In Data There Is Truth: Understanding How Households Actually Support Spending in Retirement

By Jack VanDerhei, Ph.D., Employee Benefit Research Institute, and Kelly Hahn and Katherine Roy, J.P. Morgan

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In Data There Is Truth: Understanding How Households Actually Support Spending in Retirement

By Jack VanDerhei, Ph.D., Employee Benefit Research Institute, and Kelly Hahn and Katherine Roy, J.P. Morgan

Introduction

This Issue Brief uses a unique database to gain insight into some of the most important policy questions involving retirees today:

- How do households generate income in retirement to support their spending and what role do individual retirement account (IRA) distributions play in this process?
- Are required minimum distributions (RMDs) from IRAs taken as a signal for appropriate withdrawal behavior? If not, do those who take out more than the minimum or start before age 70-1/2 need the distributions to support their spending behavior?
- Are some households continuing a smaller percentage of preretirement spending than would be indicated from industry averages? If so, how many of them would be able to increase their IRA distributions in a "safe" manner?
- What happens to 401(k) and IRA money at retirement? How rapidly does money leave 401(k) funds at retirement, and if money is rolled over from a 401(k) to an IRA, what happens to the asset allocation? Does the relative equity concentration in a post-rollover IRA depend on whether the household has guaranteed retirement income other than Social Security (e.g., annuities and/or pensions)?

Past research has offered tentative answers to some of these questions. However, it has typically had a narrow and in-depth focus on individual components, looking strictly at either defined contribution (DC) plan participant savings and balances or household spending behavior. The analysis almost invariably relies on survey data.

We are taking a groundbreaking approach, drawing on data tracking both actual income and spending and 401(k) and IRA data to offer a holistic view of how a retired household supports their spending in retirement.¹

This paper is based on research from a collaboration between the Employee Benefit Research Institute (EBRI), with more than four decades of research on retirement policy, and J.P. Morgan Chase & Co., which serves nearly half of U.S. households. As of 2018, EBRI data on more than 23 million 401(k) accounts and IRA details such variables as account balances, asset allocation, and post-retirement withdrawals. J.P. Morgan Chase data include a comprehensive view of total household spending through all payment mechanisms (credit card, debit card, cash, and checking) and sources of income including Social Security, annuity, pensions, etc. for around 21 million customer households.²

Among the highlights of our research findings:

- On average, those households taking an IRA withdrawal prior to reaching the age for required minimum distributions appear to need the additional income to support their current consumption levels. However, that may not be the case for households taking more than the required minimum distribution after age 70-1/2.
- While a significant percentage of households in our sample with "spending gaps" could increase post-retirement expenditures, it is not as large as conventional wisdom might lead one to believe.
- Across retirement wealth quartiles, there is more spending at almost all ages for households who have at least some annuities and/or pensions.
- We find a very significant overall decrease in asset allocation equity concentration after rollover from a 401(k) to an IRA at retirement age.
- We also found that when it comes to the most conservative 401(k) investors, those without annuities and/or pensions had a slightly larger equity concentration in their IRA portfolios after rollover than they had in their...
401(k) plans; however, those with some annuities and/or pensions had a significantly larger increase in equity concentration.

In future research, we will continue to harness the data to gain a deeper understanding of how households behave in saving for and spending in retirement and what factors drive those behaviors.

**Description of Data and Summary of Household Behavior**

**Who Is in the Study Sample?**

We are able to discern whether a household is retired for each year they are in the study based on when retirement income such as Social Security begins and when employment income ends and can derive the year of retirement for any household that is not already retired in the initial year (2013). Limiting the sample to those with a known retirement age produces a total of approximately 31,000 unique households with approximately 96,000 total observations from 2014–2018. In our analyses of observing income and spending by age, data were adjusted to 2018 using the Bureau of Labor Statistics’ Consumer Price Index for Americans 62 years of age and older, or R-CPI-ET.

The distribution of the retirement wealth — defined as 401(k) and IRA balances that we can observe in the data — for the sample is shown in Figure 1. The median retirement wealth for the sample is approximately $113,000. A quarter of the households have retirement wealth less than $40,000 and another quarter have retirement wealth greater than $316,000. Most of this is in the form of IRAs.

![Figure 1: Distribution of Observable Retirement Wealth at Retirement (in $1,000s)]
More than 3 in 10 (31 percent) households have retirement income from annuities and/or pensions (Figure 2).

![Figure 2: Percentage of Sample With Annuities and/or Pensions](image)

Retirement Age and Social Security Claiming Behavior

The age distribution at retirement is shown in Figure 3. Retirement age is determined as the age at which no employment income is observed and only retirement income such as Social Security and annuities and/or pensions is received, in addition to transfers from financial institutions other than Chase for 12 consecutive months. Slightly more than a third (36 percent) of the sample retired at ages 65 to 70.

Figure 4 shows the distribution of estimated Social Security claiming ages as determined by when Social Security benefits are first observed in the data.† As expected, the most frequent claiming ages are the earliest age for retirement benefits (62) and at/around the full retirement age (65 to 66). Those who wait have higher incomes — the median retirement income including Social Security benefits for these three ages are:

- Age 62, $30,483.
- Age 66, $35,917.
- Age 70, $47,701.
Figure 3
Age Distribution at Retirement

Figure 4
Distribution of Estimated Social Security Claiming Ages
How Is Income Generated to Support Spending?

Figure 5 shows the average total retirement income by age as well as the breakdown into the following components:

- Transfers from other financial institutions.
- Social Security benefits.
- IRA withdrawals.
- Annuities and/or pensions.

Total retirement income starts at $55,480 at age 60 and gradually increases until it peaks at $65,760 at age 71. It then decreases until it reaches $57,370 for those ages 85 and above. Keep in mind that this is not a longitudinal view of following the same households through time but a snapshot of our study sample based on age from 2013 to 2018. In terms of its components:

- Social Security benefits at early retirement age (62) average only $11,895 but increase to $21,570 at age 71 before decreasing slightly.
- IRA distributions start at $2,950 at age 60 and remain under $4,700 though age 69. Once the RMD age of 70-½ is reached for the retirees in 2013 to 2018, the value increases substantially to $7,730 at age 71. It remains at least at that level through age 85.
- Amounts from annuities and/or pensions reduce gradually from a high of $13,120 at age 61 to $7,450 at age 69 and remain relatively constant thereafter.
- Transfers from other financial institutions remain relatively constant from ages 60 through 69, but then drop significantly around the start of the RMD age. They go from $30,500 at age 69 to $27,700 at age 70 and decrease gradually thereafter.
Distributions From IRAs That Are in the Dataset

Utilization of IRAs observed in this sample can be broken down into four different categories based on their age and the amount of IRA distribution:

- Those younger than the required minimum distribution age of 70-½:
  - who have **not** taken any IRA distributions (80 percent).
  - who have started IRA distributions (20 percent).
- Those older than age 70-½:
  - who take the required minimum distribution (84 percent).
  - who take **more** than the required minimum distribution (16 percent).

Households Taking an IRA Distribution Prior to the Age When Minimum Distributions Are Required

Figure 6 shows the average spending amounts by age for households taking IRA distributions prior to the age when minimum distributions are required. These households have average spending considerably larger than the full sample of households. At age 60, they have an additional $4,120 in spending, or 7.6 percent more than the full sample. This extra spending persists through age 71, with an average additional spending of 5.3 percent for all years combined.

Figure 6
**Average Spending by Age for Households Taking IRA Withdrawals Prior to Age 71 vs. All Households**

![Figure 6](image-url)

Figure 7 shows the average retirement income amounts by age for households taking IRA distributions prior to the age when minimum distributions are required, while Figure 8 shows the differences in retirement income components for those taking such IRA withdrawals vs. the entire sample.
Figure 7
Average Retirement Income Amounts by Age for Households
Taking IRA Distributions Prior to Age 71

Figure 8
Differences in Average Retirement Income Components for Those
Taking IRA Distributions Prior to Age 71 vs. Entire Sample
The IRA distributions are consistently much larger for those taking IRA withdrawals prior to the age when minimum distributions are required — averaging at least $10,000 more per year until age 69. At that point, the difference falls to $7,900 but remains above $6,600 through age 71. The Social Security differential is also positive for those taking an IRA distribution prior to the age when minimum distributions are required — averaging at least an extra $1,000 per year in withdrawals for ages 63 through 68. The amounts derived from annuities and/or pensions are at least $1,000 per year less from ages 60 to 68 for those taking an IRA distribution prior to the age when minimum distributions are required.

The IRA withdrawal percentages by age for households taking an IRA distribution prior to the age when minimum distributions are required are shown in Figure 9. The withdrawal percentages are typically in the 8 to 10 percent range until age 68. After that point, the withdrawal percentage drops to nearly 4 percent and remains at that level until age 71.

![IRA Withdrawal Percentages by Age for Households Taking Distributions Prior to Age 71](image)

It would appear that, on average, those households taking an IRA distribution prior to the age when minimum distributions are required need the additional income to support their current consumption levels. This is based on Figure 10, which shows the average differences between income and spending amounts by age for households as a function of whether they are taking an IRA distribution prior to the age when required to do so. For those taking the IRA distribution prior to the required age, the average "excess" income is relatively small and never exceeds $2,300. In contrast, with the exception of Social Security early retirement age (age 62), the "excess" income for those not taking an IRA distribution prior to the required age is never less than $11,300. The average difference in the "excess" income amounts over the 12 years is $11,960. On a percentage basis, the average ratio of "excess" income amounts for those taking an IRA distribution prior to the required age relative to those who do not is 11.3 percent.

It would also appear that households taking an IRA distribution prior to the required age have a significantly larger amount of observed retirement wealth (defined as IRA and 401(k) balances from EBRI databases) vs. those who do not
take withdrawals from their IRAs prior to age 70-½. Those *not* taking an IRA distribution prior to the required age had an average retirement wealth at age 65 of $36,950, compared with $144,620 for those households taking them.

![Figure 10](image)

**Figure 10**
**Average Differences Between Income and Spending Amounts by Age for Households as a Function of Whether They Are Taking IRA Distributions Prior to Age 71**

Households With Distributions Exceeding the Required Minimum

Although households are typically required to take out minimum IRA withdrawals equal to a ratio of \((1/\text{life expectancy})\) after reaching age 70-½, it is possible for people to take out a larger amount. In this section we analyze these individuals relative to those over age 70-½ who take out only the minimum required distribution.

Figure 11 shows the average spending by age for households who take IRA withdrawals greater than the minimum required distribution. It does not appear that spending behavior for this group differs much from that of all households in our sample over age 70-½. This groups spends on average only $890 less, or approximately 1.6 percent.

Figure 12 shows the average retirement income amounts by age for households taking IRA withdrawals greater than the RMD, and Figure 13 shows the differences in retirement income components for those taking more than the RMD vs. the entire sample. As expected, those households taking more than the RMD have larger withdrawal amounts from IRAs than the full sample at the same age; the size of the differential is quite large at all ages and averages $9,640. They also have slightly larger Social Security benefits (an average of $585) but somewhat smaller values for annuities and/or pensions (an average of negative $930). It appears that households who take more than the minimum required distribution also have significantly less income from transfers from other financial institutions (an average of negative $4,925). The overall result is that households who take more than the RMD have significantly more total income for all ages, with an average difference of $4,365.
Figure 14 compares IRA withdrawal percentages as a function of whether households take IRA withdrawals greater than the RMD. Households who take an IRA withdrawal greater than the RMD have an average withdrawal rate 4.2 percentage points larger than the minimum required distribution rate. This averages out to an 83 percent increase in the withdrawal rate.

Further, Figure 15 shows that the average difference between income and spending amounts for households taking more than the RMD is lower than that for those who don’t. For those taking the RMD, the average “excess” income is relatively small and never exceeds $5,300. In contrast, the “excess” income for those taking more than the RMD is never less than $10,200. The average difference in the "excess" income amounts over the 15 years is $9,560.

It would appear that, on average, those older households taking more than the RMD may not necessarily need the additional income to support their current consumption levels. However, we do not know that for certain; there are several possible explanations for the excess distributions:

- A timing mismatch of when minimum required distribution are taken (e.g., late in the year) and when spending is funded (e.g., the following year).
- A delay in paying taxes owed on the distribution until the next year.
- Conversions / repositioning assets into taxable accounts.

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Figure 11

**Average Spending by Age for Households Who Take IRA Withdrawals Greater Than the Required Minimum Distribution vs. All Households**

- Households Who Take IRA Withdrawals Greater Than the Required Minimum Distribution
- All Households
Figure 12
Average Retirement Income Components for Households Who Take IRA Withdrawals Greater Than the Required Minimum Distribution

Figure 13
Differences in Retirement Income Components for Those Taking IRA Withdrawals Greater Than the Required Minimum Distribution vs. Entire Sample
Figure 14
IRA Withdrawal Percentages as a Function of Whether Households Take IRA Withdrawals Greater Than the Required Minimum Distribution

Figure 15
Average Differences Between Income and Spending as a Function of Whether Households Take IRA Withdrawals Greater Than the Required Minimum Distribution
What Does Spending Look Like?

As shown in Figure 6, average spending across the full sample increases gradually until it reaches a peak of $57,410 at age 71 and then decreases by approximately 9 percent to a value of $52,190 for those ages 85 and above.

In an attempt to determine whether households with annuities and/or pensions spent more in retirement than households who did not have this source of non-Social-Security retirement income, we analyzed the median spending curve by age, and by whether annuity and/or pension income was observable, by observable retirement wealth quartiles.

Figure 16 through Figure 19 show that for all four observable retirement wealth quartiles, there is more spending at almost all ages for households who have at least some annuities and/or pensions. However, the impact is much greater for households with lower observable retirement wealth. The overall median spending for the lowest and second-lowest observable wealth quartiles is larger for these households by $10,740 and $10,450, respectively. The difference in overall median spending declines to $8,954 for those in the third wealth quartile and drops to only $4,504 for those in the highest observable retirement wealth quartile.

Figure 16
Median Spending Curve by Age and Whether They Have Annuities and/or Pensions for the Lowest Wealth Quartile
Observable Retirement Wealth Less Than $40,000
Figure 17
Median Spending Curve by Age and Whether They Have Annuities and/or Pensions for the Second Wealth Quartile
Retirement Wealth Between $40,000 and $113,000

Figure 18
Median Spending Curve by Age and Whether They Have Annuities and/or Pensions for the Third Wealth Quartile
Observable Retirement Wealth Between $113,000 and $316,000
Could IRA Withdrawals Be **Larger** for Some Without the Risk of Running out of Money?

Several recent studies of Health and Retirement Study data have concluded that some retirees are not drawing down their retirement assets as rapidly as predicted by theoretical models. This is further underscored in a recent EBRI survey in which 57 percent of retirees stated that their goal was to NOT spend down their assets or even to grow their assets over the course of their retirement.

In this section of the paper, we seek to quantify how many of our observations would be able to continue to spend at least a specified percentage of their preretirement spending into retirement based on a large spending sample shown in Figure 20 using the following assumptions:

- We take the annual average preretirement total spending for the two years prior to retirement.
- We multiply this by the age-specific preretirement spending percentage from Figure 20 and adjust by the inflation assumption of 2 percent to establish *the minimum amount of spending* in retirement.\(^8\)
- Due to the limited sample size beyond two years post retirement, to determine the *actual spending level* we assume households continue to spend the annual average of two years’ observed post-retirement spending adjusted for inflation (2 percent assumption).
- We assume that the deterministic rate of return on the IRA balances is a nominal 5 percent (assumption for a 40 percent equity / 60 percent bond portfolio).\(^9\)

If the difference between the minimum amount of spending based on Figure 20 is larger than the actual spending in any year, we calculate the additional withdrawal amount from the IRA to make up the difference. However, if the minimum amount of spending is less than the actual spending level, no additional amount is withdrawn from the IRA.
Figure 21 shows what the expected age of IRA depletion would be if this strategy were followed for households with a "spending gap" for a variety of assumed marginal tax rates. At a zero percent marginal tax rate, the median age at which IRA balances would be depleted is only age 77. The median falls to age 76 for a 12 percent marginal tax rate and 75 at a 22 percent marginal tax rate. At the top marginal tax rate, the median age drops to 74. However, at least 40 percent of those with a "spending gap" would be able to continue this strategy under these assumptions until at least ages 77 to 81 (depending on the marginal tax rate), and 30 percent would not have the IRA balances depleted until at least ages 81 to 89, depending on the marginal tax rate.

What does this mean for quantifying the notion that some retirees could safely increase their level of retirement expenditures, at least up to a certain level of their preretirement expenditures? The answer will depend on what IRA depletion age is considered "safe". For example, if we arbitrarily choose age 100 as the subjective threshold for a safe age, we see from Figure 21 that at a zero percent marginal tax rate, 24 percent of our observations could increase their post-retirement expenditures to the percentages specified in Figure 20 of their preretirement levels in real terms. If the marginal tax rate is 12 percent, then 20 percent of our observations could increase their post-retirement expenditures to the percentages specified in Figure 20 of their preretirement levels in real terms. If the marginal tax rate is 22 percent, then the percentage of these households who could safely adopt this strategy decreases to 18 percent. At the top marginal tax rate (37 percent), only 15 percent of these households would have IRA balances that last until age 100.
What Happens to the Money at Retirement?

How Fast Does Money Leave 401(k) Plans?

Figure 22 shows the percentage of 2013 401(k) balances retained within the plan for the subsequent five years, by age. For each age cohort, more than half of the money remains in the 401(k) after two years. However, assets decline considerably in the third year, from an average of 59 percent to only 34 percent.

Figure 23 shows the average amount of 401(k) assets by year for households who retired in 2014. This tracks the same 1,328 participants through all six years and includes zero values when the assets have been entirely extracted from the plan. The analysis shows a 20 percent decline in the average plan amount in the year of retirement (from $140,000 in 2013 to $113,000 in 2014). The average plan amount declines to only 50 percent of the preretirement value by 2015. By 2016, less than a third ($45,000) of the 2013 plan amount remains on average, and by 2017, only 10 percent remains (the average plan amount rebounds slightly to 14 percent in 2018).
Figure 22
Percentage of 2013 401(k) Balances Retained for the Following Five Years by Age

Figure 23
Average Amount of 401(k) Assets by Year for Households Who Retired in 2014
What Happens to Asset Allocation When Assets Are Rolled Over From the 401(k) to IRA After Retirement?

Finally, in an attempt to analyze the change in the relative level of portfolio risk when assets are rolled over after retirement, we took a sample of 3,922 observations\textsuperscript{11} where at least 60 percent of the 401(k) assets are rolled over to an IRA. We then computed a "total equity percentage" for both the 401(k) and IRA portfolios, assuming 100 percent for equities, 60 percent for balanced funds, and the average age-specific equity concentrations for target-date funds. We find the median value for the difference between the 401(k) equity percentage and the IRA equity percentage to be 17 percentage points, meaning the IRA portfolio is less aggressive. However, we also found that there is substantial variation: At the 25\textsuperscript{th} percentile, the change is negative 3 percentage points; at the 75\textsuperscript{th} percentile, the percentage change is a positive 55 percentage points.

To better understand what is driving this phenomenon, we looked at the distribution of the difference between the equity concentration in the 401(k) plan and the equity concentration in the IRA plan as a function of the equity concentration in the 401(k) plan (Figure 24). Looking at the median values, we see that for participants with 401(k) equity concentrations of less than 40 percent, the equity concentration actually increases by 7 percentage points when the assets are rolled over to an IRA. For participants with a 401(k) equity concentration between 40 and 59.9 percent, however, the median difference is a positive 5 percentage points. For 401(k) participants with larger equity concentrations, the difference increases substantially: For those in the 60–79.9 percent range, the median difference is a positive 18 percentage points, whereas those in the 80–100 percent range have a median difference of positive 42 percentage points.

Figure 25 shows the asset allocation change after rollover as a function of having annuities and/or pensions. We included this analysis to test the hypothesis that some retirees may be more inclined to be aggressive with their IRA investments IF they had such a guaranteed stream of income. Of course, any increase in equity concentration would

![Figure 24: Asset Allocation Change at Rollover Into IRA](image-url)
likely be relatively small if the allocations already are very aggressive within the 401(k) (the left-hand side of the horizontal axis). Figure 25 shows that for those with the most conservative 401(k) equity allocation — 0–19.9 percent on the horizontal axis — who had no annuities and/or pensions, the equity concentration increased slightly when assets were rolled over into the IRA portfolio compared with the original 401(k) plan — by 2 percentage points. However, for comparable individuals with some annuities and/or pensions, the equity allocation increased significantly after the rollover — by 21 percentage points. This 19 percentage point difference was much larger than any for the other groups classified by 401(k) equity concentration. In fact, none of the cohorts with higher original 401(k) equity allocations had an equity allocation change that differed by more than 4 percentage points between those with and without annuities and/or pensions.

Figure 25
Asset Allocation Change at Rollover as a Function of Having Annuities and/or Pensions

<table>
<thead>
<tr>
<th>Equity Concentration in 401(k) in Year t-1 Minus Equity Concentration in IRA in Year t Where t = Rollover Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–19.9%</td>
</tr>
<tr>
<td>No Pension or Annuity</td>
</tr>
<tr>
<td>Some Pension or Annuity</td>
</tr>
</tbody>
</table>

Conclusion

In this Issue Brief, we summarized joint research between EBRI and J.P. Morgan Asset Management (JPMAM) on important policy questions involving retirees today:

- How do households generate income in retirement to support their spending and what role do IRA distributions play in this process?
- Are required minimum distributions from IRAs taken as a signal for appropriate withdrawal behavior? If not, do those who take out more than the minimum or start before age 70-½ need the distributions to support their spending behavior?
- Are some households continuing a smaller percentage of preretirement spending than would be indicated from industry averages? If so, how many of them would be able to increase their IRA distributions in a "safe" manner?
- What happens to 401(k) and IRA money at retirement? How rapidly does money leave 401(k) funds at retirement, and if money is rolled over from a 401(k) to an IRA, what happens to the asset allocation? Does
the relative equity concentration in a post-rollover IRA depend on whether the household has guaranteed retirement income other than Social Security (e.g., annuities and/or pensions)?

We conclude that overall, on average, those households taking an IRA withdrawal prior to the age for RMDs appear to need the additional income to support their current consumption levels, but that may not be the case for households taking more than the RMD after age 70-½.

Further, while a significant percentage of households in our sample with "spending gaps" could safely increase post-retirement expenditures, that percentage is not as large as conventional wisdom might lead one to believe. The results in our projections differed with what would be considered the "safe" age for IRA balances to be depleted as well as the marginal tax rate that would apply to the IRA distributions. We find that using age 100 as a threshold, the percentage of these households who could safely increase their consumption ranges from 15 percent at the top marginal tax rate to 24 percent at a zero marginal tax rate.

We also find a very significant overall decrease in asset allocation equity concentration after rollover from a 401(k) to an IRA at retirement age. We find the median value for the difference between the 401(k) equity percentage and the IRA equity percentage to be 17 percentage points (meaning the IRA portfolio is less aggressive). However, there is substantial variation: At the 25th percentile, the change is negative 3 percentage points; at the 75th percentile, the change is positive 55 percent percentage points.

We also investigated the asset allocation change after rollover as a function of whether the household has annuities and/or pensions. We find that when it comes to those in the most conservative 401(k) category — 0–19.9 percent on the horizontal axis — those with no pensions or annuities had a slightly larger equity concentration in their IRA portfolios after rollover than they had in their 401(k) plans (2 percentage points); however, those with some annuities and/or pensions had a significantly larger increase in equity concentration (21 percentage points). This sizable percentage point difference was unique to those with smaller initial 401(k) equity allocations.

In future research, we will continue to harness the data to gain a deeper understanding of how households behave in saving for and spending in retirement and what factors drive those behaviors.
Appendix

Figure Appendix A provides a schematic illustrating how the dataset is constructed. Each year, a cohort of retired households is created by first selecting the common participants between the EBRI and JPMC databases and then applying a series of selection criteria to this overlap group. The inputs to this process consist of three datasets, one from JPMC and two from EBRI: (1) a JPMC dataset containing monthly income and spending data for a year, (2) an annual EBRI participant-level IRA savings dataset, and (3) an annual EBRI participant 401(k) savings dataset.

The first step is to combine the two EBRI datasets to create an annual, participant-level dataset that includes the shared, encrypted participant identifier along with the IRA and 401(k) demographic variables, total assets, cash flow variables, and asset allocations. The list of participants in this dataset is then merged with the JPMC participant identifier dataset to select the participants who overlap both datasets. The list of overlap participants is then used to extract the selected demographic and income and spending variables from the JPMC spending dataset. The result is a dataset that includes, for the overlap sample, the JPMC income and spending and EBRI retirement savings variables.

Several selection criteria are then applied to the overlap sample to arrive at the final annual cohort. First, each participant must meet the definition for being fully retired. “Fully retired” is defined as having no employment income and only receiving retirement income such as Social Security and annuity and/or pensions in addition to transfers from institutions other than Chase for 12 consecutive months. Each participant must also be identified as a JPMC core customer, reside in the United States, and have spending data for all 12 months of the year. The participant data are then aggregated to the household level and households that (1) spend at least half of their estimated gross income, and (2) spend at most 30 percent of their total spending on non-JPMC credit cards are selected for the final annual cohort. This is to ensure that we are observing only the households for whom we have the majority of their spending.

After the annual cohort is identified, each year of data is combined to create a longitudinal, analytic dataset for the 2013 to 2018 reporting years. We then analyze the longitudinal household level view by age as a snapshot in time.
**Endnotes**

1. For additional information see, "The 3% difference: what leads to higher retirement savings rates?", Employee Benefit Research Institute & J.P. Morgan Asset Management Research Collaboration

2. Data privacy and contractual relationships with recordkeepers have been carefully protected as well as J.P. Morgan Chase’s data privacy (see below).

3. See the appendix for more detail.

4. The results are limited to ages 62 to 70 to only show retirement-related benefits and eliminate potential data-related issues where Social Security benefits were transferred to Chase for the first time after age 70.
This includes income and drawdown from non-tax advantaged investments and IRAs that are not in our database, but we see money being transferred into Chase accounts.

Beginning in 2020, the new age at which required minimum distributions from an IRA, SEP IRA, SIMPLE IRA, or retirement plan account must start is 72 (70-½ if they reach 70-½ before January 1, 2020). These rules do not apply to qualified Roth distributions.

Based on the J.P. Morgan Asset Management 2018 median spending curve. Source: Total spending: Select Chase credit and debit card, electronic payment, ATM withdrawal and check transactions from January 1 – December 31, 2018. Health care costs pre-age 65 and check and cash distribution excluding health care costs after age 65: 2017 CE Survey, College Educated; J.P. Morgan analysis. Health care costs age 65+: 2020 J.P. Morgan Guide to Retirement. Assumption for HH size (based on 2017 CE survey) for health care costs 65+: 1.9 at age 65 declining to 1.6 by end of analysis. Information that would have allowed identification of specific customers was removed prior to the analysis. Other includes: tax payments, insurance, gambling, personal care and uncategorized items.

Please note that this is NOT the same as the replacement ratio since it is a ratio of two spending amounts, not a percentage of post-retirement income divided by preretirement income.

Assumes J.P. Morgan Asset Management’s proprietary equilibrium returns of a 40 percent equity / 60 percent bond portfolio.

This would be appropriate for households with small levels of taxable income as well as those who are taking Roth distributions.

Note that this does not have the same spending filters as the previous sample. See the appendix for additional detail.

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