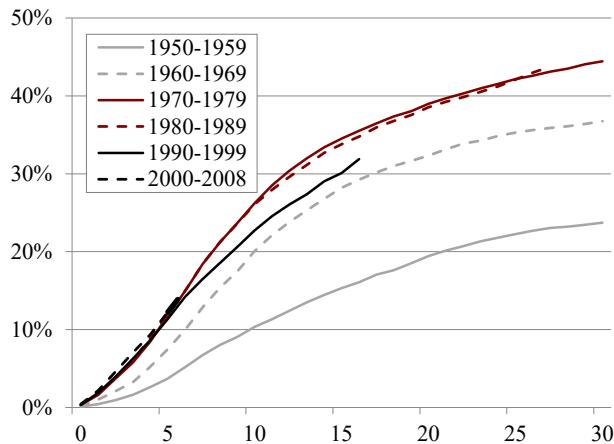
Source: Authors' calculations based on the SCF (1983-2016).

How Divorce Could Affect Retirement Wealth

Although divorce rates have declined recently, high rates in the past mean that a substantial share of today's adults have a history of divorce. As Figure 3 shows (on the next page), divorce rates rose substantially for those who were married in the 1960s and 1970s, before stabilizing in the 1980s, and then falling somewhat since then.² The duration of marriage for the typical couple who divorces or separates is about

seven years.³ Remarriage for divorced individuals is common; about 55 percent wed again.⁴ Even those who remarry, however, are likely hurt by divorce financially.⁵

FIGURE 3. FIRST MARRIAGES ENDING IN DIVORCE, BY YEAR OF MARRIAGE, 1950-2008



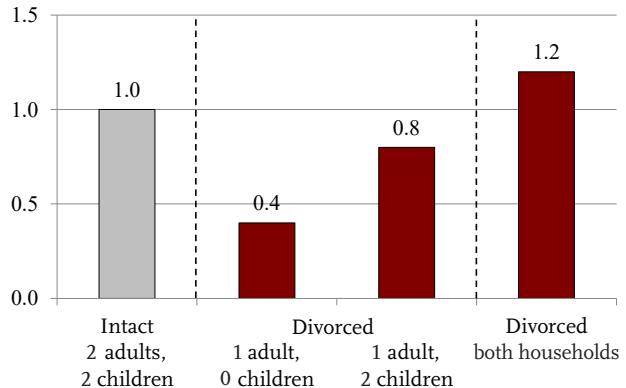
Source: Authors' calculations from the U.S. Census Bureau, *Survey of Income and Program Participation* (2001, 2004, 2008).

Given the prevalence of divorce, it is natural to wonder how much it impacts retirement security. Most immediately, divorce involves short-term expenses, such as legal fees, which directly reduce the couple's wealth. It also frequently results in the sale of the house, typically the family's largest asset, which not only involves transaction costs but also can occur at a suboptimal time in the housing market.

Divorce also requires that financial and retirement wealth be divided between two new households. If financial assets can be divided without being sold, divorce may not reduce total wealth. But if assets are sold, again, the timing may be bad, and sales can involve transaction costs. In contrast, the division of accruals under a defined benefit plan always results in the spouse receiving less wealth than if the marriage had stayed intact until the earner had retired (when earnings and accruals are at their peak).

Divorce also increases daily living expenses. Supporting two separate households costs more than living together under one roof (see Figure 4). Divorce can also be costly in terms of the federal income tax. If both spouses work but have different incomes, marriage provides a bonus because the tax brackets

FIGURE 4. RATIO OF INCOME REQUIRED TO SUPPORT INTACT AND DIVORCED HOUSEHOLDS (RELATIVE TO AN INTACT HOUSEHOLD)



Note: The figure uses a standard equivalency scale to estimate how much each household needs relative to an intact household. The scale is $(A + 0.7C)^{0.7}$ where A is the number of adults and C the number of children.

Source: Adapted from Citro and Michael (1995).

for married couples are wider than for single filers, allowing more of the household income to be taxed at lower rates (the reverse is true when spouses have similar incomes). Divorce prevents couples from enjoying this benefit.

In addition, the majority of women in the United States remain the primary child caregivers following divorce and often are the principal financial contributors for their children. Caregiving can impede the wife's ability to earn, while the presence of children increases the household's costs. These factors together make it difficult for the wife to save. The exception may be where the wife retains the couple's home and saves for retirement by paying down the mortgage.

At the same time, men often end up providing financial support to their ex-spouse and children, while also paying the bills for a new family. While such support obviously benefits the ex-spouse, these transfers permanently reduce the man's total income, which likely leads to lower savings.

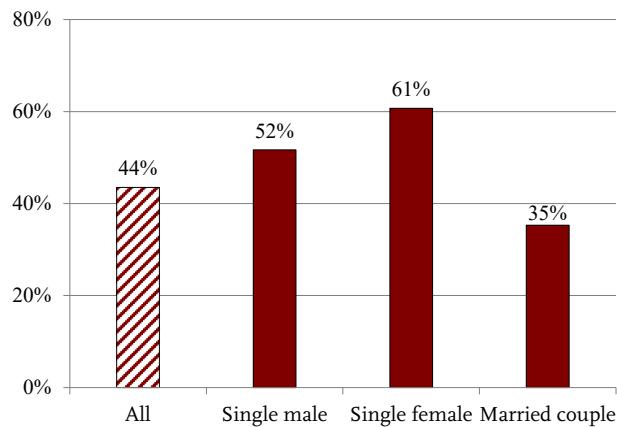
Finally, with the breakup of the marriage, each spouse may find that their line of credit is reduced – that is, what they were able to borrow as a couple may not be available to either separately. This restriction is more likely to affect the lower-income individual, but it may also reduce access to mortgage markets for both spouses.

In short, divorce is expected to adversely affect retirement readiness.⁶ The question is the magnitude of that effect and how it varies by household type.

Divorce and the NRRI

As discussed earlier, the NRRI is based on data from the *Survey of Consumer Finances*, which asks not only about current marital status but also whether the individual or each spouse in a couple has been married before. For the sample of SCF households included in the NRRI, which covers the 30-59 age range, 44 percent had a previous divorce (see Figure 5). The highest rate of divorce is among single women and the lowest among those currently married.

FIGURE 5. PERCENTAGE OF HOUSEHOLDS WITH A PREVIOUS DIVORCE, AGES 30-59, 2016



Source: Authors' calculations from the SCF (2016).

Tables 1 and 2 show that the percentage of households that have experienced divorce rises with increasing age and falls with increasing income.

TABLE 1. PERCENTAGE OF HOUSEHOLDS WITH A PREVIOUS DIVORCE, BY AGE GROUP, 2016

Age group	Percentage with divorce
All	44%
30-39	27
40-49	46
50-59	55

Source: Authors' calculations from the SCF (2016).

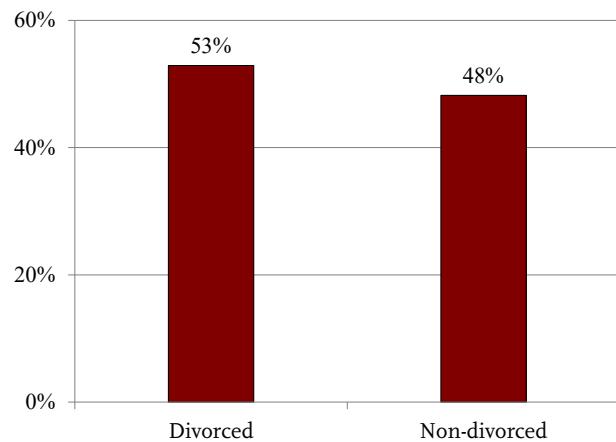
TABLE 2. PERCENTAGE OF HOUSEHOLDS WITH A PREVIOUS DIVORCE, BY INCOME GROUP, 2016

Income group	Percentage with divorce
All	44%
Low income	50
Middle income	46
High income	35

Source: Authors' calculations from the SCF (2016).

The SCF data show that both wealth and earnings are lower for households with a previous divorce than for those without one. For example, the average net financial wealth of non-divorced households is \$132,000, about 30 percent higher than the \$101,000 held by divorced households. This worse economic profile carries over to the NRRI, which shows that 53 percent of households that have gone through a divorce are at risk in retirement compared to 48 percent for households without a divorce (see Figure 6).

FIGURE 6. NRRI FOR HOUSEHOLDS WITH AND WITHOUT A PREVIOUS DIVORCE, 2016



Source: Authors' calculations.

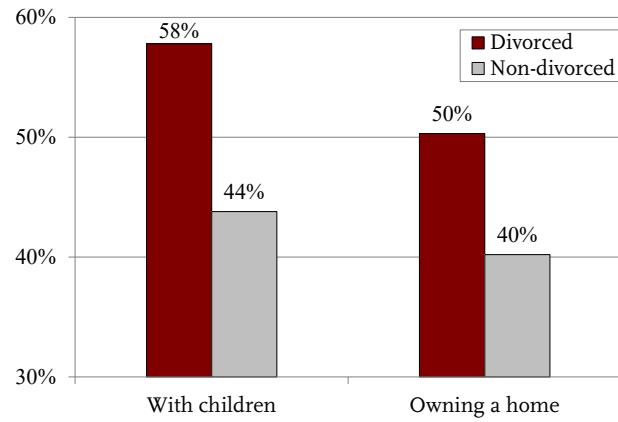
This simple difference in risk status between households with and without divorce could inaccurately portray its impact on retirement readiness. For example, if divorces were concentrated among older – and therefore higher earning – households, failure to control for age would cause the true effect of divorce to be *larger* than is shown in Figure 6. To isolate

the impact of divorce from these other factors, we estimate a regression equation for the probability of being at risk that controls for the household's income group, age group, level of education, retirement plan coverage and – in the case of couples – whether the household had one or two earners. An equation was estimated for the NRRI sample as a whole and for single men, single women, and couples separately.

The results show that, controlling for other factors, the overall impact of divorce on being at risk is 7 percentage points, which is larger than the 5 percentage points resulting from the simple comparison of households with and without divorce (see Figure 7). More interesting, however, is the variation in impact among the different types of households. Couples with a previously divorced spouse are associated with an additional 9-percentage-point increase in the NRRI and single men with a 6-percentage-point increase, while the impact on single women is not statistically significant (see Appendix A for the full results).⁷

The results for single women are surprising, but they are consistent with prior research and can be explained by looking at the underlying data.⁸ Divorced single women differ significantly from non-divorced single women on two key dimensions, and these dimensions have offsetting financial implications (see Figure 8). On the one hand, divorced women are more likely to have children, and children represent a financial responsibility that reduces the ability to

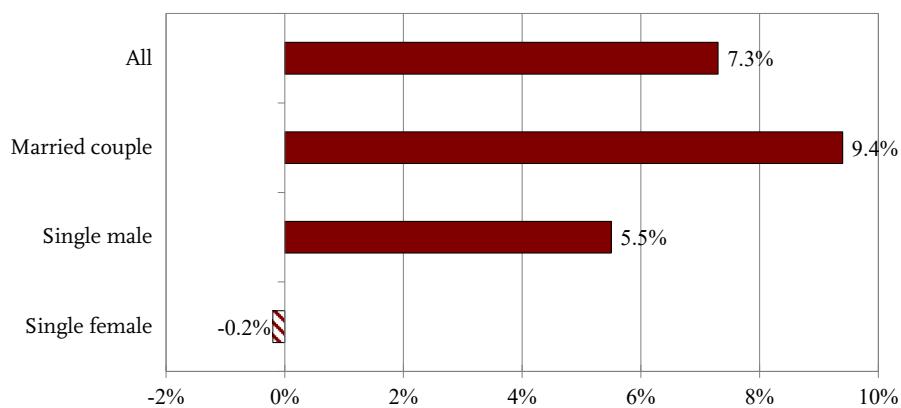
FIGURE 8. PERCENTAGE OF SINGLE WOMEN WHO HAVE CHILDREN AND WHO OWN A HOME, WITH AND WITHOUT A PREVIOUS DIVORCE, 2016



Source: Authors' calculations from SCF (2016).

save for retirement.⁹ On the other hand, divorced single women are more likely than those not divorced to own a house – an asset that serves as a base for a reverse mortgage in the NRRI, thereby enhancing retirement resources.¹⁰ The results suggest that these two differences between divorced and non-divorced single women may roughly offset one another, resulting in no overall difference in retirement readiness.

FIGURE 7. ESTIMATED EFFECTS OF A PREVIOUS DIVORCE ON RETIREMENT RISK BY HOUSEHOLD TYPE, 2016



Note: Solid bars are statistically significant at least at the 5-percent level.

Source: Authors' calculations.

Conclusion

Divorce hurts people's finances in many ways. This damage is reflected in the status of divorced households in the National Retirement Risk Index. Controlling for other factors, the share at risk is 7 percentage points higher for the divorced households than for those who have never experienced divorce. To get a sense of whether that amount is big or small, consider that the Great Recession increased the NRRI by 9 percentage points. So the impact of divorce is quite substantial.

The most interesting finding is that not all household types are equally affected. While couples with a previously divorced spouse and divorced single men are clearly worse off than their non-divorced counterparts, divorced single women do not appear disadvantaged relative to other single women. The explanation appears to be that divorce leaves single women with two offsetting things – children, who are costly to raise, and the house, which provides a means for accumulating home equity.

Overall, given the harmful financial effects of divorce, the good news is that divorce rates appear to be declining.

Endnotes

1 For the measures of retirement income and pre-retirement income, both mortgage debt and non-mortgage debt are subtracted from the appropriate income components.

2 This broad trend is also explored by Wolfers (2014), Miller (2014), and Stevenson and Wolfers (2007).

3 Kreider and Ellis (2011).

4 Livingston, Parker, and Rohal (2014).

5 Holden and Kuo (1996) find that couples with a previously divorced individual have lower assets than couples in first marriages. Wilmoth and Koso (2002) confirm this general finding, but their results indicate that remarriage offsets a large portion of the negative effects that divorce has on wealth.

6 Fethke (1989) concludes that divorce is likely to significantly undermine retirement security by disrupting savings and depleting existing assets.

7 These results could potentially be affected by the treatment of alimony and Social Security spousal/survivor benefits, but in both cases the amounts involved are very small.

Alimony accounts for less than 1 percent of aggregate adjusted gross income each year and is typically a time-limited obligation. So, for the payer (generally the man because he tends to be the higher earner), this obligation may not continue into retirement. In this case, the man does not need to replace as much of his pre-retirement income to maintain his living standard as assumed by the NRRI, so his at-risk status may be slightly overstated. For the payee (generally the woman), alimony is treated just like earnings or any other form of pre-retirement income that needs to be replaced in retirement; thus, in this regard, the NRRI accurately reflects her at-risk status.

On the other hand, excluding Social Security spousal and survivor benefits could overstate the at-risk status for divorced women. In the NRRI, a single divorced woman is assumed to receive a benefit based solely on her own work history. However, if the woman's marriage lasted 10 years or more, she is eligible to receive spousal and survivor benefits based on her ex-husband's earnings record. If this latter benefit is higher than her worker benefit, she would get the higher amount. This situation is relatively rare; such women make up only about 1 percent of Social Security beneficiaries, so any effect on the NRRI would be very small.

8 This finding is consistent with Yamokoski and Keister (2006), which finds that divorced single women have higher net wealth than never-married women, especially among single women with children.

9 In a previous NRRI analysis, Munnell, Hou, and Sanzenbacher (2017) find that children reduce household wealth and moderately increase the likelihood of retirement risk for older working households.

10 While, as noted, only a small number of individuals receive alimony, those who do receive it will be helped in the future by the changing tax treatment of alimony payments. Under the traditional treatment, alimony is deductible for the payer and included as income by the payee. Under the 2017 Tax Cuts and Jobs Act, for new divorce agreements beginning in 2019, alimony will no longer be deductible for the payer and, thus, will not be counted as income for the payee.

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APPENDIX

TABLE A1. ESTIMATED EFFECTS OF DIVORCE AND OTHER FACTORS ON RETIREMENT RISK BY HOUSEHOLD TYPE

Type	All	Married couple	Single men	Single women
<i>Household</i>				
Divorced	0.073*** (0.008)	0.094*** (0.010)	0.055** (0.022)	-0.002 (0.017)
Two-earner	0.149*** (0.009)	0.209*** (0.016)		
<i>Age group</i>				
40-49	-0.043*** (0.009)	-0.033*** (0.011)	0.045* (0.027)	-0.123*** (0.022)
50-59	-0.095*** (0.009)	-0.077*** (0.011)	-0.043 (0.027)	-0.170*** (0.021)
<i>Income group</i>				
Middle	0.035*** (0.010)	-0.006 (0.014)	0.055** (0.024)	0.035* (0.020)
<i>Education</i>				
High	-0.080*** (0.012)	-0.102*** (0.015)	-0.092*** (0.033)	-0.004 (0.031)
High school	-0.044*** (0.010)	-0.065*** (0.012)	-0.088*** (0.027)	0.040* (0.022)
College	-0.074*** (0.013)	-0.128*** (0.015)	0.126*** (0.041)	0.023 (0.030)
DB plan	-0.377*** (0.010)	-0.365*** (0.011)	-0.344*** (0.027)	-0.463*** (0.023)
DC plan	-0.140*** (0.008)	-0.164*** (0.010)	-0.173*** (0.023)	-0.033* (0.018)
Constant	0.598*** (0.009)	0.567*** (0.017)	0.548*** (0.022)	0.655*** (0.019)
Observations	15,484	10,135	2,153	3,196
R-squared	0.156	0.185	0.126	0.153

Notes: Standard errors are in parentheses. Statistically significant at 10-percent (*), 5-percent (**), or 1-percent level (***)
Source: Authors' calculations.

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