

Spending Patterns of Older Households

By Zahra Ebrahimi, Ph.D., Employee Benefit Research Institute

AT A GLANCE

Using the Health and Retirement Study (HRS) 2014 and the Consumption and Activities Mail Survey (CAMS) 2015, we examine total spending and its components based on marital and retirement status. We also closely analyze the gap between total spending and total income as defined in the HRS.

- Overall, 59 percent of the sample spent less than their income; 41 percent spent more than their income in 2015.
- For single and retired individuals in 2015, average spending was \$5,000 lower than income; however, median spending was higher than median income by \$3,000.
- Coupled households where both spouses were retired on average spent 80 percent of their income in 2015; married couples with at least one spouse in the labor force had the lowest spending-to-income ratio with an average of 45 percent.
- The single, retired cohort had the highest spending-to-income ratio, with an average of 86 percent. However, their median spending-to-income ratio was very high at 112 percent.
- As many income replacement approaches assume, our findings support a reduction in housing and transportation expenses for retirees relative to those in the labor force. However, food costs and health expenses were higher for retirees. These observations could merit a different approach for measuring retirement income adequacy as well as further research where a longitudinal analysis is used to assess the changes in spending allocations before and after retirement.
- For a single and retired individual in 2015, average income was \$21,000 higher for those with regular pension/annuity income compared with those without a pension, while the average total expenditure was \$9,000 greater, which was largely driven by a higher share of entertainment and other (gifts and contributions) expenses in total spending.
- Married and retired households with pension income, on average, had \$16,000 more income than those without pension income; total expenditure was \$10,000 more, largely driven by higher dollar-amount spending on the housing, entertainment, and other (gifts and contributions) categories.
- While almost 34 percent of households with regular pension/annuity income spent more than their income, 46 percent of households without regular pension/annuity income spent more than their total income in 2015.
- Having an IRA or pension account is correlated with surpluses: 71 percent of households with a surplus had IRAs or pension accounts, vs. 52 percent with a deficit.

- In addition, account holders with a surplus were less likely to make irregular withdrawals from their account (28 percent) vs. those with a deficit (42 percent).
- The probability of having a deficit has a positive correlation with catastrophic medical expenses. For instance, of those who spent 20 percent or more of their income on medical expenses, 85 percent experienced a budget deficit. In comparison, of those who spent 5 percent or less of their income on health-related costs, only 20 percent experienced a deficit.

Zahra Ebrahimi is a research associate at the Employee Benefit Research Institute (EBRI). This *Issue Brief* was written with assistance from the Institute’s research and editorial staffs. Any views expressed in this report are those of the author and should not be ascribed to the officers, trustees, or other sponsors of EBRI, Employee Benefit Research Institute-Education and Research Fund (EBRI-ERF), or their staffs. Neither EBRI nor EBRI-ERF lobbies or takes positions on specific policy proposals. EBRI invites comment on this research.

Suggested Citation: Zahra Ebrahimi. "Spending Patterns of Older Households," *EBRI Issue Brief*, no. 480 (Employee Benefit Research Institute, May 2, 2019).

Copyright Information: This report is copyrighted by the Employee Benefit Research Institute (EBRI). You may copy, print, or download this report solely for personal and noncommercial use, provided that all hard copies retain any and all copyright and other applicable notices contained therein, and you may cite or quote small portions of the report provided that you do so verbatim and with proper citation. Any use beyond the scope of the foregoing requires EBRI’s prior express permission. For permissions, please contact EBRI at permissions@ebri.org.

Report Availability: This report is available on the internet at www.ebri.org

Table of Contents

Introduction	5
Data	5
Who Is in the Data?.....	5
What Is Included in Total Income?	7
Total Spending	7
Budget Surplus vs. Budget Deficit	12
Income and Expenditure of Households With Budget Deficits	13
Demographic Differences	14
Does Regular Pension/Annuity Income Make a Difference?	15
What About Irregular Pension/IRA Withdrawal?	16
Wealth and Budget Deficit (Surplus)	16
Out-of-Pocket Medical Expenditure and Budget Deficits	19
Conclusion	20
References.....	21
Appendix I: Pension/Annuity Income in HRS.....	22

Figures

Figure 1, Sample, by Gender, Age, and Education, 2015.....	6
Figure 2, Average (Median) Income and Expenditure, by Marital and Retirement Status, 2015	8
Figure 3A, Average Expenditure of Retirees by Marital Status, Pension, and Wealth, 2015	10
Figure 3B, Median Expenditure of Retirees by Marital Status, Pension, and Wealth, 2015	11
Figure 4, Income Remaining After Expenditure, 2015	12
Figure 5A, Average Income and Expenditure by Spending Behavior, 2015	13

Figure 5B, Median Income and Expenditure by Spending Behavior, 2015	14
Figure 6, Income Remaining After Expenditure, by Marital and Retirement Status, 2015	14
Figure 7, Income Remaining After Expenditure, by Regular Pension/Annuity Income, 2015	15
Figure 8, Percentage in Budget Deficit, by Total and Regular Pension Income, 2015.....	16
Figure 9A, Percentage With IRA/Pension Account by Spending Behavior, 2015.....	17
Figure 9B, Percentage of Account Holders With Irregular Withdrawals by Spending Behavior, 2015	17
Figure 9C, Irregular Withdrawal Amount by Spending Behavior, 2015.....	17
Figure 10, Spending Behavior, by Wealth Quartile, 2015.....	18
Figure 11, Change in Average Wealth, by Spending Behavior, 2012–2014.....	19
Figure 12, Spending Behavior, by Percentage of Total Income Spent on Medical Expenses, 2015	20

Spending Patterns of Older Households

By Zahra Ebrahimi, Ph.D., Employee Benefit Research Institute

Introduction

Understanding spending patterns of the elderly is a key but often overlooked part in assessing financial security in retirement and later life. While significant attention is paid to retirement savings adequacy and the sources of income in retirement, less is paid to whether those sources are enough to cover expenditures.¹

This article examines the spending behaviors of the elderly in the U.S. population. The data come from the Health and Retirement Study (HRS) 2014 and the Consumption and Activities Mail Survey (CAMS) 2015, which is a supplement of the HRS. CAMS contains detailed spending information on durable and nondurable expenses. Using this information merged with the income information available in the HRS, this study summarizes the spending patterns of the American elderly. The primary goal of this article is to document overall spending as well as spending in different categories for different marital/retirement status subgroups. The amount they are spending will be compared with their income, and how any gap is possibly financed will be discussed. The majority of the households studied have either reached or are on the cusp of retirement. Compared with EBRI's previous research on this topic (Banerjee, 2014), which uses CAMS and HRS data between 2003–2011 to study the spending patterns of the elderly as they age, this paper utilizes the more recent available waves of data to do a cross-sectional analysis of spending patterns for different demographics and labor market statuses instead of age and focuses on whether households limit their spending to their income as defined in the HRS. The budget deficit has been briefly studied in EBRI's previous research (Banerjee, 2013), where a household's budget deficit is reported across age groups. However, the current paper does an in-depth analysis on budget surpluses and deficits and how they vary for different subgroups in the sample.

Data

The HRS dataset provides information on those within the U.S. population over the age of 50 through a biennial survey of a representative sample from that population. The HRS is the most comprehensive survey of older Americans in the nation and covers topics such as health, assets, income, and labor force status in detail. The survey started in 1992 and every five to six years a new cohort has been added. The initial sample consisted of individuals born between 1931–1941. The study is sponsored by the National Institute on Aging (NIA) and the Social Security Administration (SSA) and administered by the Institute for Social Research (ISR) at the University of Michigan. In this study, the 2014² wave is used.

The second data source used in this study comes from CAMS, which was started in 2001 as a supplement to the HRS. From the participants in the 2000 HRS, 5,000 households were selected at random and mailed the CAMS questionnaire. In coupled households, the questionnaire was sent randomly to one of the two spouses. Since 2001, CAMS has been conducted every two years. It collects spending information on 32 categories (six durable and 26 nondurable categories).

Who Is in the Data?

For this study, the CAMS 2015 dataset, which contains data on household expenditures, has been merged with the HRS 2014, which provides data on all other variables including income. Four groups that differ by marital and retirement status are the focus of the study. Since CAMS only surveys a subsample of the HRS, as a result of this merge, the total

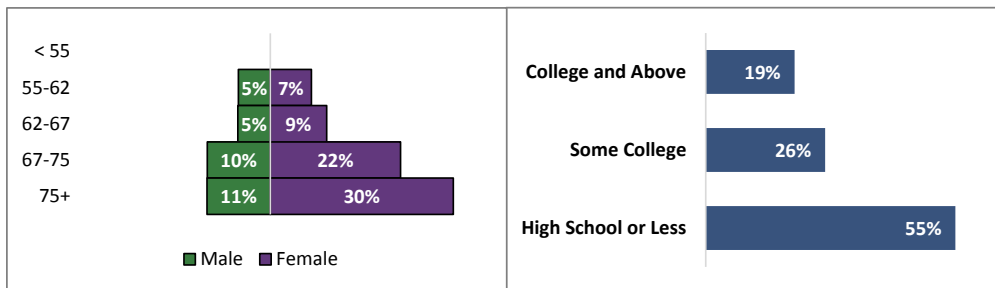
¹ EBRI's Retirement Security Projection Model[®] measures retirement income adequacy and simulates the percentage of the population at risk of not having enough financial resources to cover average expenses at retirement while incorporating the effect of major changes in policies and economic conditions.

² The RAND HRS, which is a cleaned and streamlined version of HRS raw data, is only available until 2014.

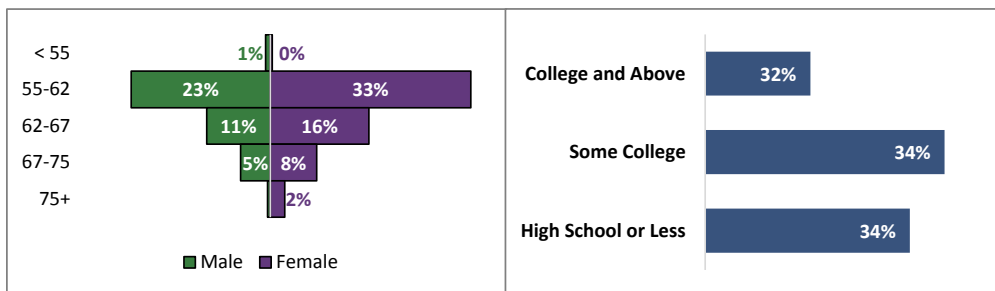
sample size becomes smaller, which makes it difficult to disaggregate the sample into more detailed subgroups while still making accurate statistical inferences.

Figure 1
Sample, by Gender, Age, and Education, 2015

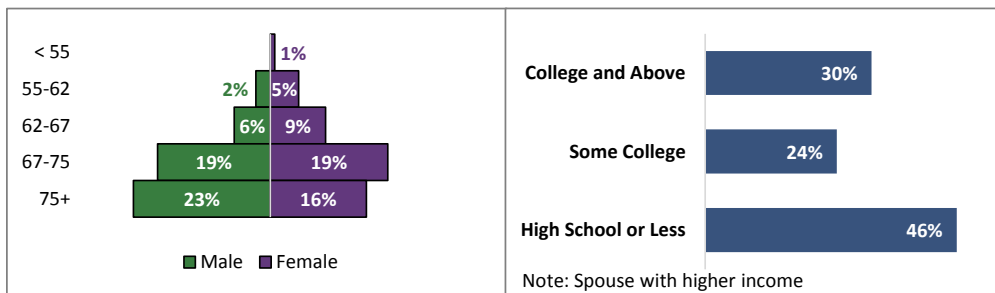
Single and Retired



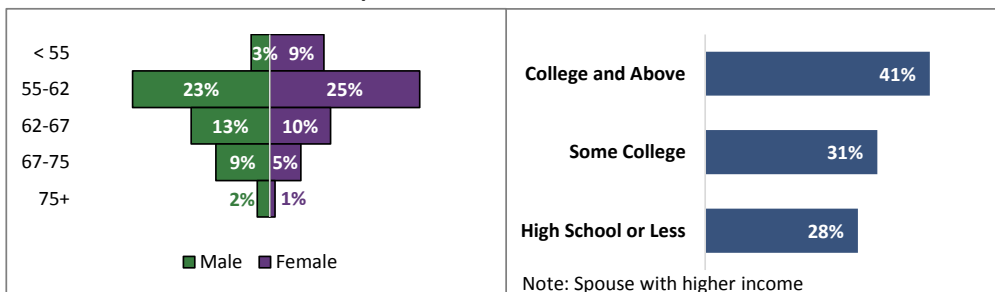
Single and in Labor Force



Couple, Both Retired



Couple, at Least One in Labor Force



Note: HRS household weight applied for analysis.

Source: Employee Benefit Research Institute estimates from the Health and Retirement Study (HRS)

Figure 1 shows the composition of each marital/retirement status subsample by gender, age, and education. Single households were mostly female, and those who were single and retired were the most likely to have a high school or lower-level education. For married households, educational levels were reported for the spouse with the highest income. Coupled households with at least one spouse in the labor force had the highest level of college degree or above individuals. Overall, retired groups were mostly populated by individuals who had less than a college education and were above 67 years old³, while those who were in the labor force were mostly between ages 55 and 67.

What Is Included in Total Income?

Figures 2, 3A, and 3B show the total income of households by marital and retirement status in 2015.

The income measure is taken from the RAND HRS and it is important for our analysis to note the components as listed below:

- **Labor income:** sum of wage and salary income; bonuses, overtime pay, commissions, and tips; second job income; and professional-practice or trade income.
- **Capital income:** sum of business or farm income, self-employment earnings, business income, gross rent, dividend and interest income, trust funds or royalties, and other-asset income.
- **Pension/annuity income:** sum of all pension and annuity payments. This includes income from defined benefit pensions and annuities, as well as income from other retirement savings such as 401(k) plans and individual retirement accounts (IRAs). (This item of income will be explained further in the Appendix I).
- **Social Security income:** includes Social Security retirement, spouse, and widow or widower benefits.
- **Other income:** sum of Social Security disability benefits, unemployment and workers' compensation, veterans' benefits, food stamps, alimony, lump sums from insurance, pensions, and inheritance.

All income figures are annual and reported at the household level, so the respondent's and spouse's incomes are added for coupled households. The figures report both average and median dollar amounts. Median income (and median of all other variables) is computed as the average of values between the 45th and 55th percentiles. Since the median gives a single observation, which may not be representative of people in the center of the distribution, by using the middle 10 percent of the distribution, this statistic describes the income for typical cases better⁴. This statistic is referred to as the median throughout the text.

Total household income is higher for households in the labor market as they earn wage and salary income. For instance, among single households for those who were retired, the 2015 average and median household incomes were \$37,558 and \$22,516, respectively, while the average and median for those in the labor force were \$81,360 and \$48,411. Average and median income for coupled households follow the same pattern.

Total Spending

Figure 2 also looks at the expenditure patterns by marital/retirement status. Household expenditures are reported in total and across individual categories.

³ Both spouses are included. Please note this does not necessarily mean both spouses in a household were on average above 67.

⁴ This statistic has been used in other HRS-related studies. For example, Butrica et al. 2005.

Expenditure Categories:

- **Housing expenses:** sum of mortgage payments, property taxes, homeowner’s or renter’s insurance, rent, utilities, home repairs, home furnishings, cleaning supplies, housekeeping and laundry services, gardening and yard supplies, and gardening and yard services.
- **Food expenses:** includes food and drink, including alcoholic beverages that are bought in grocery and other stores. Dining out is not included.
- **Health expenses:** include out-of-pocket (uninsured) health insurance costs, including Medicare supplemental insurance; out-of-pocket costs on prescription and nonprescription drugs; out-of-pocket costs of hospital care, doctor services, lab tests, eye, dental, and nursing home care; and out-of-pocket costs for medical supplies.
- **Transportation expenses:** include car payments (principal and interest), vehicle insurance, vehicle maintenance, and gas.
- **Clothing expenses:** include clothing and apparel (including jewelry), as well as personal-care products and services.
- **Entertainment expenses:** sum of trips and vacations, tickets to movies and sporting or performing arts events; hobbies and leisure equipment (photography, reading, camping, etc.); dining out in restaurants, cafes, and diners; and take-out food.
- **Other expenses:** include contributions to religious, educational, charitable, or political organizations, and cash and gifts to family and friends outside the household (including alimony and child support payments).

Figure 2				
Average (Median) Income and Expenditure, by Marital and Retirement Status, 2015				
	Single and Retired	Single and in Labor Force	Couple, Both Retired	Couple, at Least One in Labor Force
Total Income	\$37,558 (\$22,516)	\$81,360 (\$48,411)	\$70,076 (\$53,795)	\$153,246 (\$106,931)
Total Wealth	\$363,200 (\$104,413)	\$312,671 (82,801)	\$756,547 (\$367,625)	\$636,897 (\$285,750)
Total Spending	\$32,380 (\$25,328)	\$43,111 (\$34,102)	\$55,849 (\$46,329)	\$68,757 (\$59,509)
Spending-to-Income Ratio	86% (112%)	53% (70%)	80% (86%)	45% (57%)
Share of Expenditures				
Housing	48% (47%)	52% (51%)	41% (36%)	45% (52%)
Food	11% (13%)	9% (12%)	11% (12%)	9% (12%)
Health Care	11% (11%)	7% (7%)	10% (13%)	9% (10%)
Clothing	3% (3%)	3% (3%)	3% (3%)	3% (3%)
Transportation	10% (12%)	13% (17%)	12% (9%)	13% (13%)
Entertainment	8% (10%)	11% (10%)	13% (17%)	11% (11%)
Other	10% (5%)	6% (1%)	9% (8%)	7% (6%)
Number	1439	519	757	729
Note: HRS household weight applied for analysis. Median is measured as mean of value between the 45th and 55th percentiles of the distribution.				
Source: Employee Benefit Research Institute estimates from the Health and Retirement Study (HRS)				

For single and retired individuals in 2015, average spending was \$5,178 lower than average income, resulting in a spending-to-income ratio of 86 percent; however, a household in this category had a median spending higher than median income (by \$2,812), resulting in a spending-to-income ratio of 112 percent.

This is the only demographic for which this was true. For those who were single and in the labor force, married and retired, and married with at least one individual in the labor force, spending-to-income ratios were well below 100 percent.

Coupled households had lower spending-to-income ratios than singles, most likely due to economies of scale in consumption and the possibility of two income earners in the household. Married couples with at least one individual in the labor force had the lowest spending-to-income ratio among the four groups, with an average of 45 percent and a median of 57 percent. Couples who were both retired had an 80 percent spending-to-income ratio on average and a median spending-to-income ratio of 86 percent.

Figure 2 shows that housing expenses were by far the largest item in all groups' budgets. For the average single, retired households, housing-related expenses accounted for 48 percent of total expenditures for those who were retired and 52 percent for those in the labor force. In contrast, their coupled counterparts allocated 7 percentage points fewer of their total spending to housing in 2015.

Regardless of marital status, retired households spent 11 percent of their income on food in 2015 while those in the labor force spent 9 percent. Retired households spent slightly more on health care compared with those in the labor force, likely due to higher ages and a higher probability of poor health status.

Single and retired households, on average, spent the lowest on transportation and entertainment at 10 percent and 8 percent, respectively. The other three groups spent 11 percent to 13 percent of expenses on transportation and entertainment costs. The share of clothing expenses remained the same across these groups, and other categories were slightly higher for retired groups compared with those in the labor force.

It is worth mentioning that the income replacement approach that is usually used to help determine whether a person is on track for adequate retirement savings suggests that the income necessary to maintain financial wellbeing in retirement is a fraction (70 to 80 percent) of the final-year salary. This approach assumes that households will need less income in retirement than during the employment period, since costs such as transportation, other work-related expenses, housing, and even food costs might be reduced. Our findings support the reduction in housing and transportation expenses for retirees relative to those in the labor force. However, food costs and health expenses are higher for retirees. These observations could merit a different approach for measuring retirement income adequacy as well as further research where a longitudinal analysis is used to assess the changes in spending allocations before and after retirement.

In figures 3A and 3B, we focus on the income and spending behaviors of the single and married retired cohorts with and without regular pension/annuity income⁵.

For single and retired households in 2015, average income was \$21,593 higher for those with regular pension/annuity income compared with those without pensions; this group's average total expenditure, however, was \$9,096 greater. Still, this translates into a significantly lower spending-to-income ratio for those with pension income compared with those without pension income (75 percent and 100 percent, respectively).

⁵ Please note that irregular pension/annuity income is not included.

Figure 3A
Average Expenditure of Retirees by Marital Status, Pension, and Wealth, 2015

Share of Sample	Total Income	Total Spending	Spending-to-Income Ratio	Share of Total Spending						
				Housing	Food	Health Care	Clothing	Transportation	Entertainment	Other
Single and Retired										
43%	\$49,870	\$37,560	75%	45%	10%	10%	3%	10%	9%	14%
With Regular Pension Income										
57%	\$28,277	\$28,464	100%	51%	12%	11%	3%	9%	7%	4%
Wealth Quartile										
25%	\$16,493	\$22,940	131%	55%	14%	9%	4%	11%	7%	1%
25%	\$23,356	\$27,655	118%	51%	13%	12%	3%	13%	8%	0%
25%	\$33,095	\$30,419	92%	45%	11%	11%	3%	10%	7%	7%
25%	\$77,662	\$48,618	63%	46%	8%	10%	3%	7%	10%	9%
 Couple, Both Retired										
64%	\$76,043	\$59,512	78%	40%	10%	10%	3%	12%	13%	7%
Without Regular Pension Income										
36%	\$59,430	\$49,257	83%	45%	12%	10%	3%	12%	12%	8%
Wealth Quartile										
25%	\$40,151	\$38,683	96%	45%	13%	10%	3%	13%	8%	1%
25%	\$56,137	\$47,796	85%	39%	12%	12%	3%	15%	11%	2%
25%	\$71,380	\$55,762	78%	42%	11%	11%	3%	13%	12%	8%
25%	\$112,847	\$80,850	72%	39%	9%	9%	3%	8%	16%	15%

Note: HRS Household weight applied for analysis. Median is measured as mean of value between the 45th and 55th percentiles of the distribution.

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS)

Figure 3B

Median Expenditure of Retirees by Marital Status, Pension, and Wealth, 2015

Share of Sample	Total Income	Total Spending	Spending-to-Income Ratio	Share of Total Spending						
				Housing	Food	Health Care	Clothing	Transportation	Entertainment	Other
Single and Retired										
With Regular Pension Income										
43%	\$54,223	\$30,159	57%	42%	12%	13%	4%	11%	11%	7%
Without Regular Pension Income										
57%	\$22,629	\$20,202	89%	46%	14%	12%	4%	13%	7%	4%
Wealth Quartile										
25%	\$13,206	\$16,249)	123%	51%	19%	6%	5%	6%	7%	1%
25%	\$24,250	\$21,822	90%	52%	12%	9%	4%	12%	6%	2%
25%	\$25,220	\$25,759	100%	46%	13%	12%	3%	12%	9%	4%
25%	\$57,628	\$37,365	65%	45%	14%	16%	4%	6%	9%	7%
Couple, Both Retired										
64%	\$73,079	\$54,588	74%	37%	12%	13%	3%	15%	11%	5%
36%	\$52,692	\$40,712	77%	36%	12%	15%	3%	12%	13%	7%
Wealth Quartile										
25%	\$43,214	\$30,910	71%	41%	13%	16%	3%	17%	6%	5%
25%	\$54,396	\$42,877	79%	34%	13%	14%	4%	12%	17%	5%
25%	\$94,736	\$47,223	50%	36%	10%	12%	3%	10%	18%	3%
25%	\$118,617	\$69,353	58%	28%	8%	11%	3%	9%	28%	12%

Note. HRS Household weight applied for analysis. Median is measured as mean of value between the 45th and 55th percentiles of the distribution.

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS)

Moving to the married and both retired cohort, the typical household with regular pension/annuity income had, on average, \$16,613 more income than those without pensions. As with the comparable single cohort, however, total expenditures were also higher: \$10,250. As with the single cohorts, the average married and both retired household with pension income had a significantly lower spending-to-income ratio: 78 percent for married and both retired with pension income vs. 83 percent for married with both retired without pension income.

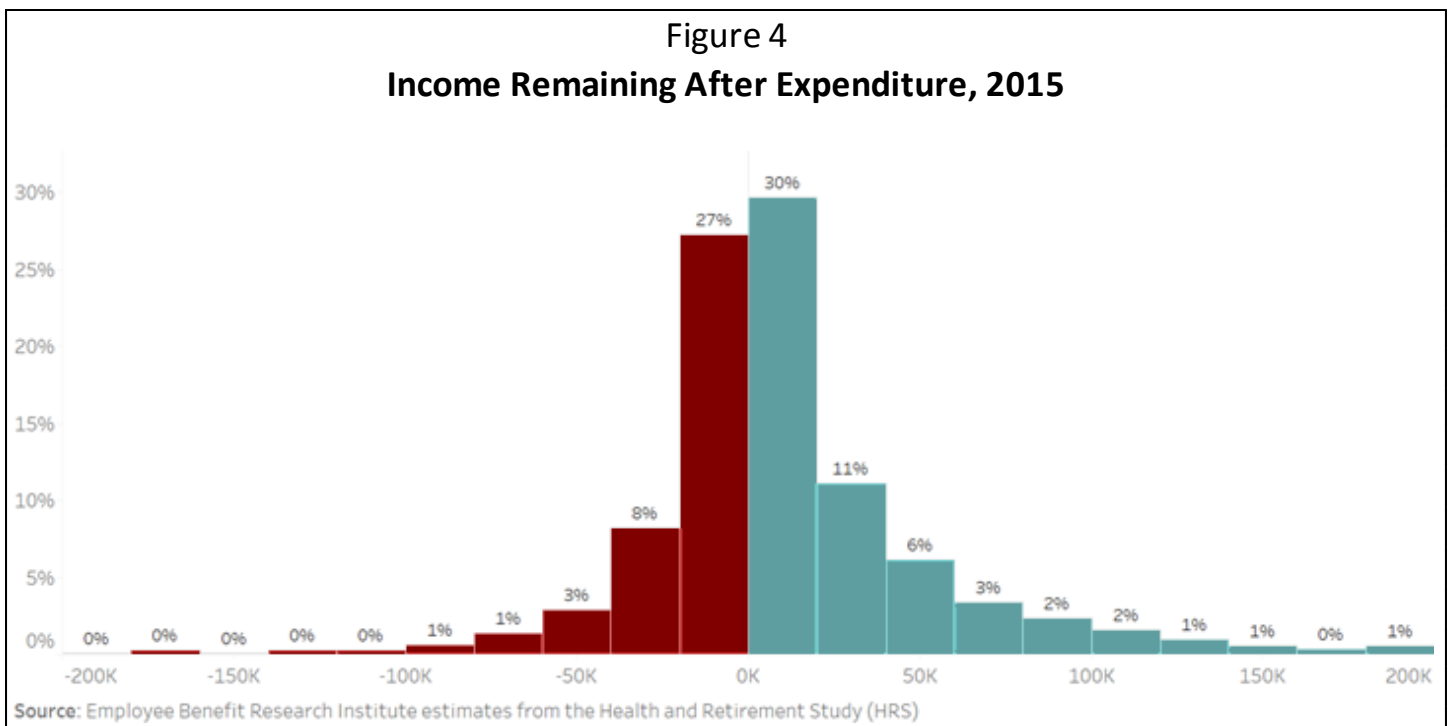
Not surprisingly, for both groups, the amount of slack that households had in their budget increased by wealth quartile. Single and retired households in the lowest two income quartiles were in the red by 18 percent and 31 percent of their income, respectively. In contrast, single and retired households in the wealthiest two quartiles spent on average 8 percent to 37 percent less than their income level.

For the low quartiles, larger proportions of total expenditures were spent on housing-related, food, and transportation items, while those from high quartiles allocated a larger share of their total expenditure for entertainment and other (gifts and contributions) categories.

Budget Surplus vs. Budget Deficit

As we already saw in the previous section, average (median) spending-to-income ratio varies across different wealth, income, and demographic categories. In this section we more closely look at the gap between total spending and total income as measured in the HRS. Budget deficit (surplus) has been used interchangeably for spending more (less) than income.

Figure 4 shows the amount of income remaining after expenditures for all observations in the sample. Notably, the distribution is slightly skewed to the right, with 59 percent of the observations showing a surplus vs. 41 percent showing a deficit. For instance, 27 percent experienced a shortfall between \$0 and \$20,000 while 30 percent had a deficit between \$0 and \$20,000 based on income to expenditures.



It is important to note that the income used in this study is before-tax income, while expenditures are financed by net income. As a result, some households who had gross income that was higher than their expenditures but net income that was lower than their expenditures would be wrongly classified as having income that exceeds their expenditures. Estimating the tax bracket of each household with the survey information is a complicated task and this analysis does not attempt to do so. Rather, the percentage of households with income less than expenditures shown in this study should be treated as a lower bound, which means the actual percentage of such households would be higher.

In addition, it should be noted that having income that is less than expenditures does not necessarily mean that these households cannot afford their expenditures or that they have run out of money. Most households have positive asset holdings, which can be tapped to bridge the gap between income and expenditures. They may also have income sources that are absent in the HRS definition of total income (we will discuss this further in the following sections).

Therefore, this figure provides a rough estimate of the percentage of households who did not have regular sources of income sufficient to finance their spending in the year under observation.

Income and Expenditure of Households With Budget Deficits

To identify the factors that drive budget deficits, it is important to identify income and expenditure of households with deficits vs. surpluses. Figure 5A shows that the average household with a deficit had a significantly lower income compared with the average with a surplus: \$31,765 and \$111,392, respectively. While the difference in average expenditures was not as great, it is still material: households with a deficit spent \$54,662 vs. \$46,161 for households with a surplus. Notably, even though households with deficits were more concentrated in lower-income groups, their median spending was higher than households with surpluses, which were concentrated in the upper-income groups.

It can be noted that, while there was not much variation in the median (see Figure 5B), average housing and health expenses were higher for households with deficits compared with households without deficits.

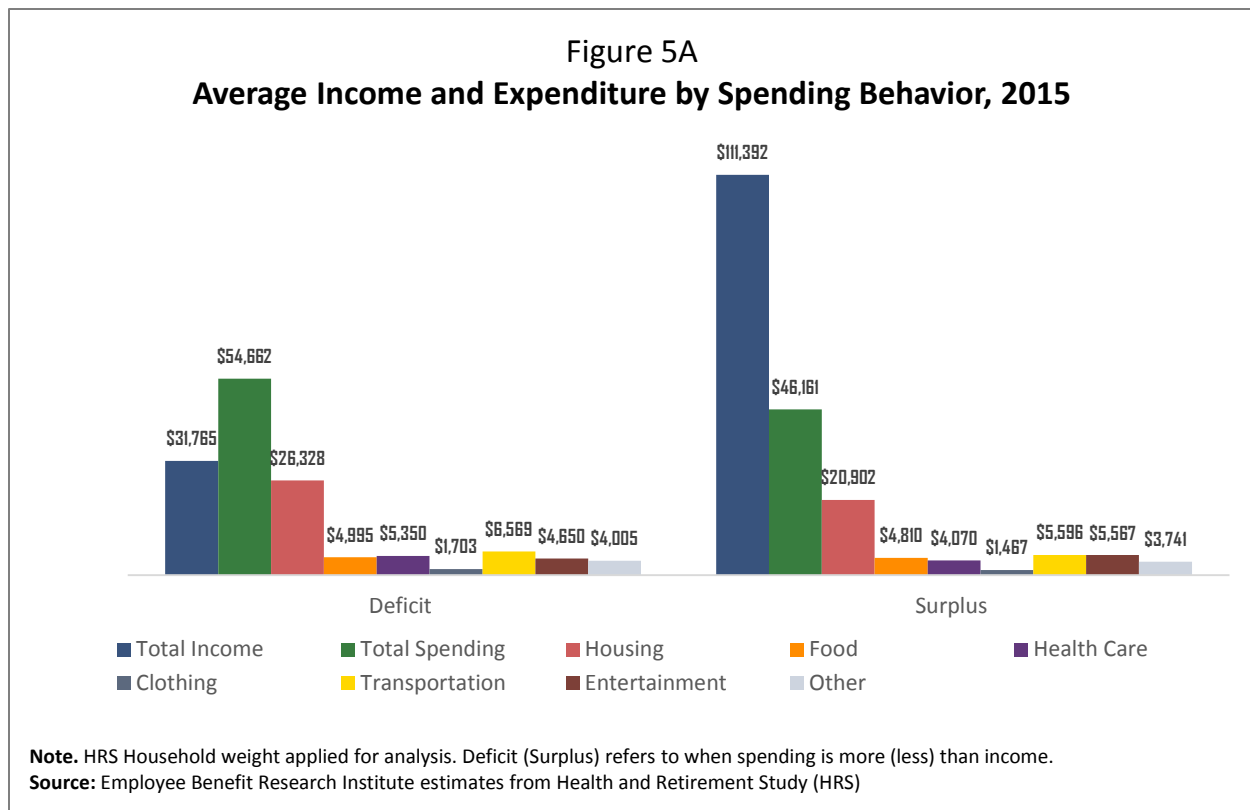
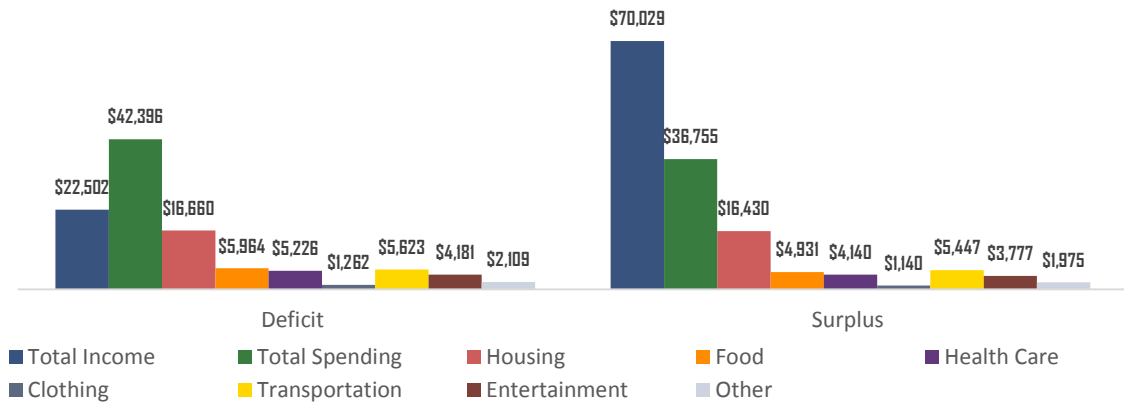


Figure 5B
Median Income and Expenditure by Spending Behavior, 2015



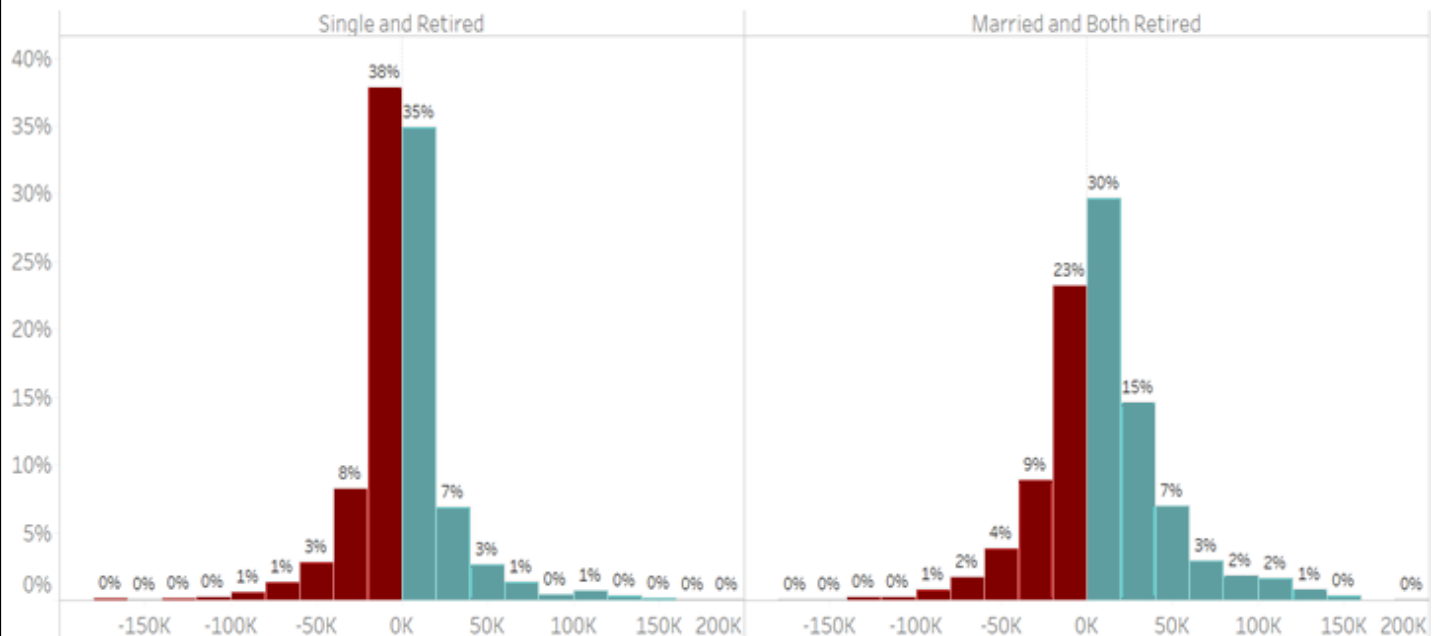
Note. HRS Household weight applied for analysis. Median is measured as Average of value between the 45th and 55th percentiles of the distribution. Deficit (Surplus) refers to when spending is more (less) than income.

Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS)

Demographic Differences

Figure 6 shows how the percentage of households with income deficits and surpluses varies between retired couple and single households. As expected, single households are much more likely to face deficits as the distribution is skewed to the left (negative) for single retirees. The opposite is true for the married and retired group, which is skewed to the right (positive). For example, almost 38 percent of retired single households had income deficits between \$0 and \$20,000, compared with 23 percent of married and retired, in 2015.

Figure 6
Income Remaining After Expenditure, by Marital and Retirement Status, 2015



Source: Employee Benefit Research Institute estimates from the Health and Retirement Study (HRS)

Does Regular Pension/Annuity Income Make a Difference?

As explained in Appendix I, regular pension income in the HRS means that a steady source of income is provided, which might help retirees to better manage expenses. But are households without pensions more likely to run into deficits? Figure 7 shows the distribution of budget surplus (deficit) among households who received regular pension income vs. those who did not.

In 2015, the share of households with budget deficits was much higher for households without any pension income. While roughly 34 percent of households with pensions had deficits, 46 percent of households without any regular pension income faced budget deficits. Deficit amounts for both groups were mostly concentrated between \$0 and \$20,000.

Figure 8 shows that, conditional on being low income, the share of households with deficits is larger for those without regular pension income compared with those with. This pattern is reversed for high-income households. Having a regular stream of pension/annuity income seems to have a positive impact on budget management of low income households. In contrast, regular pension/annuity in high income households is associated with higher probability of budget deficit, which could be an indication of having other means (which are not included in the HRS definition of income) to finance their expenses.

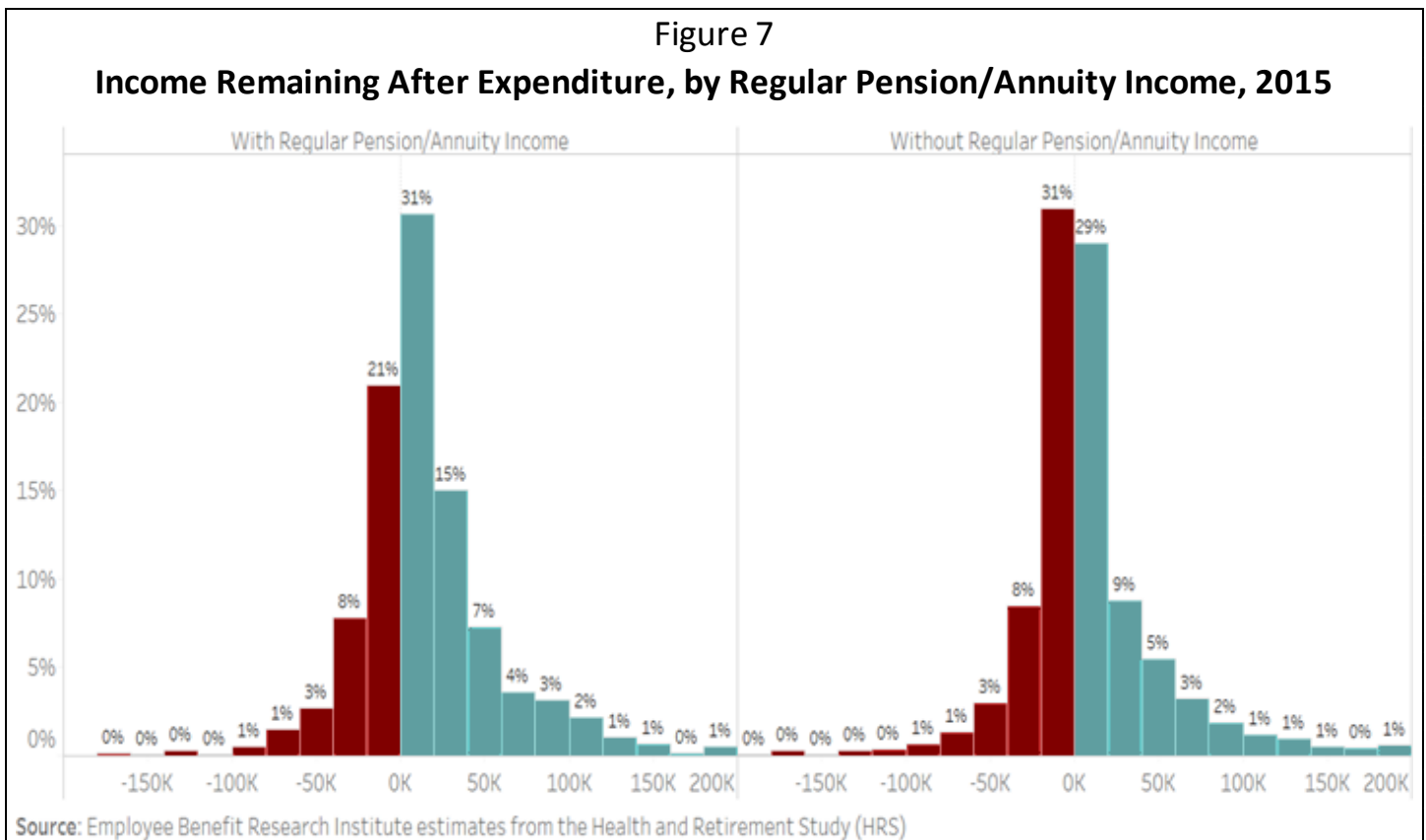


Figure 8
Percentage in Budget Deficit, by Total and Regular Pension Income, 2015

	W/ Regular Pension Income			W/O Regular Pension Income		
	Overall	Low Income	High Income	Overall	Low Income	High Income
Deficit	34%	52%	19%	46%	60%	13%

Note. HRS household weight applied for analysis. Deficit refers to when spending is more than income

Source: Employee Benefit Research Institute estimates from the Health and Retirement Study (HRS)

What About Irregular Pension/IRA Withdrawal?

Irregular withdrawals from defined contribution (DC) plans and IRAs/Keoghs are not included in income variables in the HRS (see Appendix I), which usually only queries regular sources of income. In 2012, however, the HRS restructured the pension section of their survey in such a way that, in 2014, for the first time, respondents could be asked about irregular withdrawals since the last survey.

Figure 9A, 9B, and 9C summarizes the findings regarding households' irregular withdrawals from pension accounts and IRAs for both groups who had surpluses and deficits in 2015.

First, we show that having an IRA or pension account is correlated with surpluses: 71 percent of households with a surplus had IRAs or pension accounts, vs. 52 percent with a deficit.

In addition, account holders with a surplus are less likely to make irregular withdrawals from their account (28 percent) versus those with a deficit (42 percent).

Figure 9C also visualizes the difference in the overall pattern of irregular withdrawal amounts among those who had deficits or surpluses. While withdrawal amounts were similar and small for the first quartile, the long upper whisker suggests that the amount of these withdrawals varied among the last quartile households for both groups.

While median amounts are all at the same level, the longer interquartile range and upper whisker for the deficit group indicates that this group was making larger withdrawal amounts than the surplus group.

Wealth and Budget Deficit (Surplus)

To identify which households are more likely to run into deficits, we look at the households with deficits spread across the wealth spectrum.

Wealth is defined⁶ as the sum of primary and secondary residence, all other real estate, and net value of vehicles owned; individual retirement accounts (IRAs)⁷, stocks and mutual funds, checking, savings and money market accounts, certificates of deposit (CDs), government savings bonds, Treasury bills, and bonds and bond funds; and any other source of wealth minus all debt such as mortgages and consumer loans.

It is important to know whether they are concentrated on the lower end of the wealth scale or spread evenly across it. Figure 10 sheds some light on this, showing the percentage of households in each wealth quartile with household incomes that are less or more than household expenditures.

⁶ Definition from HRS RAND, Total Wealth (including secondary residence).

⁷ Does not include assets in an employer-provided retirement plan such as a 401(k).

Figure 9A

Percentage With IRA/Pension Account, by Spending Behavior, 2015



Figure 9B

Percentage of Account Holders With Irregular Withdrawals, by Spending Behavior, 2015



Figure 9C

Irregular Withdrawal Amount, by Spending Behavior, 2015

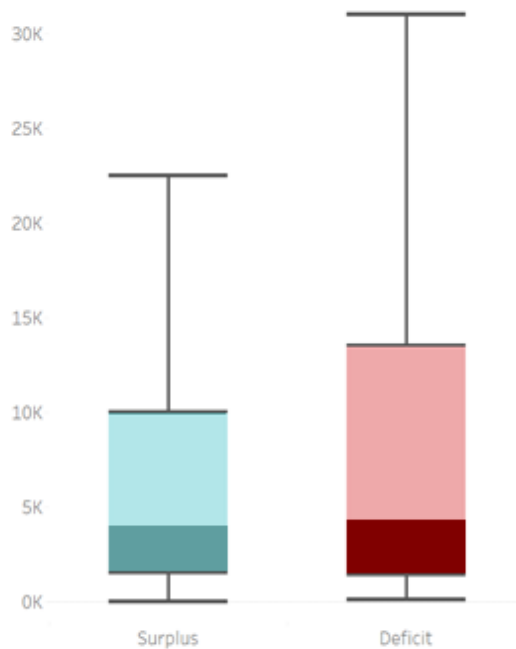
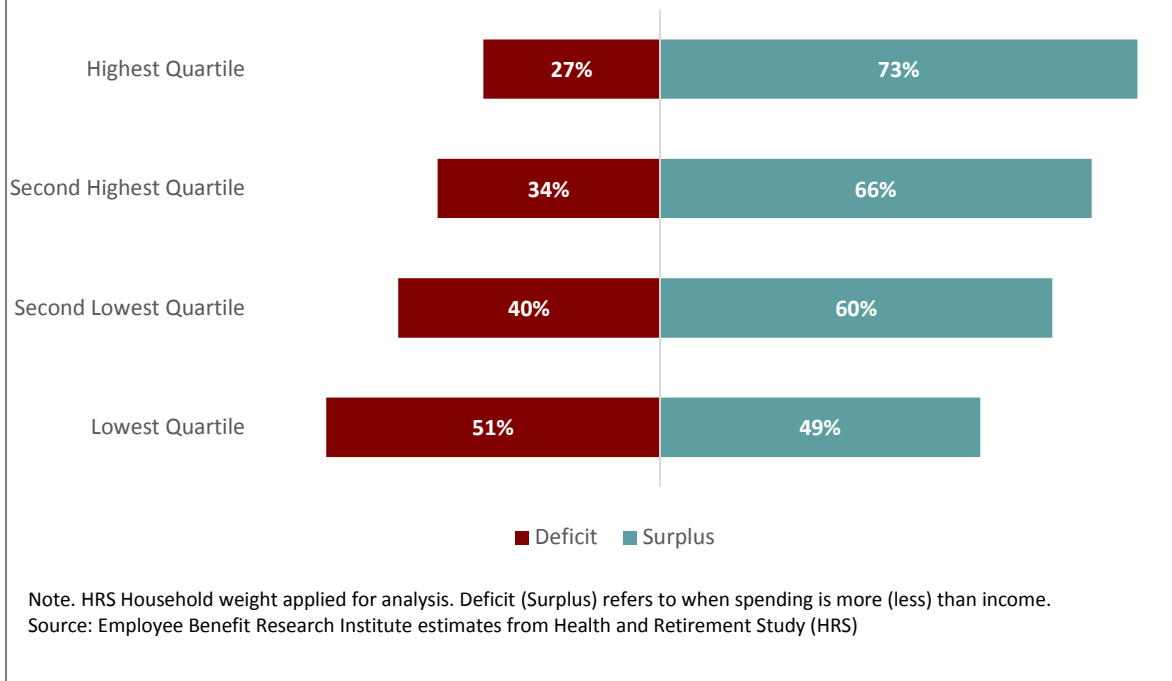


Figure 10
Spending Behavior, by Wealth Quartile, 2015



Not surprisingly, the share of households with deficits is highest in the lowest wealth quartile. However, the other quartiles also contain significant shares of households with deficits. In 2015, just over half (51 percent) of households in the bottom wealth quartile had a deficit.

In addition, 40 percent and 34 percent of households in the middle quartiles also experienced a deficit. While the proportion with deficits was much lower in the top income quartile, still we find that 27 percent of households in that quartile had expenditures that exceeded their incomes.

As noted earlier, an income deficit does not necessarily mean that a household cannot sustain its expenditures. The household might have enough savings to cover the gap, for instance. Consequently, it is also important to check the level of wealth that these households own and whether it has changed relative to previous interviews. Figure 11 tracks the change in average total household wealth (excluding IRAs), non-housing wealth, and non-housing financial wealth conditional on having a budget deficit or surplus in 2015.

Notice that the average levels of wealth are much lower for households with deficits than in households with surpluses. For example, households with a surplus had an average total wealth of \$501,136, compared with \$255,341 for households with a deficit in 2014. The difference was also significant for non-housing wealth.

To search for evidence of whether households liquidate their wealth to finance their expenditures, we check the percentage change in wealth between 2012 and 2014.

While there were no significant changes in total wealth, households with a surplus in 2014 experienced a 12 percent gain between 2012 and 2014 in their average wealth when IRAs were excluded. On the other hand, households with deficits in 2014 on average had a 5 percent decline in their wealth (excluding IRAs) during the same period.

A better understanding of spending down can be obtained by examining the change in non-housing assets. Between 2012 and 2014, average non-housing financial assets for households with deficits dropped 10 percent, compared with a gain of 12 percent for households with a 2014 surplus. This could be an indication that households with deficits not only have much lower levels of liquid assets but also draw down their assets to finance their deficits.

It is important to note that part of these gains or losses could be due to the change in the value of components of total wealth like housing and financial wealth rather than active spending down by households.

Figure 11
Change in Average Wealth, by Spending Behavior, 2012–2014

	Non-Housing Wealth		Non-Housing Financial Wealth		Total Wealth (Excluding IRAs)	
	Deficit	Surplus	Deficit	Surplus	Deficit	Surplus
2012	\$227,705	\$399,744	\$99,100	\$170,768	\$267,494	\$448,251
2014	\$221,934	\$444,476	\$88,725	\$191,582	\$255,341	\$501,136
Percentage Change	-3%	11%	-10%	12%	-5%	12%

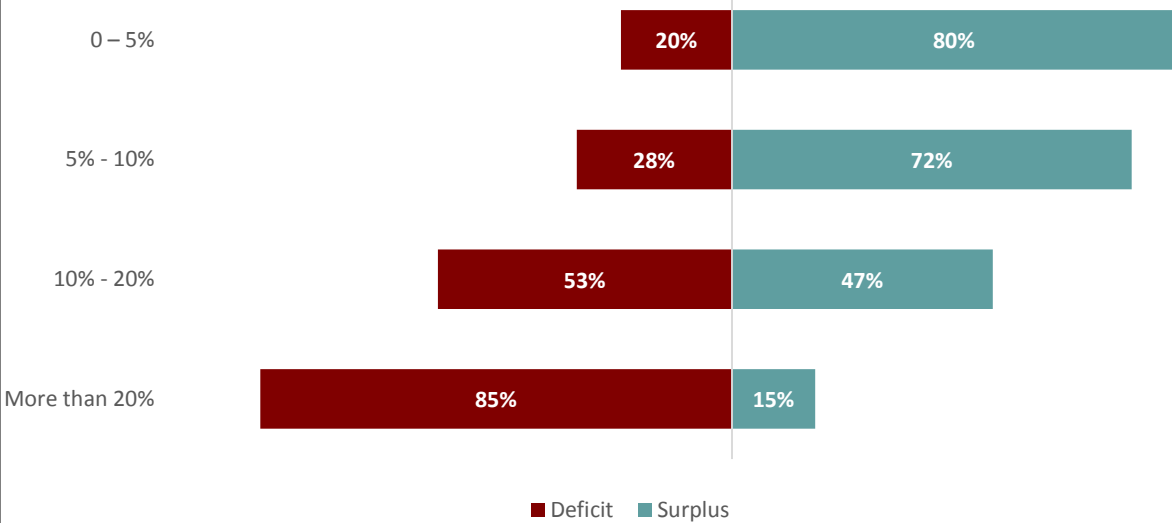
Note. HRS household weight applied for analysis. Median is not reported as there were no significant variations in median across years. Deficit (Surplus) refers to when spending is more (less) than income.

Source: Employee Benefit Research Institute estimates from the Health and Retirement Study (HRS)

Out-of-Pocket Medical Expenditure and Budget Deficits

It has been shown empirically that health expenses grow steadily with age. For example, EBRI’s research shows that in 2011, households with at least one member between ages 50 and 64 spent 8 percent of their total budget on health items, compared with 19 percent for those ages 85 or over. In addition, the share of out-of-pocket health expenses in total spending was the second largest for those ages 75 or older (Banerjee, 2014). While the relationship between age and household expenditure is beyond the scope of this paper, it is interesting to look at the role of large medical expenses in the household’s budget deficit. Figure 12 shows the percentage of households with a deficit (surplus) by share of medical expenses in total income. The probability of having a deficit has positive correlation with catastrophic medical expenses. For instance, of those who spent 20 percent or more of their income on medical expenses, 85 percent experienced budget deficit, while of those who spent 5 percent or less of their income on health-related costs, only 20 percent experienced a deficit.

Figure 12
**Spending Behavior, by Percentage of Total Income Spent on
 Medical Expenses, 2015**



Note. HRS Household weight applied for analysis. Deficit (Surplus) refers to when spending is more (less) than income.
 Source: Employee Benefit Research Institute estimates from Health and Retirement Study (HRS)

Conclusion

Following EBRI’s line of research on income and spending patterns of older Americans (Banerjee, 2013 and 2014), this paper uses the HRS 2014 and CAMS 2015 datasets to study the spending behaviors of different marital/retirement status subgroups of older Americans by assessing households’ expenditures and available financial resources, such as total income (as defined in HRS), irregular withdrawal from pension accounts/IRAs, and wealth, in 2015.

We find that housing remains the largest spending category across all marital/retirement status subgroups while share of health care costs is slightly higher for retirees. The spending-to-income ratio is much higher for those retired compared with those in the labor force. In addition, from retired households, those with regular pension/annuity income and those in higher wealth quartiles had a significantly lower expenditure-to-income ratio.

Our analysis shows that 59 percent of the households experienced a surplus in their budget while 41 percent ran into a deficit, and households with a deficit had higher average spending and lower average income compared with those with a surplus. We show some evidence that irregular withdrawals from pension accounts/IRAs and wealth spend-down were used by those with a deficit to cover the gap between the household’s spending and income. Finally, our findings highlight the correlation between incurring large medical expenditures and running into a budget deficit. These findings highlight the need for continued research on consumption behaviors of older Americans and an accurate assessment of available financial resources in order to design better products and policies that help to maintain well-being through retirement.

References

- Banerjee, Sudipto. "Expenditure Patterns of Older Americans, 2001–2009," *EBRI Issue Brief*, no. 368 (Employee Benefit Research Institute, February 2012).
- Banerjee, Sudipto. "Income Composition, Income Trends, and Income Shortfalls of Older Households" *EBRI Issue Brief*, no. 383 (Employee Benefit Research Institute, February 2013).
- Banerjee, Sudipto. "How Does Household Expenditure Change With Age for Older Americans?" *EBRI Notes*, vol. 35, no. 35 (Employee Benefit Research Institute, September 2014).
- Butrica, Barbara A., Richard W. Johnson, and Joshua H. Goldwyn, 2005. "Understanding Expenditure Patterns in Retirement," Working Papers, Center for Retirement Research at Boston College, wp2005-3
- Health and Retirement Study, (2014 Core) public use dataset. Produced and distributed by the University of Michigan with funding from the National Institute on Aging (grant number NIA U01AG009740). Ann Arbor, MI, (2014)."
- Hurd, Michael D., Erik Meijer, Philip Pantoja, and Susann Rohwedder. 2018. "Addition to the RAND HRS Longitudinal Files: IRA Withdrawals in the HRS, 2000-2014," Ann Arbor MI: University of Michigan Retirement Research Center (MRRC) Working Paper, WP 2018-388. <https://mrdrc.isr.umich.edu/publications/papers/pdf/wp388.pdf>
- Hurd, Michael D. and Susann Rohwedder. 2018. "Assessing Economic Resources in Retirement: The Role of Irregular Withdrawals from Tax-Advantaged Retirement Accounts," Ann Arbor MI: University of Michigan Retirement Research Center (MRRC) Working Paper, WP 2018-387. <https://mrdrc.isr.umich.edu/publications/papers/pdf/wp387.pdf>
- RAND Center for the Study of Aging. August 2017. RAND HRS CAMS Spending Data 2015 (V2). Santa Monica, CA, Funding from the National Institute on Aging and the Social Security Administration.
- RAND Center for the Study of Aging. February 2018. RAND HRS Longitudinal File 2014 (V2). Santa Monica, CA, Funding from the National Institute on Aging and the Social Security Administration.

Appendix I: Pension/Annuity Income in HRS

"Income from Employer Pension or Annuity" is a variable from the RAND HRS that is based on questions in two different sections of the HRS 2014 survey. First, a detailed section asks all respondents about any pension plan they have ever reported, beginning with the HRS 2012 survey. In this section, respondents are asked whether they are receiving benefits from any pension plan that they have previously reported in an earlier HRS wave, along with any new pension plans entered since the previous interview. Some of the questions are:

"Are you currently receiving regular payments from your [Insert Plan Name] (plan)?"

"Age when benefits started?"

"How much are the payments per month or year?"

"Plan status-converted to annuity"

Later, in the asset and income section, respondents are asked about the household's pension income (i.e., income paid to the respondent and spouse). Specifically, the question asks:

"Not including Social Security or other retirement income you've already told me about, are you (or your [husband/wife/partner]) currently receiving any other income from retirement pensions?"

The RAND HRS summarizes all the information in these two sections to extract self-reported regular household income from pensions and annuities.

A related point to consider is that defined benefit (DB) plans typically guarantee a regular stream of income, and that when regular payments are queried in surveys, income from DB plans is — for the most part — reported and therefore included in pension (total) income. In contrast, since distributions (withdrawals) from defined contribution (DC) plans or IRAs and Keogh accounts are usually infrequent, their contribution to total income is mostly underrepresented. To address this problem, we take advantage of the newly restructured HRS pension sections to assess the role of irregular withdrawals from pension accounts/IRAs in financing household expenses. For IRAs, the HRS elicits information on whether households own any account and any withdrawal from these accounts since the last interview. We annualize the reported amounts by dividing the number by two, which is the number of years between survey waves in the HRS.