Assessing Economic Resources in Retirement: The Role of Irregular Withdrawals from Tax-Advantaged Retirement Accounts

Michael D. Hurd and Susann Rohwedder

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Abstract

Irregular withdrawals from IRAs and DC pensions are not included in standard measures of household income in the CPS or Health and Retirement Study. Yet, among retirees such withdrawals can supplement regular retirement income to finance consumption. It has been difficult to assess their importance, because of lack of informative survey data. In 2012 the HRS restructured the way it collects information about pensions, improving the measurement of irregular withdrawals from pension accounts. We analyzed HRS 2014 data and found that irregular withdrawals from pensions and IRAs totaled $2,049 for singles and $6,663 for couples averaged over everyone age 55 and older. These irregular withdrawals amount to about 5 percent of income for singles and 10 percent of income for married households. Irregular withdrawals are highest among those in the highest wealth quartile and those in the highest education group, reflecting the higher prevalence of pensions in high-paying jobs that are predominantly held by those with high education. Because of the greater frequency of IRA and pension withdrawals towards high SES individuals, accounting for them has little impact on estimates of the poverty rate.

Citation

Authors' acknowledgements

Introduction

People save during their working lives to finance consumption in retirement. An important part of the saving is tax-advantaged saving accounts such as defined benefit (DB) pensions, defined contribution (DC) pension accounts, IRAs, and Keoghs. Several important policy questions are associated with such savings. First, when these plans are fully accounted for, how well are retirees economically prepared for retirement? Second, what is the contribution of these plans to economic preparation? This question is of considerable importance given the large tax costs of their provision. Third, who benefits from these plans? In particular, how well do they help those in the lower part of the income distribution meet the challenges of financing a comfortable retirement?

In a DB world, it is relatively easy to measure the contribution from DB plans because, following retirement, DB plans typically provide a regular stream of income that can be successfully queried in surveys. The Current Population Survey (CPS) has questions about DB pension income as does the HRS, and such income is included in total income. But the DB world, while not at an end, is shrinking. Many more workers now have DC plans than DB plans, and additional workers and nonworkers have IRAs and Keogh accounts. Because annuitization of such plans (all of which we will refer to as "DC plans") is infrequent, asking about regular income from them to assess their support for consumption in retirement will underestimate their contribution. See Iams and Purcell (2013) for an assessment based on the Survey of Income and Program Participation (SIPP).

Some retirees make irregular withdrawals from DC plans; but apparently many others do not until they reach age 70½ when they must take a mandatory distribution. Capturing these

irregular withdrawals in a household survey is difficult, which likely has led to an underreporting of them in the CPS and, possibly, in the HRS.

Bee and Mitchell (2017) linked household data from the CPS with administrative data from the Internal Revenue Service (IRS), which recorded actual distributions from retirement accounts. They found that the CPS substantially under-measures retirement distributions when compared with IRS data. The underreporting came mainly from underreporting of retirement income from defined benefit pensions and from retirement account withdrawals such as distributions from DC accounts. The discrepancy between the CPS and the IRS data has increased over time.

In this paper, we use data from the 2014 wave of the Health and Retirement Study (HRS) to assess the importance of irregular withdrawals from pensions and individual retirement accounts to complement retirement income. To this end, we use data from the survey module on pensions that HRS substantially restructured starting with the 2012 data collection. Because the resulting data is quite different from previous HRS data on pensions, we include a description of the workings of this revamped section and some indicators of data quality.

HRS Data on Pension Withdrawals

Prior to 2012, HRS collected data on (regular) pension income, annuity income, and withdrawals from IRAs/KEOGHs. It also asked about the disposition of DC plans on termination of employment, to change jobs, or to retire. It did not query in a systematic way about irregular withdrawals from "dormant" DC plans, that is, from plans from prior employment that remained with the prior employer. For example, the HRS would not capture the irregular withdrawals by a 75 year old from a DC plan administered by a former employer.

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(If that same DC plan were rolled into an IRA, the HRS would capture withdrawals from the IRA.)

In 2012, the HRS revamped its pension section. It took a detailed inventory of all pensions whether current or inactive. It gave names to each pension with the objective of being able to ask about the disposition of each plan in future waves. It elicited the characteristics of each pension such as type, whether it was in pay status, if so, amounts of any regular benefits or payments, and if not, expected future benefits. It also queried about irregular withdrawals since separation from a former employer, but not in a manner permitting dating of the withdrawal. It is thus possible to form an inventory of pensions based on the HRS 2012 data, but because the date of the withdrawal was not captured, not an annualized total of money flows out of the pension plans. These queries are at the plan level which can be aggregated to the respondent level, and, in a coupled household, one can form an inventory of the household's pension holdings.

In 2014, the HRS further modified the pension instrument to account for the restructuring of the 2012 pension module in the context of a longitudinal survey. Because of the complete accounting of pension holdings undertaken in 2012, the HRS was able to ask about withdrawals from each pension since the last HRS interview in 2012 on a pension-by-pension basis. In principle, one can capture all extracts from tax-advantaged accounts between the 2012 HRS interview and the 2014 interview.

Extracting Irregular Withdrawals from Pensions based on HRS Section J2

Our strategy is to begin with HRS 2014 Section J2 which asks about all types of pension entitlements. There are two types of observations in Section J2: those with preloads about pensions as reported in J2 in 2012, and those without preloads because they were not interviewed

in HRS 2012. Among those with preloads, HRS asks, pension plan by pension plan, whether it is still owned. If the plan is no longer owned then follow-up questions establish what happened to the plan. If the plan is still owned then payment status is queried. In both cases HRS takes care to distinguish irregular withdrawals from regular pension income, which is already included in the HRS measure of income. For this study, we account for all irregular pension withdrawals since last interview. We annualize the reported amounts by dividing by the number of years since the last interview, which is two for the vast majority of respondents having participated in adjacent waves.[1]

Among those without preloaded pension plans in 2014, the HRS first inventories respondents' pension holdings plan by plan and then asks the same questions about what happened to plans no longer owned, and the payment status of the plans still owned. Again, we extract all reported irregular withdrawals. One complication is that, because this group did not complete the new pension section J2 in 2012, the time frame over which the reported withdrawals occurred may span several years (e.g., "since you left that employer") and the questionnaire does not ask any additional questions to narrow down the timing. As an approximation, we annualize the amounts by dividing by the number of years since last interview. While imperfect, this affects fewer than five percent of pension plans with irregular withdrawals.

HRS records the pension information at the pension plan-person-level. We conducted several data quality checks on the pension data, which we included in the Appendix. Here we report those findings most pertinent to this study.

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[1] Due to variation in interview dates and length in field period the distance between interviews in adjacent waves can be less than two years and up to three years for some respondents.

Rates of item nonresponse on the amount of irregular withdrawals averaged 15 percent.

The survey instrument did not include any unfolding bracket questions if the amount was not reported. We imputed missing amounts using a nearest neighbor approach to preserve the covariance between pensions and other covariates. The amount imputations were performed at the person-plan level using an inverse hyperbolic sine transformation on the dependent variable (annualized amount of irregular withdrawal). In the nearest neighbor approach, we compute predicted values for all pension plans, both those with and without exact amounts. For each plan missing an exact value, we find the plan that is closest in predicted values among the plans where an exact amount has been reported. We then impute the actual value reported by the nearest neighbor.

Covariates in the amount imputation process are comprised of 10 principal components of approximately 20 underlying variables, including age and its square, gender, nonwhite race/ethnicity, marital status, education (college graduate or high school/GED), health status (excellent or poor), job occupation, employment status (working, disabled, unemployed, retired), bequest expectations ($10,000+ or $100,000+), cognition, number of recorded pension plans, and number of years in the workforce. Although the covariates have systematic influence on the predicted values (R-squared about 0.14) the imputations will be imprecise because, unlike most other HRS monetary variables, there were no follow-up brackets for the amount of withdrawal.

In HRS 2014, there were 7,957 unique respondents with a record in the pension section (J2) data module. For 833 of these, or 10.5 percent, we identified one or more irregular withdrawals from a pension plan. The total number of plans with a recorded, irregular withdrawal was 908, of which 85 percent included the amount. For the 15 percent of plans where the withdrawn amount was not reported, we performed imputations. Table 1 shows the

distribution of the reported amounts at the plan level with a mean of $21,000 and a median of $6,000 prior to imputation. Post-imputation the distribution is very similar. There were three extreme values among the reported withdrawal amounts, one of which was imputed to another plan as part of the nearest neighbor imputation. After imputation and prior to any other analyses, we winsorized the four highest values as they had an outsized impact on the mean.

Summary statistics at the respondent-level are shown in Table 2. Among all respondents interviewed in HRS 2014, 4.4 percent have a recorded pension withdrawal amounting to $760 on average across all respondents. While this suggests only a modest impact on total income in the population, the amounts can be substantial at the individual level: Among those who made pension withdrawals, the median amount is $6,500 and the 99th percentile is $175,000.

HRS Data on IRA and Keogh Withdrawals

The HRS elicits information on whether households own any individual retirement and Keogh accounts and asks related follow-up questions in the Asset and Income section (Section Q) of the survey. In married or partnered households, the financial respondent answers all questions in this section on behalf of both the respondent and spouse. After eliciting ownership of IRA accounts, the survey asks about the total number IRA/Keogh accounts the household owns. In couples, it also queries who owns the respective accounts, and the balance in up to three accounts. If the household owns more than three accounts, then the third amount reflects the sum of all other accounts. Turning to withdrawals from IRA and Keogh accounts, the survey asks separately about the withdrawals from each account since last interview (or in last 24 months in case of new interviews), whether any withdrawals were made and, if so, the frequency of withdrawal(s). Should the amount be missing, the financial respondent is asked a sequence of

unfolding brackets. For details on data quality and imputations, please see Hurd et al. (2018).

Table 3 reports respondent-level summary statistics. In HRS 2014, 12.8 percent of respondents made withdrawals from IRA or Keogh accounts, amounting to $1,331 on average. Conditional on making a withdrawal, the average amount is $10,400 and the median is $4,615. While the amounts may be modest at the population-level, for some individuals the amounts are substantial as evidenced by the amount associated with the 99th percentile of withdrawal amounts ($81,379).

Results

We undertake two main comparisons. The first compares income measured in the CPS with income measured in HRS both before and after augmentation for IRA withdrawals and irregular withdrawals from DC-type accounts. The second compares the main measure of income in the HRS (which differs somewhat from that used in the CPS comparison) with that measure after augmentation.

The main measure of income in the HRS is called HwITOT under the RAND HRS naming convention where 'w' indicates the wave. Thus, income in 2014 is labeled H12ITOT because it was elicited in HRS wave 12. In general, H12ITOT includes the same types of income as in the CPS. Of particular note for this paper, is that both CPS and HRS include pension and annuity income, so we expect that both would include DB pension benefits, and, most likely, flows from DC accounts that are "regular," such as a standing order to send monthly a check from a DC account. It is likely that respondents would exclude irregular withdrawals, and, indeed, HRS specifically excludes lump-sum payments from retirement accounts. However, the HRS income measure differs from the CPS measure in several respects: It includes the cash equivalent of food stamps; it measures gross Social Security income rather than subtracting out withholdings for

Medicare Part B; it does not include income of household members beyond the income of the HRS respondent and spouse or partner (if any). The RAND HRS includes an income measure that has made the adjustments to make the income measure equivalent to the CPS measure; it is called H12POVHHI in wave 12. We use H12POVHHI in our comparison with CPS income.

Table 4 shows mean and median CPS income, equivalently measured HRS income, and equivalently measured and augmented HRS income. The first two panels show incomes of households of married (or partnered) persons and single persons; the last four panels disaggregate single person households into several types according to whether additional people are present. We have followed CPS definitions to make them comparable. One possible point of error comes from assigning a personal attribute such as age to a household. The CPS has the concept of the "householder," which relates to the owner or renter of the dwelling. The HRS does not have that concept. In the case of an HRS couple, we assume that the oldest person corresponds to the householder (which often is the husband) and use that person's age as the age of the household.

Among couples, HRS income is in all instances greater than CPS income. For example, among 55 to 59 year olds, CPS median income was $94,671; HRS median income was $107,000, or 13 percent greater. The difference in mean income is greater still, about 27 percent greater. Except for persons 55 to 59, among singles, HRS median and mean income, are greater than CPS income, sometimes by substantial amounts.

It is not surprising that HRS income is greater than CPS income: That has been found before, and several reasons have been identified (Hurd, Juster and Smith 2003; Hurd and Rohwedder 2006). Beginning in 1996, HRS linked the query about income from assets to the query about asset amounts, which resulted in a substantial increase in dividend and interest

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income: Mean interest and dividends more than doubled between HRS 1994, which did not link, and 1996, which did link. CPS does not link. HRS uses a financial respondent to report on income and assets of a couple: The more knowledgeable person is likely to know about more sources of income. The CPS attempts to interview the "householder" (renter/owner of dwelling), but may take the interview from someone else. The HRS uses brackets which permits unsure or suspicious respondents to report a range of values. Bracketing is important among higher income individuals because covariates have limited explanatory power to produce large predicted values.

Among single persons, HRS income is greater than CPS income except for ages 55 to 59. However, among sub-types of single households (last four panels) the discrepancy between CPS income and HRS does not show a consistent pattern. One reason is the small sample size in the HRS for those types of households. A second is that HRS spends considerably more interview time collecting data on the income of the HRS respondent and spouse and relatively less on the incomes of other family members.

The right-most columns show HRS total household income augmented by IRA withdrawals and by estimated irregular withdrawals from DC-type accounts. These are population medians and means, i.e. taken over those who withdrew and those who did not withdraw. The effect of the augmentation is noticeable, but highly variable depending on age. For example, among couples ages 55 to 59 median income increased from $107,000 to $108,000, an increase of 0.9 percent, and mean income from $153,736 to $155,254, an increase of 1.0 percent. Among couples 75 or older, the increases in the population median and mean are 8.4 percent and 8.6 percent respectively.

Table 5 has a more compact way of showing the comparison between CPS and HRS. It has the percentage difference between HRS and CPS means and medians, columns (1) and (2); percentage difference between HRS and CPS means and medians when HRS income is augmented, columns (3) and (4); and the increase in the percentage difference in the last two columns. For example, among couples ages 55 to 59, before augmentation median HRS income is 13.0 percent greater than median CPS income; after augmentation, the HRS median is 14.1 percent greater for an increase of 1.1 percentage points. Among single persons ages 55 to 59 HRS median and mean income is less than the CPS medians and means. Irregular withdrawals reduce the gap, but do not close it. At older ages, especially at the mean, HRS income is considerably higher than CPS income, and irregular withdrawals increase the difference.

Because of differences in measurement and possibly for other reasons, HRS and CPS income differ, and sometimes by substantial amounts. It would, therefore, seem more fruitful to study the effect of irregular withdrawals by comparisons of income and augmented income within the HRS. Doing so has the further advantage that it focuses on the best-measured income measure in the HRS, income of the respondent and spouse.

Table 6 shows in the columns "HRS income" the median and mean incomes of respondent and spouse in the case of couples, and of the respondent in the case of single persons. A comparison of Table 4 (HRS Total household income) and Table 6 (HRS income) shows the combined effects of the included and excluded items. Among both couples and single persons, the CPS-type measure from Table 6 is higher, by 5 to 10 percentage points in the case of couples, and by 14 to 32 percentage points in the case of single persons.

In Table 6, augmented income is shown in the middle columns and the median and mean amounts of IRA and of irregular DC withdrawals are shown in the right columns. These are

population medians and means, including those who did not make withdrawals. The medians of IRA and DC withdrawals are all zero because fewer than half of HRS households make such withdrawals. The means are substantial, however, and in some cases, the sum of the two reaches about $6,000. IRA withdrawals tend to be highest after individuals have reached the age when distributions become mandatory, that is, after age 70 ½. Pension withdrawals tend to be highest among those in their 60s, most likely because the withdrawals mainly take place on retirement.

The percentage increases in income from the irregular withdrawals are shown in Table 7. During the late 50s, when most are still working, the impact on income is minimal; but at 65 or older when retirement assets can be expected to be used for spending, the impact is to increase income by 4 to 10 percent among couples, and by 5 to 11 percent among single persons.

Because the required minimum distribution must first be taken during the year in which someone turns $70^1/_2$, we also analyzed the age band 72 to 77 (Table 8). Among couples, the augmentation increased the median and mean by 10.1 and 8.9 percent respectively; among singles, the increases were somewhat smaller.

The preceding tables showed results for the household, using household weights and classifying according to the age of the older person in the case of couples. We now present results at the individual level using, in the case of couples, the characteristics of each spouse, and using person weights. Thus, the entries will show the income of the household in which a person with the specified characteristic lives. In the case of couples this will result in an approximate doubling of the number of observations, as the income of the household will enter the table under the characteristic of the husband, and also enter the table under the characteristic of the wife.

Table 9 shows the effect among those 65 or older of irregular withdrawals by wealth quartiles and by education. Among couples, irregular withdrawals increase median income in

the highest wealth quartile by 12.3 percent, but just by 2.8 percent in the lowest quartile.

Qualitatively this is to be expected because higher lifetime incomes lead to both higher saving

rates outside of tax-advantaged accounts, and to a greater tendency to save via IRAs and optional

DC accounts. Further, high income jobs are associated with pension plans, most of which are

DC plans. The increase with wealth quartile is especially sharp for median, irregular

withdrawals among singles: At the lowest wealth quartile there are hardly any irregular

withdrawals, yet at the highest quartile irregular withdrawals increase median income by 15.3

percent. For both couples and singles, the increase in income associated with irregular

withdrawals is flattened out at the mean. The patterns with respect to education are similar to

those with respect to wealth quartiles: sharply increasing median income, less so for mean

income.

Table 10 has the same information except that it pertains to those 75 or older. The general

patterns are the same with irregular withdrawals having a greater impact at higher wealth

quartiles, and among those with higher education.

Because of the strong correlation between wealth quartiles and the impact of irregular

withdrawals, we would not expect that poverty rates would be highly affected by the inclusion of

irregular withdrawals, and, indeed, the impact on poverty rates is minimal (Table 11). In many

of the household cells of the table it is zero. A modest effect is found among single persons

where the poverty rate declines from 17.0 percent to 16.4 percent, a change of 0.6 percentage

points, when irregular withdrawals are added to conventionally measured income.

Conclusions

In this paper, we sought to quantify the importance of irregular withdrawals from DC pensions and IRAs by comparing them to the incomes of older households. These irregular withdrawals are difficult to capture in household surveys. With the restructuring of the HRS pension section the tracking of pension balances and withdrawals was improved. Based on HRS 2014, irregular withdrawals from pensions and IRAs amounted to $2,049 for singles and $6,663 for couples on average among those 55 and older, but they are zero at the median. Among those making withdrawals, the average amount is $17,000 for pension withdrawals and $10,400 for IRA withdrawals. Pension withdrawals tend to be highest among those in their 60s, most likely because the withdrawals mainly take place on retirement; IRA withdrawals tend to be highest after individuals have reached the age when distributions become mandatory, that is, after age 70 ½. The sum of mean irregular IRA and pension withdrawals is about 5 percent of mean income of singles and 10 percent of mean income of married households. The irregular withdrawals are concentrated among those in the highest wealth quartile and those in the highest education group, reflecting the higher prevalence of pensions in high-paying jobs that are predominantly held by those with high education. Because the withdrawals are heavily skewed toward high SES individuals, accounting for them has little impact on estimates of the poverty rate.

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Table 1. Pension withdrawal amounts, conditional on any withdrawal, plan level, unweighted

Amount ($)	N	Mean	Std Dev	Min	P1	Q1	Median	Q3	P99	Max
Pre-impute	759	21,339	118,770	1	150	2,400	6,000	15,000	175,000	2,654,471
Post-impute	908	21,780	118,204	1	150	2,500	6,000	15,000	166,667	2,654,471

Notes: Based on HRS 2014 data. 3 extreme values reported (see Max). One is picked as nearest neighbor in imputation. All 4 extreme values are winsorized after imputation, prior to further analysis.

Table 2. Frequency and amounts of pension withdrawals, HRS 2014, respondent-level, unweighted

Variable	N	Mean	Std Dev	Min	P1	Q1	Median	Q3	P99	Max
Any withdrawal	18,747	0.04	0.21	0	0	0	0	0	1	1
Pre-impute ($)	18,747	864	24,293	0	0	0	0	0	15,000	2,654,471
Post-impute*($)	18,747	756	7,760	0	0	0	0	0	20,000	250,000
Among respondents with withdrawals										
Pre-impute ($)	833	19,443	113,735	0	0	1,000	5,000	13,750	175,000	2,654,471
Post-impute*($)	833	17,013	32,860	1	200	2,500	6,500	17,000	175,000	250,000

*Post imputations and post-winsorizing of the 4 largest, extreme values.

Table 3. Frequency and amounts of IRA/Keogh withdrawals, HRS 2014, respondent-level, unweighted

Variable	N	Mean	Std Dev	Min	P1	Q1	Median	Q3	P99	Max
Any withdrawal	18,747	0.128	0.33	0	0	0	0	0	1	1
Amount ($)	18,747	1,331	7,605	0	0	0	0	0	29,895	350,946
Among respondents with IRA/Keogh withdrawals										
Amount ($)	2,400	10,400	18,909	4	83	1,778	4,615	11,453	81,379	350,946

Table 4. Income in 2013 in CPS, total household income in HRS, and total household income in HRS augmented by irregular withdrawals from IRAs and DC-type pension accounts

		CPS			HRS Standard			HRS Augmented	
					Total household income			Total household income + withdrawals (IRAs & Pensions)	
Age	N	Median	Mean	N	Median	Mean	N	Median	Mean
Married persons									
55 - 59	6,517	94,671	121,219	1,253	107,000	153,736	1,253	108,000	155,254
60 - 64	5,688	80,784	107,626	1,235	93,740	130,816	1,236	100,000	135,563
65 - 69	4,825	67,440	97,191	858	79,757	122,158	858	83,660	127,223
70 - 74	3,606	60,148	80,184	864	65,434	97,203	865	72,050	103,160
75 +	4,442	45,160	64,713	1,733	52,261	74,849	1,742	56,659	81,264
Single persons									
55 - 59	5,448	34,036	51,703	1,219	31,396	47,008	1,219	32,080	48,515
60 - 64	4,681	31,647	46,696	1,106	32,001	70,778	1,106	34,400	72,955
65 - 69	4,157	30,393	42,641	679	35,000	59,626	679	38,300	62,760
70 - 74	3,181	26,630	37,303	845	31,279	57,572	845	33,559	60,083
75 +	8,222	23,470	32,657	2,665	26,459	44,981	2,665	27,783	47,030
Male household with others, no spouse									
55 - 59	507	54,039	76,289	174	34,000	52,927	174	35,000	53,231
60 - 64	233	47,192	67,580	100	32,680	75,661	100	40,120	78,974
65 - 69	239	50,276	58,958	44	56,019	56,274	44	56,019	58,565
70 - 74	105	36,792	70,099	54	41,375	52,539	54	41,375	54,625
75 +	305	64,706	65,258	183	47,003	80,856	183	49,923	82,342
Female household with others, no spouse									
55 - 59	1,236	45,582	73,551	435	35,001	51,163	435	35,001	51,976
60 - 64	849	43,026	50,875	373	42,328	57,495	373	45,500	59,941
65 - 69	683	44,222	59,368	212	44,403	78,188	212	47,422	82,229
70 - 74	495	46,998	57,975	242	41,835	66,371	242	42,359	67,853
75 +	1,030	34,209	52,735	733	40,459	61,453	733	40,811	62,486
Male Alone									
55 - 59	1,849	28,003	43,409	263	25,000	45,834	263	27,126	49,067
60 - 64	1,600	32,841	52,404	225	27,500	109,343	225	31,720	112,059
65 - 69	1,375	26,689	41,587	124	31,355	65,107	124	31,659	66,227
70 - 74	795	26,564	35,517	156	30,644	80,171	156	33,209	84,403
75 +	1,718	24,660	37,502	422	28,061	44,521	422	30,545	48,637

Female Alone

55 - 59	1,856	26,893	38,699	347	30,036	41,315	347	30,168	42,403
60 - 64	1,999	24,047	37,919	408	30,000	51,366	408	30,480	52,658
65 - 69	1,860	25,499	35,182	299	30,660	46,995	299	34,879	50,894
70 - 74	1,786	20,417	30,440	393	25,259	42,229	393	27,659	44,375
75 +	5,169	18,501	25,122	1,327	21,107	33,415	1,327	22,683	35,303

Note: HRS 2014 data, recording income for last calendar year (i.e. 2013). The HRS sample excludes institutionalized households. HRS total household income (H12POVHHI) in this table from the most widely used HRS measure of income (H12ITOT) by adjustments to match CPS definitions: the value of food stamps is excluded, Medicare Part B premiums are deducted from Social Security income, and income of other resident family members added in. See the RAND HRS codebook for complete definitions of H12ITOT and H12POVHHI.

Table 5. HRS total household income relative to CPS: percent difference

	(1)	(2)	(3)	(4)	(3) − (1)	(4) − (2)
	HRS relative to CPS		HRS including irregular withdrawals relative to CPS		Difference in relative percentages	
Age	Median	Mean	Median	Mean	Median	Mean
Married persons						
55 - 59	13.0	26.8	14.1	28.1	1.1	1.3
60 - 64	16.0	21.5	23.8	26.0	7.7	4.4
65 - 69	18.3	25.7	24.1	30.9	5.8	5.2
70 - 74	8.8	21.2	19.8	28.7	11.0	7.4
75 +	15.7	15.7	25.5	25.6	9.7	9.9
Single persons						
55 - 59	-7.8	-9.1	-5.7	-6.2	2.0	2.9
60 - 64	1.1	51.6	8.7	56.2	7.6	4.7
65 - 69	15.2	39.8	26.0	47.2	10.9	7.3
70 - 74	17.5	54.3	26.0	61.1	8.6	6.7
75 +	12.7	37.7	18.4	44.0	5.6	6.3
Male household with others, no spouse						
55 - 59	-37.1	-30.6	-35.2	-30.2	1.9	0.4
60 - 64	-30.8	12.0	-15.0	16.9	15.8	4.9
65 - 69	11.4	-4.6	11.4	-0.7	0.0	3.9
70 - 74	12.5	-25.1	12.5	-22.1	0.0	3.0
75 +	-27.4	23.9	-22.8	26.2	4.5	2.3
Female household with others, no spouse						
55 - 59	-23.2	-30.4	-23.2	-29.3	0.0	1.1
60 - 64	-1.6	13.0	5.8	17.8	7.4	4.8
65 - 69	0.4	31.7	7.2	38.5	6.8	6.8
70 - 74	-11.0	14.5	-9.9	17.0	1.1	2.6
75 +	18.3	16.5	19.3	18.5	1.0	2.0
Single male alone						
55 - 59	-10.7	5.6	-3.1	13.0	7.6	7.4
60 - 64	-16.3	108.7	-3.4	113.8	12.8	5.2
65 - 69	17.5	56.6	18.6	59.2	1.1	2.7
70 - 74	15.4	125.7	25.0	137.6	9.7	11.9
75 +	13.8	18.7	23.9	29.7	10.1	11.0
Single female alone						
55 - 59	11.7	6.8	12.2	9.6	0.5	2.8
60 - 64	24.8	35.5	26.8	38.9	2.0	3.4
65 - 69	20.2	33.6	36.8	44.7	16.5	11.1
70 - 74	23.7	38.7	35.5	45.8	11.8	7.0
75 +	14.1	33.0	22.6	40.5	8.5	7.5

Note: See notes to Table 4.

Table 6. HRS income with and without irregular IRA and DC withdrawals

Age	N	HRS income		HRS income plus irregular IRA and DC pension withdrawals		Irregular IRA withdrawals		Irregular DC-type pension withdrawals	
		Median	Mean	Median	Mean	Median	Mean	Median	Mean
Married persons									
55 - 59	1,253	99,505	146,706	101,340	148,224	0	646	0	871
60 - 64	1,236	87,400	123,337	91,480	128,171	0	1,873	0	2,962
65 - 69	858	74,636	115,939	77,460	121,004	0	2,393	0	2,672
70 - 74	865	60,908	89,941	64,616	95,938	0	4,493	0	1,504
75 +	1,742	47,644	69,015	51,600	75,677	0	5,638	0	1,025
Single persons									
55 - 59	1,219	25,200	39,554	26,000	41,061	0	197	0	1,310
60 - 64	1,106	25,050	62,357	27,500	64,534	0	934	0	1,243
65 - 69	679	27,007	51,909	30,096	55,042	0	1,660	0	1,474
70 - 74	845	24,080	47,099	25,644	49,611	0	1,999	0	513
75 +	2,665	20,396	33,999	21,576	36,048	0	1,875	0	174
Male household with others, no spouse									
55 - 59	174	28,800	43,308	28,800	43,612	0	191	0	113
60 - 64	100	20,748	44,344	21,302	47,657	0	2,135	0	1,178
65 - 69	44	46,800	47,301	46,800	49,592	0	308	0	1,983
70 - 74	54	23,723	34,951	23,723	37,036	0	746	0	1,339
75 +	183	20,640	52,416	21,600	53,903	0	1,289	0	198
Female household with others, no spouse									
55 - 59	435	20,000	29,558	20,000	30,371	0	136	0	676
60 - 64	373	22,800	36,675	24,877	39,120	0	576	0	1,870
65 - 69	212	19,496	51,946	23,016	55,988	0	3,279	0	762
70 - 74	242	21,003	27,739	21,108	29,221	0	1,197	0	286
75 +	733	16,260	25,910	16,980	26,943	0	964	0	69
Male Alone									
55 - 59	263	26,551	45,806	27,126	49,039	0	190	0	3,043
60 - 64	225	27,500	110,313	31,687	113,028	0	982	0	1,733
65 - 69	124	30,096	64,122	30,400	65,242	0	299	0	822
70 - 74	156	29,400	78,919	31,950	83,152	0	3,629	0	603
75 +	422	26,802	43,303	29,485	47,419	0	3,654	0	462
Female Alone									
55 - 59	347	30,036	41,348	30,168	42,435	0	264	0	824
60 - 64	408	30,000	51,295	30,338	52,587	0	821	0	470
65 - 69	299	28,604	45,725	33,620	49,624	0	1,750	0	2,149
70 - 74	393	24,000	41,094	26,400	43,241	0	1,691	0	456
75 +	1,327	20,124	32,304	21,580	34,193	0	1,765	0	123

Note: HRS income (h12itot) is income of the HRS respondent and spouse (if a couple). It does not include income of other family members. See note to Table xx for other differences from CPS definitions.

Table 7. Percentage increase in median and mean income associated with irregular IRA and DC-type pension withdrawals. HRS income

	N	Median	Mean
Married persons			
55 - 59	1,253	1.8	1.0
60 - 64	1,236	4.7	3.9
65 - 69	858	3.8	4.4
70 - 74	865	6.1	6.7
75 +	1,742	8.3	9.7
Single persons			
55 - 59	1,219	3.2	3.8
60 - 64	1,106	9.8	3.5
65 - 69	679	11.4	6.0
70 - 74	845	6.5	5.3
75 +	2,665	5.8	6.0
Male household with others, no spouse			
55 - 59	174	0.0	0.7
60 - 64	100	2.7	7.5
65 - 69	44	0.0	4.8
70 - 74	54	0.0	6.0
75 +	183	4.7	2.8
Female household with others, no spouse			
55 - 59	435	0.0	2.8
60 - 64	373	9.1	6.7
65 - 69	212	18.1	7.8
70 - 74	242	0.5	5.3
75 +	733	4.4	4.0
Male Alone			
55 - 59	263	2.2	7.1
60 - 64	225	15.2	2.5
65 - 69	124	1.0	1.7
70 - 74	156	8.7	5.4
75 +	422	10.0	9.5
Female Alone			
55 - 59	347	0.4	2.6
60 - 64	408	1.1	2.5
65 - 69	299	17.5	8.5
70 - 74	393	10.0	5.2
75 +	1,327	7.2	5.8

Note: HRS income (h12itot) is income of the respondent and spouse (if a couple). It does not include income of other family members. See note to Table 4 for other differences from CPS income

Table 8. HRS income and HRS income augmented by irregular withdrawals from IRAs and DC-type accounts. Ages 72 to 77

	N	HRS income		HRS augmented income		% increase	
		Median	Mean	Median	Mean	Median	Mean
Couples	1,173	54,960	81,674	60,510	88,983	10.1	8.9
Singles	1,216	23,044	47,577	24,781	50,029	7.5	5.2

Note: HRS income (h12itot) is income of the HRS respondent and spouse. It does not include income of other family members. See note to Table 4 for other differences from CPS income.

Table 9. HRS income and percent increase when augmented with irregular withdrawals. Ages 65 or older

	N	HRS income		% increase in median or mean	
		Median	Mean	Median	Mean
Married persons					
Wealth Quartile					
Lowest	1430	34,980	44,322	2.8	3.4
2	1455	47,676	59,303	5.8	4.7
3	1441	61,450	79,238	9.1	8.1
Highest	1455	99,800	158,757	12.3	7.6
Total	5781	58,500	89,719	8.8	6.8
Single persons					
Wealth Quartile					
Lowest	946	13,680	18,205	0.4	0.7
2	1077	17,954	23,646	1.7	2.1
3	1090	24,000	32,067	5.8	5.8
Highest	1076	41,040	79,124	15.3	7.4
Total	4189	21,724	40,793	8.1	5.7
Married persons					
Education Level					
1.Lt High-school	951	31,746	41,173	2.2	3.9
2. HS grad/GED	2000	47,712	62,211	9.1	7.1
3.Some college	1317	61,390	85,381	8.2	7.3
4.College and above	1510	96,000	143,832	11.2	6.7
Total	5778	58,500	89,733	8.8	6.8
Single persons					
Education Level					
1.Lt High-school	1067	13,240	19,602	1.5	2.6
2. HS grad/GED	1578	21,000	30,055	8.6	7.8
3.Some college	880	25,504	37,531	8.5	6.5
4.College and above	663	42,079	89,815	12.0	4.7
Total	4188	21,724	40,796	8.1	5.7

Note: HRS income (H12ITOT) is income of the HRS respondent and spouse. It does not include income of other family members. See note to Table 4 for other differences from CPS income.

Table 10. HRS income and percent increase when augmented with irregular withdrawals. Ages 75 or older

		HRS income		% increase in median or mean	
	N	Median	Mean	Median	Mean
Married persons					
Wealth Quartile					
Lowest	640	29,280	35,657	5.5	3.2
2	648	39,328	49,318	5.2	4.5
3	650	48,000	62,605	9.8	8.6
Highest	657	79,915	110,813	18.2	13.9
Total	2595	46,164	67,144	9.7	9.7
Single persons					
Wealth Quartile					
Lowest	583	13,442	16,045	0.5	0.5
2	683	16,728	21,140	2.4	1.3
3	704	20,760	28,241	6.7	4.3
Highest	695	37,132	60,871	12.4	9.0
Total	2665	19,980	33,416	5.4	5.9
Married persons					
Education Level					
1.Lt High-school	501	30,876	37,033	2.3	5.4
2. HS grad/GED	946	40,728	53,256	8.6	9.6
3.Some college	518	51,180	73,702	11.0	8.2
4.College and above	629	75,852	100,457	12.2	11.6
Total	2594	46,200	67,149	9.6	9.7
Single persons					
Education Level					
1.Lt High-school	727	13,683	17,877	1.2	2.3
2. HS grad/GED	1015	19,500	27,076	4.8	5.3
3.Some college	512	22,560	33,198	10.2	5.9
4.College and above	410	38,748	70,855	6.8	7.7
Total	2664	19,980	33,420	5.4	5.9

Note: HRS income (H12ITOT) is income of the HRS respondent and spouse. It does not include income of other family members. See note to Table 4 for other differences from CPS income.

Table 11. Percent of population in poverty according to household income and household income augmented with irregular withdrawals

Age	N	Income used Household	Augmented household	Difference in rates
Couples				
55-59	1253	5.9	5.8	-0.1
60-64	1236	6.4	6.4	0.0
65-69	858	5.1	4.8	-0.3
70-74	865	2.2	2.2	0.0
75 plus	1742	2.9	2.8	-0.1
Total	5954	4.8	4.7	-0.1
Singles				
55-59	1219	24.5	23.2	-1.3
60-64	1106	21.5	20.6	-0.9
65-69	679	15.2	14.5	-0.7
70-74	845	10.7	10.6	-0.1
75 plus	2665	13.1	12.9	-0.2
Total	6514	17.0	16.4	-0.6

Note: Household income in this table is total household income (h12povhhi). It includes adjustments to match CPS definitions: the value of food stamps has been excluded, Medicare Part B premiums have been deducted from Social Security income, and income of other resident family members added in.

Appendix

Appendix 1: HRS 2014 Pension Section

The HRS redesigned the pension section (J2) with the objective to build a comprehensive inventory of all past and current pensions, establish which ones are still owned, and facilitate the linking of pension plans for each respondent over time.

The new design was first administered in HRS 2012. Preloads were created based on respondents' pension reports from previous HRS waves, which had followed a very different elicitation strategy. In 2012, a large fraction of preloaded plans were denied by respondents (about 30 percent of preloaded plans) and about 20 percent of respondents reported plans that had not previously been captured in a way to be entered into the preloads. This confirms that the pension information from prior waves was lacking information to link pension plans longitudinally.

For HRS 2014, the construction of preloads was based on the new inventory of pensions (or pension grid) obtained in 2012 that asked respondents to assign a name to each pension to facilitate the longitudinal tracking of pensions.

The data resulting from the HRS Pension Section J2 are recorded at the pension plan query-respondent level, that is each record represents a different pension plan query and more than one query can pertain to a single respondent. Most records are associated with different pension plan, but some records represent a plan query that was answered negatively. For example, a respondent who entered Section J2, but did not have any pension plan to report still has a record in the raw data even though it is not associated with any pension plan. Similarly, a separate record exists when a respondent was asked about "any other" plan and then answers no.

In HRS 2014, a total of 7,957 respondents had at least one record in the pension module; of them, 6,432 has at least one preloaded pension plan. Because some respondents had multiple records (due to multiple plans, or a query for another plan which was then denied) there were 18,125 records in total in the pension module.

Appendix Table 1. HRS 2014 pension module summary

HRS 2014 pension plan-level info	Count	HRS 2014 Respondent level info	Count
Total records	28,915	Total records	18,747
In pension section	18,125	In pension section	7,957
In preload	9,120	In preload	6,432

To verify whether the longitudinal tracking of pension plans improved with the new pension section design we tabulated the fraction of previously reported plans as included in the preloads (Total N=9,120) that were either confirmed or denied (App. Table 2). Only 4 percent of preloaded plans were denied in 2014, and 96 percent were confirmed by respondents. The majority of confirmed plans were still owned in 2014. This seems like a huge improvement compared to the plans that were preloaded in 2012. That said, those preloads were based on information not just from the preceding wave, but also on data from earlier waves.

Appendix Table 2. Status of preloaded pension plans

Pension plan	N	%
Confirmed, still owned	7499	82.2
Confirmed, no longer owned	1225	13.4
Denied	369	4.0
Incomplete information	27	0.3
All	9120	100.0

Pension payment status and disposition

For the purpose of this project the questions about what happened to a pension plan are particularly important and whether the respondent receives benefits, other payments from this plan or makes regular or irregular withdrawals. The answers are categorized as follows in the HRS data, allowing multiple mentions:

- Receiving regular payments/benefits;

- Left money in the account;

- Withdrew <u>all</u> of the money/received full amount as cash settlement or lump-sum;

- Withdrew <u>some</u> of the money;

- Rolled over into IRA;

- Converted to or purchased an annuity;

- Haven't done anything with plan/waiting to become eligible for benefits;

- Combined it with another plan;

- Transferred to new employer;

- Lost all benefits;

- Frozen, or lost some benefits;

- Other (specify).

Appendix Table 3 shows that for almost all plans the pension plan disposition is observed with few missing observations remaining. Among confirmed plans that respondents still own, 63 percent are not yet disbursing any money yet, which is similar to the 64 percent of newly reported plans. However, this rate is less than a half percent for confirmed plans that respondents no longer own. In this group 84 percent have a recorded disposition and for 9 percent of plans the respondent could not answer or said "other."

Appendix Table 3. Reported payment status of pension plans

Pension plan disposition	Confirmed, still owned		Confirmed, no longer owned		Newly reported plan	
	N	%	N	%	N	%
Reported	2,666	35.55	1,031	84.16	433	34.12
DK/RF/Other only	90	1.20	112	9.14	29	2.29
Did not do anything with plan yet / waiting to qualify for benefits	4,735	63.14	5	0.41	806	63.51
Missing	8	0.11	77	6.29	1	0.08
All	7,499	100.00	1,225	100.00	1,269	100.00

Notes: "Reported" includes all reported forms of benefit receipt or withdrawal. If R reports "left money in account" without any other form of benefit disbursement then the plan is coded as "R did not do anything with plan yet / waiting to qualify for benefits."

Additional/new plans reported in HRS 2014

As another data quality check we looked at how many additional plans were reported in 2014, some of which may have been missed in 2012. Among respondents who did not have any preloaded plans, 512 reported new plans; among the 6,432 respondents who did have preloaded plans 603 reported additional plans, so 90 percent did not report any additional plans beyond those that were preloaded.

Appendix Table 4. Respondents with additional plans

Has preloaded plans?	Number of non-preloaded plans*	Frequency	Percent	Cumulative Freq	Cumulative Percent
0	0	11,803	62.96	11,803	62.96
0	1	439	2.34	12,242	65.30
0	2	63	0.34	12,305	65.64
0	3	8	0.04	12,313	65.68
0	4	2	0.01	12,315	65.69
1	0	5,829	31.09	18,144	96.78
1	1	539	2.88	18,683	99.66
1	2	59	0.31	18,742	99.97
1	3	5	0.03	18,747	100.00

Problems found in the HRS Pension Section (J2) and suggestions for improvement

- Irregular withdrawals in Section J2 in 2012and 2014 are not expressly timebound (e.g., in the past two years) but rather are tied to 'since you left this job' or 'ever' (2012) or 'since last interview' (2012 for respondents who completed Section J2 in 2014).

  Suggestion: At a minimum, add a question about withdrawals in last two years when the reference period would otherwise be longer (e.g., plans without preloads, often the wording is "since you left that employer …" which can be longer for dormant plans; or when a respondent did not participate in the previous wave). If there is sufficient interest in the research community to obtain estimates for "last calendar year" to compare to HRS income measures, then this reference period query would need to be added as well.

- For irregular withdrawal amounts, no unfolding bracket questions are asked if the amount is missing. Imputation uncertainty is much larger in the absence of the bracket questions, and this effect is particularly large when the distribution of the underlying variable is highly skewed, as is the case with pension withdrawals.

  Suggestion: Add unfolding brackets to the amount questions about irregular withdrawals in cases where an exact amount is not reported.

- Plan type is not reasked in subsequent waves, once reported for a plan in Section J2. For example, if plan type was reported in J2 in 2012, then it was not re-asked in J2 in 2014. However, respondents have difficulty reporting plan type accurately.

  Suggestion: Re-ask pension plan type every wave.

- DB plans, once reported as "receive regular benefits" will not be queried as part of Section J2 in subsequent waves. It appears that the underlying assumption is that such regular benefits will be captured in the Asset and Income Section of the HRS going forward. However, it has proven difficult for respondents to accurately report the pension plan type as evidenced by inconsistent reports over time. This skip logic that relies on plan type propagates any misreporting forward: if the plan was not actually a DB plan, but a DC plan instead, then no further detailed questions will be asked about this plan in future waves.

Furthermore, DB plans from which respondents report receiving regular benefits are not used to populate preloads for the next wave. However, when respondents are asked about any other plans they might have, they may re-report those plans and these would look like new plans, when in fact they are not.

Suggestion: Use all pension plans that are still active to construct the preloads for the next wave to ensure proper tracking of plans over time, and reduce the chances of double-counting.