

Administrative Supplement

Enhancing Pension Data Files for Modeling Health and Retirement and for the HRS User Community: 1992 to 2006

Alan L. Gustman, Thomas L. Steinmeier and Nahid Tabatabai¹

September, 2012

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File Set Contents

There are four packages prepared for distribution to the HRS user community; each consists of documentation and accompanying code or data files. The data files and code files are being made available to HRS users as a researcher contribution. Following is a brief description of each of the packages and their contents.

1- Pension Data Documentation for Table Data: Pensions in the Health and Retirement Study - 1992 to 2006

In 2010, we published a book titled "*Pensions in the Health and Retirement Study*". In this book, we summarized some of the most important lessons provided by the HRS data over a period of 1992 to 2006. One of our goals in writing this book was to encourage the use of HRS pension data. Accordingly, we have made the data files underlying the various tables in this book available to researchers. Those who wish to reproduce the tables in this book will find the data listed by individual and household id posted on the HRS Web site (<http://hrsonline.isr.umich.edu/data/index.html>).

The main goal of this document is to further facilitate the use of the HRS data and the posted data files. This document describes the major pension related outcomes from the panel survey, constructed variable in the data files, how they are constructed, the imputation process, and differences cross waves in the relevant questions.

Contents of this package:

- a. The documentation described above.
- b. Code Files: Along with this document, the underlying code used for preparing the constructed variables is included. Code files are organized by chapters, where the

constructed variable appeared in the book. There are 12 folders including Chapter 1, Chapter 3 to Chapter 13.

- c. Imputes: The code for imputations are included in the “imputes” folder. This folder is organized by wave including imputations’ code for variables reported in each wave. There are 8 waves; Wave 1 to Wave 8.
- d. Data files: the data are posted on the HRS website.

2- Pension Wealth Data Files: 1992 to 2006

This package includes pension wealth data files constructed for each wave from Wave 1 to Wave 8. They include separately DB wealth, DC wealth, and total pension wealth, as the sum of the two. Pension wealth levels included in this package are not updated. That is, information from updated pension sequences based on the preload for old dormant pensions is not used in preparing these data files. The corresponding values in package 3 are updated using questions keyed by the pension preload in each wave.

The values are based only on the information respondents reported when they were asked about pensions from their current job, last job and/or previous job(s), and from information provided in response to questions asked when respondents reported their previous interview wave employment had been terminated. Respondents with missing values, don’t know, or refuse responses have imputed values. There are eight data files, one for each of the eight survey years covered, Wave 1 to Wave 8.

Contents of this package:

- a. The document “Pension Wealth Data Files” describes the package and its content.
- b. Data Files include DB and DC wealth from current jobs, DB and DC wealth from last and previous jobs, and pension wealth; the sum of DB and DC wealth from

current, last, and previous jobs for every wave from Wave 1 to Wave 8. The wealth data in this package are without updates.

3- Updated Pension Wealth Data Files in the HRS Panel: 1992 to 2006.

This package includes pension values for the eight biannual waves of the HRS from 1992 to 2006. Pension values in Part 1 of the project were constructed based on respondent reports during the first wave they were included in the survey and later waves if their previous wave's current job was terminated. Part 2 of the project updates those values using the information from follow-up questions that asked about the fate of respondents' dormant plans, plans held by respondents from jobs they held previously that are not yet in pay status. These updated values are added to the values of plans on current jobs and pensions in pay status.

Contents of this package:

- a. The document "Updated Pension Wealth Data Files" describes the process used for updating the pension wealth in each wave.
- b. Data Files include DB and DC wealth from current jobs, updated DB and DC wealth from last and previous jobs, and updated pension wealth; the sum of DB and DC wealth from current, last, and previous jobs for Wave 1 to Wave 8.

4- Disposition of Pension Data Files: 1992 to 2006

The data files in this package include the wealth from disposition of pensions from respondents' last and/or up to three previous pension jobs reported in their first interview wave and when respondents leave their previous interview wave job. There are two sets of data files.

The first set includes pension values from respondents' last and or previous jobs for Waves 1, 4, and 7. The second set of data files includes pension values from respondents' terminated jobs for Waves 2 to Wave 8. The values are constructed from self-reported data. They include imputations for the missing, don't know and refuse responses.

Contents of this package:

- a. The document "List of Data Files for Disposition of Pensions: 1992 to 2006" describes the package and its content.
- b. Data Files include pension values for each of the choices respondents have made in disposing their pensions upon leaving a last or previous job. Pension wealth variables for DB plans are present value of the benefit if expecting future benefits, remaining benefits as of the wave date if receiving benefits, received cash settlements, or rolled the DB plan into an IRA. Pension wealth regarding DC plans include present value of account balances if left to accumulate, transferred to new employer, withdrew the account, rolled over into an IRA, the remaining amount of the annuities as of the wave data, or the present value of installment(s) (only in Wave 8) they received or receiving. There is a data file for each wave from Wave 1 to Wave 8.

List of Data Files for Disposition of Pensions

1992 to 2006

Alan L. Gustman

Thomas L. Steinmeier

And

Nahid Tabatabai

September, 2012

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Disposition of Pensions upon Leaving a Job

This document describes the list of data files included in this package. The data files include information about disposition of pensions from respondents' last and/or up to three previous pension jobs reported in their first interview wave and when respondents leave their previous interview wave job. There are two sets of data files. The first set includes pension values from respondents' last and or previous jobs for Waves 1, 4, and 7. The second set of data files includes pension values from respondents' terminated jobs for Waves 2 to Wave 8. The values are constructed from self-reported data. They include imputations for the missing, don't know and refuse responses.

A. Disposition of Pensions from Last and Previous Jobs

Respondents who reported not working at their initial interview are asked about their last job. Those respondents and respondents who reported working are also asked about up to three previous pension jobs they worked on for at least five years. They are asked for the details of the pensions from those jobs, including their dispositions. Questions about the disposition of pension plans include detailed questions about what the respondent did with the plan; if withdrew the money, rolled it over into an IRA, left it to accumulate in the old plan, converted it to an annuity, is expecting future benefits, receiving benefits, transferred to the new employer, received a cash settlement, or lost the benefit. There are follow-up questions asking about the amounts of the benefits and the dates of the reported action the respondent has taken.

We begin with the following list of data files, which includes constructed variables capturing the value of those pensions in Wave 1, Wave 4, and Wave 7.

1. dispos_PrevLast92

This data file includes pension values from respondents last and/or previous pension jobs reported in Wave 1. All values are in 1992 dollars. Constructed variables include:

pdvEFB92x: present discounted value of expected future benefits

pdvRBremain92x: present discounted DB values if in pay status

pdvCash92x: present value of cash settlements

pdvIRAA92x: present value of IRA accounts from DB plans

pdvIRAB92x: present value of IRA accounts from DC plans

pdvTransf92x: present value of the DC plans transferred to new employers

pdvANNremain92x: present value of annuities

pdvWitdr92x: present value of the money withdrawn from DC

For respondents who made the same disposition choices for more than one pension job, the value of those choices is summed up. For example, for a respondent who reported two previous pension jobs and reported having received cash settlements from both those jobs, the value of those cash settlements are summed up and presented in pdvCash92x.

2. dispos_PrevLast98

This data file includes the value of pensions from respondents' last and previous jobs in Wave 4. All values are in 1998 dollars. Constructed variables include:

pdvEFB98x: present discounted value of expected future benefits

pdvRBremain98x: present discounted DB values if in pay status

pdvCash98x: present value of cash settlements

pdvIRAA98x: present value of IRA accounts from DB plans

pdvIRAB98x: present value of IRA accounts from DC plans

pdvTransf98x: present value of the DC plans transferred to new employers

pdvANNremain98x: present value of annuities

pdvWitdr98x: present value of the money withdrawn from DC

For respondents who made the same disposition choices for more than one pension job, we have summed up the value of the choices they made.

3. dispos_PrevLast04

This data file includes the value of pensions from respondents' last and previous jobs in Wave 7. All values are in 2004 dollars. Constructed variables include:

pdvEFB04x: present discounted value of expected future benefits

pdvRBremain04x: present discounted DB values if in pay status

pdvCash04x: present value of cash settlements

pdvIRAA04x: present value of IRA accounts from DB plans

pdvIRAB04x: present value of IRA accounts from DC plans

pdvTransf04x: present value of the DC plans transferred to new employers

pdvANNremain04x: present value of annuities

pdvWitdr04x: present value of the money withdrawn from DC

For respondents who made the same disposition choices in more than one pension job, we have summed up the value of the choices they made.

4. Disposition of Pensions from Jobs Held in Previous Waves

Data on the disposition and value of pensions left during the course of the survey are collected in the wave following the termination of employment from a pension-covered job. In this package, we have included the pension values separately for each of the choices respondents made when they disposed of their pensions upon leaving their previous interview employment for each wave. For respondents with two or more terminated jobs, we have summed up the value of the choices they made. For example, for a respondent who reported two different jobs after his/her first interview and reported two different IRA rollovers upon leaving those two jobs, the value of those IRA accounts are summed up. All constructed variables include imputed values for the missing, DK, and RF values.

The data files are organized by wave. There are 7 data files, one for each wave from Wave 2 to Wave 8. They are as follows:

1. dispos_TermW2:

This data file includes pension values from a terminated job reported in the FA, FB, or FC sections of Wave 2. All values are in 1994 dollars. Constructed variables include:

pdvEFB_F2x: present discounted value of expected future benefits from DB plans

pdvRBremain94_F2x: present discounted DB values if in pay status

pdvCash_F2x: present value of cash settlements from DB plans

pdvIRAA_F2x: present value of IRA accounts from DB plans

pdvIRAB_F2x: present value of IRA accounts from DC plans

pdvTransf_F2x: present value of the DC plans transferred to new employers

pdvANNremain94_F2x: present value of annuities from DC plans

pdvWitdr_F2x: present value of the money withdrawn from DC plans

2. dispos_TermW3:

This data file includes pension values from a terminated job reported in the G section of Wave 3. All values are in 1996 dollars. Constructed variables include:

pdvEFB_G3x: present discounted value of expected future benefits from DB plans

pdvRBremain96_G3x: present discounted DB values if in pay status

pdvCash_G3x: present value of cash settlements from DB plans

pdvIRAA_G3x: present value of IRA accounts from DB plans

pdvIRAB_G3x: present value of IRA accounts from DC plans

pdvTransf_G3x: present value of the DC plans transferred to new employers

pdvANNremain96_G3x: present value of annuities from DC plans

pdvWitdr_G3x: present value of the money withdrawn from DC plans

3. dispos_TermW4:

This data file includes pension values from a terminated job reported in the G section of Wave 4. All values are in 1998 dollars. Constructed variables include:

pdvEFB_G4x: present discounted value of expected future benefits from DB plans

pdvRBremain98_G4x: present discounted DB values if in pay status

pdvCash_G4x: present value of cash settlements from DB plans

pdvIRAA_G4x: present value of IRA accounts from DB plans

pdvIRAB_G4x: present value of IRA accounts from DC plans

pdvTransf_G4x: present value of the DC plans transferred to new employers

pdvANNremain98_G4x: present value of annuities from DC plans

pdvWitdr_G4x: present value of the money withdrawn from DC plans

4. dispos_TermW5:

This data file includes pension values from a terminated job reported in the G section of Wave 5. All values are in 2000 dollars. Constructed variables include:

pdvEFB_G5x: present discounted value of expected future benefits from DB plans

pdvRBremain00_G5x: present discounted DB values if in pay status

pdvCash_G5x: present value of cash settlements from DB plans

pdvIRAA_G5x: present value of IRA accounts from DB plans

pdvIRAB_G5x: present value of IRA accounts from DC plans

pdvTransf_G5x: present value of the DC plans transferred to new employers

pdvANNremain00_G5x: present value of annuities from DC plans

pdvWitdr_G5x: present value of the money withdrawn from DC plans

5. dispos_TermW6:

This data file includes pension values from a terminated job reported in the J section of Wave

6. All values are in 2002 dollars. Constructed variables include:

pdvEFB_j6x: present discounted value of expected future benefits from DB plans

pdvRBremain02_j6x: present discounted DB values if in pay status

pdvCash_j6x: present value of cash settlements from DB plans

pdvIRAA_j6x: present value of IRA accounts from DB plans

pdvIRAB_j6x: present value of IRA accounts from DC plans

pdvTransf_j6x: present value of the DC plans transferred to new employers

pdvANNremain02_j6x: present value of annuities from DC plans

pdvWitdr_j6x: present value of the money withdrawn from DC plans

6. dispos_TermW7:

This data file includes pension values from a terminated job reported in the J section of Wave

7. All values are in 2004 dollars. Constructed variables include:

pdvEFB_j7x: present discounted value of expected future benefits from DB plans

pdvRBremain04_j7x: present discounted DB values if in pay status

pdvCash_j7x: present value of cash settlements from DB plans

pdvIRAA_j7x: present value of IRA accounts from DB plans

pdvIRAB_j7x: present value of IRA accounts from DC plans

pdvTransf_j7x: present value of the DC plans transferred to new employers

pdvANNremain04_j7x: present value of annuities from DC plans

pdvWitdr_j7x: present value of the money withdrawn from DC plans

7. dispos_TermW8:

This data file includes pension values from a terminated job reported in the J section of Wave

8. All values are in 2006 dollars. Constructed variables include:

pdvEFB_j8x: present discounted value of expected future benefits from DB plans

pdvRBremain06_j8x: present discounted DB values if in pay status

pdvCash_j8x: present value of cash settlements from DB plans

pdvIRAA_j8x: present value of IRA accounts from DB plans

pdvIRAB_j8x: present value of IRA accounts from DC plans

pdvTransf_j8x: present value of the DC plans transferred to new employers

pdvANNremain06_j8x: present value of annuities from DC plans

pdvWitdr_j8x: present value of the money withdrawn from DC plans

pdvInstall_j8x: present value of the installments received from DC plans

**Pension Data Documentation for
Table Data: Pensions in the Health and Retirement Study
1992 to 2006**

(Final v1.0)

Alan L. Gustman, Thomas L. Steinmeier and Nahid Tabatabai¹

September, 2012

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Introduction

The Health and Retirement Study is a large and comprehensive data set. At its core is a sample of households with at least one member born from 1931 to 1953. It covers a wide variety of topics on the aging population in the United States and probes deeply in each topic area. The data are longitudinal, obtained by questioning the same individuals every other year. Many questions ask about the features of the pensions held by this population. Pensions from previous jobs are tracked, and the disposition of pensions is reported at the time of job termination. Information is collected about pension incomes once a person is retired. When there are two earners in the household, each is asked the details of his or her own pension.

In 2010, we published a book titled "*Pensions in the Health and Retirement Study*". In this book, we summarized some of the most important lessons provided by the HRS data over a period of 1992 to 2006. Among the wide set of dynamic outcomes we examined how participation in a pension and pension values change over a lifetime in the labor market, how each person's pension changed during time on the job, what happened to their pensions if individuals left a job before retiring, and how pension expectations before retirement compared with pension realizations after retirement. Some people continued on the same job, and their pension rules remained unchanged; some remained on the same job but experienced changes in their pensions; still others left a pension job. Some of those who left their jobs maintained their pensions at their old firms; others rolled their pensions over, cashed them out, collected benefits, abandoned them, or took other actions affecting the future values of their retirement benefits.

One of our goals in writing this book was to encourage the use of HRS pension data. Accordingly, we have made the data files underlying the various tables in this book available to researchers. Those who wish to reproduce the tables in this book will find the data listed by

individual and household id posted on the HRS Web site (<http://hrsonline.isr.umich.edu/data/index.html>).

The main goal of this document is to further facilitate the use of the HRS data and the posted data files. This document describes the major pension related outcomes from the panel survey, constructed variable in the data files, how they are constructed, the imputation process, and differences cross waves in the relevant questions.

Major outcomes of interest include employment status, job tenure, retirement status, pension coverage, pension tenure, pension plan type, Defined Benefit and Defined Contribution wealth, old pensions identified as live, dormant or in pay status, early, normal, and expected retirement ages, pension wealth, pension accrual, disposition of pensions, and their values at jobs' termination dates. We also are including with this document the code files that were used in preparing those constructed variables.

With the posted data files, this document, and the code files, we hope to encourage the use of the HRS pension data in a wide variety of future studies. Our goal is to make it easier for researchers to use the HRS pension data and to facilitate their use by policy makers, pension experts and financial advisors.

This document is organized by chapters corresponding with the order of the chapters outlined in the book. The constructed variables used in each chapter are described in the order they appear in each chapter of the book. Variables that are used in two or more chapters are described in detail in the chapter they first appear in and briefly in later chapters. For example, the variable prorated self-reported Defined Benefits in Wave *i* (`prsrDBben_wi`) is included in Chapters 3, 9, and 12. The description of the variable and its construction are presented in detail in Chapter 3. In later chapters only a brief description is presented.

There is repetition when we discuss variables that have undergone a similar construction process. Repetition lengthens the document. We believe it is more convenient for the user to have the full description in hand rather than having to page through the document to find a related but slightly different description that may have been presented in another section.

In most cases the characters of the name of the constructed variables describe the concept that the variable captures. Each variable name ends with the Wave number to which the variable pertains: “1”, “2”, “3”, “4”, “5”, “6”, “7”, or “8”. Variables that include imputations are denoted by “x” at the end of the name.

In the next section we describe sources of the data. The pensions and pension jobs are described briefly in section II. The imputation process and methods are described in Section III. Section IV presents the variables appearing in each chapter in the book.

I- Sources of Data

Core Interview and Derived Data

The main source of the data is the information from the core interviews from eight waves of The Health and Retirement Study, some of which has been processed into more convenient form in derived data files.² Another source of the data is an auxiliary data file prepared by the HRS, the tracker file. Variables such as birth year and month, interview year and month, gender, race, marital status, education, respondent and household level weights, and financial respondent index are taken from the tracker file. The third source of the data is the Rand HRS data file. Constructed variables such as housing, real estate, IRA accounts, stock holdings, transportation, and finances are from Rand HRS data. Due to skip patterns in the survey, a file with Additional Carry Forward Variables is also useful. Other pension data have been collected from respondents from time to time. One example is the pension characteristics module we call module 6/7.

Administrative Data

Beginning in 1992, the Health and Retirement Study (HRS) collected names and addresses of respondents' employers and used that information to obtain Summary Plan Descriptions (SPDs) from the employers. SPDs are detailed documents produced by firms describing each of their pension plans. They were collected in the years following the baseline survey, 1993, 1999 and 2005/6. As a first step, the employer is contacted and asked for the pension plan description. When HRS contacts an employer and requests a pension plan, because respondent confidentiality must be maintained, the firm is not given the name of the respondent. Plan descriptions are also collected from a number of other sources. The Department of Labor has provided plan descriptions when they were on file and also provided attachments to schedule

² Data from Exit interviews are not included.

B of Form 5500. Schedule B, filed annually with the Department of Labor, provides a detailed description of the pension plans. Plan descriptions for government employees are often available on the web. In the 2004 survey, HRS began asking respondents to obtain SPDs from their employers³. Lastly, plans are being formed to enhance the collection of plan descriptions from other forms filed with the Labor Department that summarize changes adopted in plans, as well as forms filed with the IRS.

The employer documents present detailed information about the plan formulas that determine DB benefits. Together with information on covered earnings history, these plan descriptions are sufficient to generate information on annual benefits generated by the plan. The HRS also obtains information from the respondent on the benefit expected as of a reported retirement date. The formulas determining employer contributions and other details of a firm's defined contribution plan, and data on respondent contributions to the pension over time, are not sufficient without information on the contribution and earnings histories to determine plan values. Accordingly, the HRS was originally designed to measure account balances of defined contribution plans directly from respondent reports.

The Health and Retirement Study has provided the collected and coded employer produced descriptions to those researchers who have negotiated a Restricted Data Agreement

³ This experiment was initially administered to 400 individuals in the 2004 survey. Respondents in this sample had a pension in 2002. Half of these individuals were asked for any documents they have at home, including quarterly reports from their employers or pension providers. The other half was asked to request a Summary Plan Description from the Human Resource Departments of their firms. They were paid \$25 for any documents they had at home, and \$100 for obtaining the Summary Plan Descriptions from their employers. The SPD request experiment was judged sufficiently successful that it was extended to 2004 interviewees among HRS and War babies cohorts with a current pension who had not been interviewed roughly half way through the interview period. They were asked to obtain SPDs from their employers in exchange for a payment of \$50. This experiment continued asking respondents whose plan documents were not collected to ask their employer for their SPDs in 2006 and 2008.

with the HRS. HRS also makes the *Pension Calculator*® software available to registered users for evaluating those data.

Carry Forward Variables

The Labor Section Carry Forward data set consists of respondent-level, cross-sectional files constructed from the employment sections of HRS 1994 (Wave 2), HRS 1996 (Wave 3), HRS 1998 (Wave 4), HRS 2000 (Wave 5), HRS 2002 (Wave 6), and HRS 2004 (Wave 7). The files include only HRS cohort members for HRS 1992 to HRS 1996, and both HRS and War Baby cohort members for HRS 1998 and HRS 2000. The HRS 2002 and 2004 files contain information for all employed respondents. In HRS 2000 (Wave 5)⁴, some of those questions have been restored while others are not asked. In HRS 2002 (Wave 6), all employed respondents were asked the industry and occupation sequence, but if their employment status was unchanged were not asked certain questions relating to sick time and disability. For those respondents who reported working at the same employer or business, or who, for some questions, were at the same position, when missing from the current survey values are carried forward from the previous interview where the job was first reported.

Procedure

As the skipped values were carried forward, study staff attempted to reconcile and unify code frames, since different responses were allowed for similar questions in different waves. For some questions, non-matching codes may stand for the same response, and in other cases, matching code values may have a different meaning in different waves. An example of different codes representing the same response is the *firm size at all locations* question. In this question the response indicating "only one location" is represented by different codes depending on the

⁴ The restored questions in HRS 2000 ask about the number of employees at the location and all locations, number of paid sick days, disability coverage, start date of employment, and union membership.

survey year. It is 999995 in HRS 1992, 9999997 in HRS 1994, 9999995 in HRS 1996, 99995 in HRS 1998, a combination of 0, 9995, 99995, and 999995 in HRS 2000, and a combination of -2, 0, 9999995 in HRS 2002, and -2 in HRS 2004. The unification of this code involves converting those codes to 9999995 designating "only one location" for all waves.

As an example of a situation where the same code has a different meaning in different waves consider the question number of years of education needed for the job. For this question the code 96 indicates "no education needed" in HRS 1994, but "Missing/Inap" in HRS 1992. The unification of this code involves converting the code 96 in HRS 1992 to blank (Missing/Inap) and in HRS 1994 to 0 (no education needed). It was not possible to apply the unification process to all codes with different interpretations. Therefore, it is critical for the user to continue to pay attention to the source of each of the observed values in the constructed variables and interpret them accordingly.

The rectangular array of data that provides observations for all of the skipped variables for each of the 1994, 1996, 1998, 2000, 2002, and 2004 survey is posted on the HRS website and may be downloaded according to the terms of the HRS Conditions of Use.

Flag Variables

In addition to the constructed carry forward variables, *Flag* variables have been created. Each flag variable indicates the source of an observed value, whether it is from HRS 1992 (Wave 1), HRS 1994 (Wave 2), HRS 1996 (Wave 3), HRS 1998 (Wave 4), HRS 2000 (Wave 5), HRS 2002 (Wave 6), or HRS2004 (Wave 7) for each of the variables. The flag variables have only two values for constructed variables from Wave 2 (1 or 2), three values for variables from Wave 3 (1, 2, or 3), four values for variables from Wave 4 (1, 2, 3, or 4), six values for variables from Wave 6 (1, 2, 3, 4, 5, or 6), and seven values for variables from Wave 7 (1, 2, 3, 4, 5, 6, or 7).

For example, for the variable W3608 (the industry variable), if the respondent did not change her/his employment in Wave 2, the value in W3608s is taken from wave 1 and the flag FW3608 is set equal to 1, indicating that the source of the carry forward variable W3608s is Wave 1. If the person had changed her/his employment between Wave 1 and Wave 2, the value of the industry code W3608s is what is observed in Wave 2; FW3608 is set equal to 2, indicating that the data source is Wave 2.

Variable Names

The constructed carry forward variables have the same name as the variables in their original data files, but those names are followed by an "s". For example, the constructed variable for W3608 (the industry question) in Wave 2 is W3608s. The sources of flag variables have the same names as the variables in their original data files with an "F" preceding those names. For example, the flag variable for the industry code in Wave 2 is FW3608.

Pension Characteristics Module; Module 6/7

In addition to the pension questions in the core of the labor section, questions about pensions were added to the 2004 survey and asked of respondents on a one time basis. The goal was to provide additional information that would be useful in redesigning the questions in the pension sequence. The redesign was ultimately adopted in the 2008 Wave of the HRS.

Experimental Pension Characteristics Module

This is a set of questions about the characteristics of the plans covering respondents. It was distributed in 2004 to all respondents who reported they were currently covered by a pension. Questions were asked about various characteristics of their pensions. The idea was that these characteristics could be related to plan type, whether the respondent had a DB or a DC

pension, and perhaps used to identify plan type without asking the respondents whether their plans were defined benefit or defined contribution.

These plan features include whether enrollment is automatic, whether the individual receives periodic (quarterly) reports indicating an account balance; whether the employer contributes to the plan; whether the individual can guide the investment of own and of the firm's contributions; whether the individual can borrow on the plan; whether R would be eligible for a lump sum payment upon leaving the firm before reaching the early retirement age; whether at retirement the respondent would receive periodic payments for as long as the respondent lives; as well as the technical name for the plan.

II- Pensions and Pension Jobs

The employment section of the Health and Retirement Study (HRS) focuses on retirement and covers specific information about pension plan(s) that a respondent may have. The pension plans may be from a current job if the respondent is employed or from a last job if s/he was not employed when first interviewed. All respondents are asked about the details of their pension plans, up to three, from previous jobs if worked for at least five years or more on that job when first interviewed. In addition, there is a set of pension questions that is designed for re-interviewee respondents who reported their previous interview employment has been terminated. They are asked about the details of pensions from that terminated job. Another set of pension questions includes follow-up questions about an old pension. Finally, there are several wrap up questions aiming at acquiring pension wealth data. Those questions were asked in the 2006 interview survey for the first time and ask for an overall review of live pensions at the time of the survey.

Following is a brief description of those pension sequences:

- 1) A detailed sequence of pension questions covering a variety of information is designed for those who are currently working for pay who report a pension, and who are interviewed for the first time, or have changed jobs since last interview wave, or did not have a pension plan at the time of last interview if working at the same employment. Those who reported that the rules that govern their pension plan have changed since last interview also go through the larger sequence of questions. We call this version the “new pension” sequence. Pension related questions from a current job⁵ include a variety of information about the pension, such as pension coverage, number of plans, type of

⁵ If respondents report not being included in a pension plan they are asked if the employer offers such plans and the possibility and circumstances that the respondent may become eligible and be included in such pension plans.

plan (s), expected, normal, and early retirement ages, the amount of benefits at those ages, number of years in the plan, current account balances if a plan is a Defined Contribution (DC) or a combination of DB and DC, amount of contributions, and more.

- 2) The returning interviewees reporting the same employment and pension get a shorter pension sequence, except in the 2004 and 2008 surveys⁶. This sequence skips some of the questions, such as the amount of contribution, or the number of years the respondent has been included in a pension plan, normal and early retirement ages, etc. This version is designed for those who report working at the same employment as in the previous interview wave and report that they have been included in a pension plan in that job and the rules that govern their pension plans have not changed since last interview. A respondent who is self-employed currently and has been self-employed in the previous interview and for whom the start date of the business is on or before the last date of previous interview also gets asked the shorter sequence. For simplicity, we call this sequence the “same pension” sequence.

Questions regarding pension wealth are asked in both the detailed and shorter versions of the pension sequence. That is, all respondents are asked about the value of DB plans at their expected age of receiving benefits and current account balances from DC plans from their current job at each interview wave.

- 3) When first interviewed, respondents are also asked about up to three previous pension jobs they worked at for at least five years. They are asked about the type of plans they had and the form of disposition of those pensions. Questions about the dispositions of pension plans include detailed questions about what the respondent did with the plan; if

⁶ In 2004, everyone with pension coverage is asked the longer version of the pension sequence. In 2008, the pension sequence is revised and everyone is asked all questions.

withdrew the money, rolled it over into an IRA, left it to accumulate in the old plan, converted it to an annuity, is expecting future benefits, receiving benefits, transferred to the new employer, received a cash settlement, or lost the benefit. There are follow-up questions asking about the amount of the benefits and the dates of the reported action the respondent has taken.

- 4) Respondents who were not working at their first interview are asked about their last job and the pension from that job. Pension questions for this group of respondents are very similar to the pension sequence detailed for respondents' previous pension jobs described in item 3.

During Wave 1 to Wave 4 interviews, respondents were asked about the details of only one pension plan from any previous or last job. In Wave 5, this number was increased to up to three plans and in Waves 6 and later waves to up to four plans.

- 5) Re-interviewee respondents are asked a set of pension questions from their previous job if they reported leaving a pension job held in the last interview. They are asked a similar set of questions noted in item 3 above.
- 6) In the Wave 3 survey, respondents were asked about the status of all "dormant" pension plans from jobs terminated before the current wave, that is, plans from last/previous jobs⁷ reported prior to the Wave 3 survey year, where it was previously reported they were expecting some future benefits and not receiving benefits now, or that the account was left to accumulate⁸. In the Wave 3 round up, they were asked if they are still expecting

⁷ Previous jobs include jobs classified as 'previous pension jobs' in the first interview wave as well as jobs that were held in the first or subsequent waves, but were left after that.

⁸ The set of questions about old pension plans was asked in the Assets and Income section of the survey in Wave 3 and Wave 4. They start with J192. It was moved to the Employment section in Wave 5. They start with J434.

future benefits, if the account is still accumulating, or if they are receiving benefits now, received a cash settlement, rolled over into an IRA, converted to an annuity, withdrew the money, or lost the benefit. Respondents were also asked about the amount of the benefits and the dates of the reported action the respondent has taken. We call this pension sequence the “old pension” sequence. Those who reported in Wave 3 they are still expecting future benefits (and not receiving benefits now) or their account is still accumulating, were asked again about the status of those plans in Wave 4, Wave 6, Wave 7, and again in Wave 8. The round up in later waves also covered pension jobs left since the last round up. As long as the reports show that a respondent’s claim on a plan continues to be active, or in other words, s/he is expecting some benefits in the future and not receiving benefits, or still has an account that is accumulating, we refer to that pension as a “dormant pension”.

- 7) Finally, in the 2006 interview survey respondents were asked several clean up pension wealth questions after the end of J434 loop, starting with JW066_1. The stem question asks “*Do you have any (other) pension plans from former jobs from which you are not currently receiving income payments?*”. If the answer was “yes” they are asked about total amount of benefits they expect to receive. Also they are asked about the sum of the balance in all the remaining pension plans where they expect to receive benefits in the future.

In summary, within each wave, respondents may be covered by one or more current pension plans and may have one or more previous pension plans. In addition, there are pensions reported in previous waves from former employers that remained dormant. In some waves, there are explicit follow-up questions about these pensions. In waves where there are no questions

asked about old pensions from a previous employer that were last reported as dormant, the pension information from the last wave is brought forward. That information is further modified in later waves where there may be a retrospective report about the old pension.

III- Imputations

It is believed that many respondents do not have complete information about specifics of their pension plans. In reality, the HRS data shows a high rate of Don't Know, Refused, and missing responses regarding plan type and other pension characteristics. In this section we describe the imputation process for the Don't Know, Refused, and missing responses for several pension related variables from Wave 1 (1992) to Wave 8 (2006). The imputed variables described here are from the employment sections of the HRS, the early and normal retirement ages, and the benefit at those ages from the firm data. It should be noted that the imputations are performed for the HRS cohort in waves 1 to 3 and for HRS and War Babies cohorts in waves 4 and 5. AHEAD and CODA cohorts are not included in these imputations. The imputations for each wave are cross-sectional and the information from previous or successive waves is not integrated in a current wave's imputations. For example, for imputing the relevant variables from 1994 survey, the information from the 1992 and 1996-2000 surveys is not used.

The imputation process includes determining a control variable(s) which will be defined later and choosing an appropriate technique for the imputation. However, some of the variables require some type of adjustment or replacement prior to the actual imputation. In the next section we describe the adjustment process for each wave. The imputation methods and imputation type variables are described following that.

Adjustment Process

Almost all values except Don't Know, Refused, and missing values are considered to be valid observed values. But a very small percentage of those observed values may not be valid due to errors in the instrument's code, preload, or some other reasons unknown to us. Therefore, some adjustment should be made to correct for those errors. The adjustment process may involve

converting a missing, Don't Know, or Refused response to an observed value or removing an observed value and setting that to missing or blank prior to any imputations.

Following is a list of major adjustments in Wave 1 to Wave 5:

1. Some of the pension related variables in sections G and H of Wave 1 were imputed previously by HRS staff. These imputed variables were included with earlier releases. However, some of the imputed values did not seem to be consistent with other observed values for pension variables that came earlier in the hierarchy. For example, while a value may have been imputed for the disposition question⁹ of pension plan of type DB, there was no reported or imputed value for the pension coverage variable (H12). As a result we ignore those imputed values in sections G and H that were imputed previously by HRS staff, and re-impute values when appropriate.

2. Both missing values and blanks in Wave 2 are recorded as zeros. Although this may not be of any consequence for discrete variables, it is a problem when trying to identify the missing values in continuous variables. For example, an account balance for a DC plan with a zero value may be an actual zero balance or just a missing value. To deal with this problem we have determined the percentage of respondents having a zero balance in Wave 1 and applied that percentage to Wave 2 balances. If the percentage of cases with recorded zero in Wave 2 is more than the determined percentages from Wave 1, we select additional cases randomly and set them to missing.

3. Respondents who have changed jobs after Wave 1 are asked about their pension plan from their previous job (e.g., Wave 1's job in Wave 2, Wave 2's job in Wave 3, ...). But first they are asked if they are working at the same employment (G19b). If the response is "No: not

⁹That is H14 in the first pension sequence of H section where the respondent is asked "Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement when you left, did you lose your benefits, or what?".

working for the same employer” then they are asked when they stopped working for that employer (G26). The follow-up question to G26 is about their pension plan from that job. A small percentage of those who responded “No: not working for the same employer” in G19b responded they were still working for the same employer when they were asked when they stopped working for that employer in G26. The design of the instrument is to jump back those respondents to G19b and change their response to “Yes: working for the same employer” and proceed from that point. However, due to an error in the code the instrument failed to do that. Instead it wrongly proceeded with asking about the pension plan from the previous job (G30 and its follow-ups) as if the respondent had stopped working for the previous Wave employer. This problem, which is present in Wave 4 only, exaggerates the number of cases with a previous pension. The adjustment process for those responses is to set responses for the pension coverage (G30) and its follow-ups in Wave 4 to blank.

4. There are some cases in Wave 3 who reported working at the same employment as in Wave 2, were included in a pension plan in Wave 2, but nevertheless were skipped over the same pension sequence and wrongly asked the “new pension” sequence questions. The adjustment for those cases involves transferring the observed values from the pension coverage question in the new pension sequence (E2861) to the first question in the same pension sequence (E2835). If the response is “5. No, don’t have a pension plan in E2861”, the missing in E2835 is replaced with “7. Denies being covered by a pension”. However, if the response in E2861 is ‘Yes’, then we assign a value of “1. Yes, the rules that govern pension have changed” to E2835. This means that those cases would jump to the new pension sequence after the first question in the same pension sequence. This is a much simpler process. It is also one which allows us to use all the information collected in the new pension sequence for those cases. However, the user must note

that this assignment may not be completely accurate and would result in exaggerating the number of cases with a response of “1. Yes the rules have changed”. We identify those cases with a code of “3” in the accompanying (imputation type) variable, which will be described later.

5. There are some cases in Wave 3 and Wave 4 with an incorrect response indicating the same pension sequence instead of the new pension sequence. In these cases respondents did not have a job in their previous interview wave, or reported not having a pension plan on the job if working. The problem is due to an error in the preload to pension coverage. The adjustment process for those cases requires transferring the information from the same pension sequence to the new pension sequence.

6. Respondents are asked about the number of pension plans they are included in from their job. The instrument collects information on up to three of those plans in Wave 1 to Wave 4, and up to four plans in Wave 5 and in later waves. These questions are asked both in the same pension sequence and in the new pension sequence. However, an error in the code affects those with more than three pension plans in the same pension sequence in Wave 4. Respondents with more than three pension plans responding to the same pension sequence are pushed to the new pension sequence after completing the same pension sequence. This confused respondents and will be confusing for the users. We make the adjustment by setting the new pension sequence responses to blank for cases with more than three plans in the same pension sequence in Wave 4.

7. Due to an error in the code in Wave 4’s instrument, the new spouses from HRS respondents were skipped out of the pension questions from GG (last job) and GH (previous jobs) sections. We assume they have missing values and impute their pension related variables using the Warbabies cohort as donors.

Imputation Process

The imputation process involves converting the Don't Know and Refused responses to missing values (in most cases)¹⁰, determining control variables, and selecting an appropriate imputation technique based on the sample size, covariates, and information from other related variables. The imputed variables have the original variables' name with an extension of "x".

In addition to the imputed variables we construct another set of variables indicating the type of imputation. The imputation type variables have an extension of "t" instead of "x".

Control Variables

We follow HRS terminology and adopt the term "Control Variable" to represent the immediate, relevant precursor variable to the variable in question. HRS staff have used the term control variable to indicate ownership of the outcome that follows.¹¹ For example, the precursor to pension coverage is working, to number of plans the precursor is pension coverage, and the precursor to plan type is number of plans. Thus control variables are those variables that help us to determine which cases should have responses for a variable we want to impute. We may need only one variable as the control variable or many more depending on the specifics of the variable to be imputed. For example, for imputing the pension coverage variable for self-employed

¹⁰ In some cases the Don't Know and Refused responses are replaced by a particular outcome. For example, by the design of the instrument, for "the type of pension plan" question, the Don't Know and Refused responses are replaced with type DB. Moreover, for the most part the information collected for a DB plan will apply to a DC plan also.

¹¹ According to HRS staff, "Each amount variable needs a control variable, indicating whether the respondent has the asset, income, expenditure or other amount type. It controls how a missing value on the amount variable should be imputed: a zero or a positive value. When a control variable is 1, a missing value on the corresponding amount variable would be imputed as a positive value. Imputations would be done for it based on a donor pool formed by all positive values of the amount variable. Conversely, when a control variable is 5, a missing value on the amount variable would be imputed as zero." For further discussion, see: IMPUTE: A SAS Application System for Missing Value Imputations--With Special Reference to HRS Income/Assets. Honggao Cao. (2001). See also "The Missing Data Imputation Process". <http://hrsonline.isr.umich.edu/index.php?p=imputes> . Note, however, that the HRS definition of control variables is not identical to ours. Michigan creates a separate control variable for each of the variables allowing the control variable to take on a value of 1 or 5. The precursor variable we use as the control variable may take on a value of 1 and 5 or some other values. For example, for imputing DC account balances, the control variable is the plan type with values 1, 2, or 3.

respondents in Wave 1, only one variable serves as the control variable. That is the variable "who work for?" (F3: V2718). But for the variable representing G69 in Wave 4 asking "*if the rules that govern your pension have changed since last interview*" many more variables are required. In that case we must know if a respondent who is an employee is working at the same employment since Wave 3 and if s/he was included in a pension plan at that time. If the respondent is self-employed we want to know if s/he was self-employed also in Wave 3 and if the start date of the business was before the Wave 3's interview date and s/he was included in a pension plan at that time. If the respondent was not interviewed in Wave 3 we have to check that information against the same information provided in Wave 2 and similarly for Wave 1 if not interviewed in Wave 2 either.

Imputation Methods

The imputation techniques used in this project include Mixed Method, Hot-decking, and Replacement. The appropriateness of the technique for each variable depends on the sample size, availability of covariates¹², and information from other related variables.

Mixed Method

This method is a combination of a regression or probit, depending on the type of dependent variable, and hot-decking (by the level of the predicted outcome). The method has two steps. The first step involves estimating a probit for discrete variables, or a regression for continuous ones, based on the observations that are available. We also create a set of random numbers as the secondary sort variable to ensure the reproducibility of the variable to be

¹² Since the imputations are cross-sectional, we do not use any covariates from a previous wave. This means that when we are imputing the pension related variables from a previous job for a respondent who has changed his job since the last interview, we would not use the Mixed method. The detailed covariates describing the previous job could only come from an earlier wave. The imputation method for this set of variables is hot-decking or replacement.

imputed. In the second step we order the observations on the basis of the predicted value or predicted probability of the dependent variable estimated in step one, and the random numbers. Then we select the closest observation preceding the one with a missing value and replace the missing value with that observed value.

To perform any regression or probit estimation we select a set of covariates. These include variables indicating gender, age, race, education, marital status, wage, if employee or self-employed, industry, occupation, job tenure, firm size, union membership, interaction of gender and marital status, interaction of gender and whether the respondent was an employee or self-employed and whether s/he was working on a full or part-time basis. In addition to these covariates we construct an indicator representing a DC plan only¹³ for imputing DC account balances. A dummy variable indicates when an observation for a covariate is missing. We also construct a compact version of above covariates by using the age and age squared, wage and wage squared as continuous variables and a dummy variable representing the missing values for each of these two variables. We also organize the education, industry, occupation, and race variables into a much smaller number of classes. We use the compact version of covariates when the sample size is too small for the expanded version. Not all covariates are used for all imputations.

Hot-decking (by a set of random numbers)

This method is used when the sample size is too small for a regression or probit estimation. The hot-decking procedure involves assigning a random number to each of the cases, then sorting the data by the random number in descending order, and finally replacing a missing value by the neighboring observed value. The main difference between this method and the

¹³ DC Plan only refers to cases with one or more DC plans. Those cases do not have any DB or Combination plan.

Mixed method is that in the Mixed method we use the predicted probability, or we use the predicted value of the dependent variable, as the primary sort variable. We also use a set of random numbers as the secondary sort variable to ensure the reproducibility of the results in the future if needed. However, in the Hot-decking method the primary sort variable is a set of random numbers with a uniform distribution¹⁴. There is no need for the secondary sort variable because the random numbers are unique for each observation. The seed for creating the random number is the number of the question that is being imputed.

Replacement

This technique is used by following the design of the instrument, when the information from other related variables is available, or the sample size is too small for the mixed or hot-decking.

a. The design of the instrument: when the response to the type of pension question is Don't Know and in some cases Refused, the instrument treats that unknown as if it was a type DB plan. That means respondents with a Don't Know (in all sections) and Refused (in some sections) for the "type of pension plan" variable are asked the follow-up questions for type DB. Therefore, we follow that convention and replace those Don't Knows and Refusals with type DB in waves 1 to 4 when appropriate. In Wave 5 the Don't Know responses are replaced with type DB if there were valid observations for the disposition of type DB plan (G32) in previous pension sequence (G30-G38) or for the amount of benefits (G72 or G82) for the same or new pension sequences. Otherwise, Don't Know and Refused responses are treated as missing values.

¹⁴ To avoid hot-decking for several missing values in a row we tried a normal distribution for the hot-decking step. The results were not very different from hot-decking with a uniform distribution.

b. By the way of deduction; if there was an observed value for the account balances for plan type DC but the plan type value was missing the missing plan type variables is replaced with type DC.

c. When the sample size is too small for mixed or hot-decking the missing value is replaced with the observed. That is true for when there is only one observed value. For example, where there are two cases with DC plans, and one has a valid observed value and the other has a missing value, we replace the missing with the observed value.

Modified Imputations

The Mixed procedure is modified for imputing the plan type, account balances, and pension benefits variables. The plan type variable is imputed in two rounds. In the first round, we construct the dependent variable in the form of a dummy variable indicating whether the plan is a DC type (only) plan or other. The dummy variable is equal to 1 if the plan type is DC only. It is zero if DB type only or if a combination of DB and DC. Then for those respondents for whom we observe the dependent variable, we use a probit model to generate the estimates of the predicted dependent variable. In the second step, we use the \hat{y} and a random number to sort the data in descending order, and finally replace a missing value by the neighboring observed value.

In the second round, we follow the same procedure to predict plan type for those with a DB only or DB combined with DC. The dummy variable is equal to 1 if DB only, and zero if DB combined with DC. Then we use the constructed variable as the dependent variable in a probit model to estimate the probability of having a DB plan or "DB combined with DC". Then we again generate a predicted dependent variable from the probit and a random number. We sort the data by the predicted value of the dependent variable and the random number. The final step

again is to select a nearest neighbor, and then substitute the value for the nearest neighbor for the missing observation.

In the end we have two new imputed variables; one imputed in the first round and the other in the second round. The missing plan types are replaced by the imputed value from the first round if it is a DC type only. If the imputed value from the first round is not a DC type only, the missing value will be replaced by a plan type DB or Both imputed in the second round. This procedure is repeated for each of the three plans in waves 1 to 4 and for the four plans in Wave 5.

The DC account balance variable from a previous or last job is imputed in two steps. Respondents with a pension plan from a previous or last job who report having a DC plan are asked both about their account balances when left and about their current balances. For those cases who did not report current balances when left, but did report a current balance, we use the current balance variable as the covariate and impute for the missing values. We follow the analogous procedure where balance when left is missing but current balance is reported. Then we use other covariates or hot-deck, depending on the sample size, for those cases where neither balance is reported.

The imputation procedure for account balances for DC plans and the DC part of combination/both plans that have brackets in Wave 5 involves three steps. In the first step, we construct a variable “class” by organizing the observed continuous and bracket values of the balances variable based on the upper and lower limits of bracket variables. Then we impute for cases with complete bracket information using either mixed or hot-decking method, and use “class” variable as the primary sort variable. In the second step we impute for cases with an open end limit brackets. We first, organize the observed values of the balances, including the imputed values in the first round, based on the information from bracket variables with an open upper or

lower limit. Then we construct a new “class” variable and impute for those cases and use the new constructed variable “class” as the primary sort variable. In these two rounds of imputations the donors are observations within the same class. In the third step we impute for cases with missing values (without any other information) using either a mixed or hot-decking method while including the imputed variables in the first and second rounds.

Imputation for pension benefits, such as expected future benefit amounts, amount of receiving benefits, cash settlements, IRA amounts, amount of transfers, installments, withdrawals, and annuities, is done in two steps. First, the ratio of benefits to earnings is calculated and imputed through a mixed method, or hot decking where necessary, for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information.

Chapter 1

Introduction

The HRS provides a unique opportunity to study the pensions of individuals as their plans and benefits evolve over their work lives and into retirement. Because the HRS is a panel study, following the same individuals over time and interviewing them every two years, it allows us not only to measure the pension-related outcomes listed in the previously, but to understand the role of changing pensions over time and to trace how pension changes have affected those on the verge of retirement. It also allows us to determine the fate of pensions held at some time over the lifetime, and thus how pension coverage while on the job affects a respondent's pension income and wealth once retired. Given the very rapid changes in pensions over the past two decades, this is a particularly propitious time to have a mature panel data set available for analysis. This chapter discusses the importance, history, and characteristics of pensions and pension plans, including Defined Benefits and Defined Contribution plans. It also provides a preliminary picture of changes in the level of pension participation and plan type among public and private sector employees, and cohorts covered by the HRS.

Employment and Labor Force

Government Employees

Govtemp8

The constructed variable “Govtemp8” identifies respondents who were public employees at the federal, state, or local government level in Wave 8 (2006).

How Constructed:

The variable is derived from KJ720. This question was asked for the first time in the Employment section of Wave 8. In the J section of Wave 8, the wording is:

Are you employed by the government at the federal, state, or local level? Would that be the federal, state, or local government?

Variable Used:

Wave 8:
KJ720

Pension Plan Type Index
Xhrsi

This variable indicates if the respondent reported Defined Benefit (DB) plan(s) only, Defined Contribution (DC) plan(s) only, or combination/both plans in Wave i, where i=1, 4, 7, and 8.

How constructed:

This variable is derived from plan type variables. Respondents who reported one or more DB (type A) plan(s) and no DC (type B) or combination/both (type AB) plan are identified as having DB only. Conversely, respondents who reported one or more DC plan(s) and no DB plan or combination plan are identified as having DC plan only. Respondents with one or more DB plan(s) and one or more DC plan(s), or a combination plan, are identified as those with combination plans.

Cross Wave Differences:

- 1- Respondents who reported having pension coverage are asked about the number of plans they have through that pension. After ascertaining the number of their plans, they are asked about the plan type for each of those plans. From Wave 1 to Wave 4 they were asked about up to 3 plans. From Wave 5 forward, they are asked about up to 4 plans.

2- In Waves 1 and 7, there is only one set of pension questions. In Wave 2, there are 4 sets of pension questions; 2 sets in the FA section designed for the employees and 2 sets in the FB section designed for self-employed. The 2 sets in FA and FB sections include questions from the same and new pension sequences each. In the remaining waves, there are two sets; one for the same pension sequence, the other for the new pension sequence.

Variables used:

Wave 1:

V2909, V3009, V31089

Wave 4:

F3364_1 – F3364_3, F3403_1 – F3403_3

Wave 7:

JJ338a, JJ338b, JJ338c, JJ338d

Wave 8:

KJ272a, KJ272b, KJ272c, KJ272d, KJ338a, KJ338b, KJ338c, KJ338d

**Pension Coverage
pension_i**

Variable “pension_i” indicates respondents’ pension coverage in Wave *i*, where in this chapter, *i*= 1, 4, 7.

How Constructed:

The “pension_i” is derived from one or two questions depending on the wave. All working respondents in Wave 1, as well as members of new cohorts who were working, and re-interviewee respondents who reported a new job, or if working at the same employment who did

not report a pension in their last interview survey, are asked the pension coverage question. If the response to this question is affirmative “pension1” is set to yes (=1). Otherwise, it is set to 5.

Re-interviewee respondents who reported working at the same employment and were included¹⁵ in a pension plan in their last interview are asked if the rules that govern their pension have changed, or if there have been other changes such as in age. If the response to this question is 1, 5, 8, or 9 (yes, no, don’t know, refuse), then “pension1” is set to 1. Otherwise, if the response is 7, which means the respondent denies being covered by a pension in the previous wave, “pension1” is set to 5.

Cross Wave Differences:

- 1- In Waves 1 and 2 employees and self-employed respondents are asked the pension coverage question in separate questions.
- 2- From Wave 5 forward, the phrase “or a new plan been offered to you” was added to the question asking if the rules that govern their pension or the age they can receive benefits have changed.

Variable used:

Wave 1:
V2901, V2838

Wave 4:
F3359, F3389

Wave 7:
JJ268, JJ324

**Employment
worki**

¹⁵ A preloaded variable identifies respondents as having had a pension in their previous wave interview.

Variable “work_i” indicates the respondent’s employment status in Wave *i*, where in this chapter *i*= 1, 4, 7.

How Constructed:

The “work_i” is derived from responses to the question “*Are you doing any work for pay?*” Respondents who reported working are identified as working. Otherwise, they are identified as not working. Respondents who reported working but worked less than 100 hours per year are categorized as not working.

Variable used:

Wave 1:

V2717, V2722, V2822, V2726, V2823

Wave 4:

F3131, F3259, F3269

Wave 7:

JJ020, JJ172, JJ179

Full-Time Employment/Retirement Status

full_time_i

This variable indicates the full-time, part-time, or not working/retired status of respondents in Wave *i*, where in this chapter *i*=1, 4, 7.

How Constructed:

The variable is constructed based on the number of hours worked per week/year combined with the self-reported retirement status responses. Full time individuals are those who reported working at least 30 hours per week and 1560 hours per year. Individuals who were working at least 100 hours per year but no more than 25 hours per week or 1250 hours per year are counted as part time, and individuals not doing any work at all or working less than 100

hours per year are counted as fully retired. Individuals who fall between full time and part time are classified on the basis of self reports of their retirement status. Those who reported not retired are considered full-time and those reported partially retired are part time.

Cross Wave Differences:

- 1- In Wave 1 and Wave 2, employees and self-employed respondents are asked about the number of hours per week and number of weeks per year worked in separate questions. From Wave 3 forward, there is one question for both groups.
- 2- For the self-reported retirement status question (K1 in Wave 1, G134 in Waves 4, and 7) there is an inconsistency in the wording of the qualification for the answer “not relevant”. In Wave 1; “7. *Question not relevant to r, does not work for pay or is homemaker, has not worked for 10 or more years*”. In Wave 4; 7. *Question not relevant to r, does not work for pay or is homemaker, has not worked for 1 or more years*”. In Wave 7; “7. *Question not relevant to r, does not work for pay or is homemaker, etc*”.

Variables Used:

Wave 1:

V2722, V2822, V2726, V2823, V4901

Wave 4:

F3259, F3269, F3570

Wave 7:

JJ172, JJ179, JJ578

Chapter 2

Theories Explaining Pensions

This chapter provides a theoretical structure for viewing the HRS pension variables.

There are no data in this chapter.

Chapter 3

Employment and Retirement in the Health and Retirement Study

This chapter sets the stage for the analysis of HRS pension data. It begins with a description of those sections of the HRS that are relevant to an analysis of pensions, then shifts to data describing the labor market activities and retirement behavior of the HRS population.

Constructed variables used in this chapter include gender, race, marital status, education, birth year and month, labor force, employment, working for self or an employee, pension coverage, and working full-time or part-time.

Age

Agei

The “agei” variable indicates respondents’ age in Wave i, where i= 1 to 8.

How Constructed:

This variable is constructed by using the respondents’ birth year and month and interview year and month. It is calculated by subtracting the birth year from the interview year. This age is adjusted downward if the difference between the interview month and birth month is less than 6 months and upward if it is more than 6 months.

Variables Used:

Birthyr, birthmo, aiwyear, aiwmonth, ciwyear, ciwmonth, eiwyear, eiwmonth, fiwyear, fiwmonth, giwyear, giwmonth, hiwyear, hiwmonth, jiwyear, jiwmonth, kiwyear, kiwmonth.

**Employment
worki**

Variable “worki” indicates the respondent’s employment status in Wave i, where i= 1 to 8.

How Constructed:

This variable is described in Chapter 1.

**Full-Time Employment/Retirement Status
full_timei**

This variable indicates the full-time, part-time, or not working/retired status of respondents in Wave i, where i=1 to 8.

How Constructed:

This variable is described in Chapter 1.

Gender, Race, Marital Status, Education

The source of these variables is the tracker file 2004, version 1. For Wave 8, the source is HRS tracker file 2006, version 1.

**Labor Force
lbrfrci**

Variable “lbrfrci” indicates the respondent’s labor force status in Wave i, where in this chapter i= 1, 4, 7.

How Constructed:

The “lbrfrci” is derived from responses to the question “*Are you working now, temporarily laid off, unemployed and looking for work, disabled and unable to work, a homemaker, or what?*” Respondents who reported working now, temporarily laid off, or unemployed and looking for work are identified as being in labor force.

Variable used:

Wave 1:

V201, V2702, V2703,

Wave 4:

F3115m1 – F3115m3,

Wave 7:

JJ005m1 – JJ005m3

**Employee/Self-employed
selfelsei**

Variable “selfelsei” indicates if the respondent was working for self or an employer in Wave i, where in this chapter i= 1, 4, 7.

How Constructed:

The “selfelsei” is derived from responses to the question “*Do you work for someone else, are you self-employed, or what?*” Responses to this question are assigned to this variable.

Variable used:

Wave 1:

V2718

Wave 4:

F3132

Wave 7:

JJ021

Firm Size

Frmszi

The constructed variable “Frmszi” indicates the firms size’s categories being small, medium, or large in Wave i, where in this chapter i=1, 4, 7.

How Constructed:

This variable identifies the size of a firm based on the number of employees working at all locations. Firms with less than 100 employees are classified as small, between 100 and 500, medium, and more than 500 employees, large. The variable is constructed by using the information provided in the questions with continuous and bracketed values. For firms with only one location, the values from questions (continuous and bracketed) for “the location” are used.

Cross Wave Differences:

The question about the number of employees working for the company is one of the carry forward questions. In Wave 1, all employees and self-employed respondents were asked the question. But in Waves 4 and 7, employees who reported working at the same employment were not. The information for those two waves is from the carry forward data files.

Variable used:

Wave 1:

V2718, V2814, V2812, V2813, V2815, V2830

Wave 4:

F3132, F3345s, F3343s, F3344s, F3347s, F3288

Wave 7:

JJ021, JJ246s, JJ247s, JJ244s, JJ245s

Union Membership

Unioni

The constructed variable “unioni” indicates an employee’s union membership in Wave i, where in this chapter i=1, 4, 7.

How Constructed:

This variable is one of the “Carry Forward” variables. When a respondent reports working at the same employment as in her/his previous interview, some of the questions about that employment are skipped. The union membership in respondent’s current job is one of those questions. “Carry Forward” variables have been discussed in the data source section of this document.

In Wave 1, respondents who had a current job and reported were working as an employee, were asked if they are covered by a union or employee-association contract. Response to this question is used for constructing this variable. In Waves 4 and 7, we used the union variable from the “Carry Forward”¹⁶ data files.

Cross wave Differences:

In Waves 1 and 5, all employee respondents were asked about the union membership in their current employment. In other waves, only respondents who were first interviewed or had started a new job were asked about their union membership.

Variables Used:

Wave 1:
V2819

Wave 4:
F3356s

Wave 7:
JJ266s

¹⁶ The new cohorts in Wave 4 and Wave 7 are asked the question. But where there are younger spouses of HRS and WBs who were age eligible in Wave 4 and Wave 7, we use the variables from the carry forward variables file.

Government Employees

Govtemp_i

The constructed variable “Govtemp_i” identifies respondents who were public employees at the federal, state, or local government level in Wave *i*, where in this chapter *i*=1, 4, and 7.

How Constructed:

In all waves, except in Wave 8 and later waves, there are no direct questions asking about government employment on respondents’ current job. Therefore, the construction of this variable involves several variables from the Job History section in Waves 1 and 4. For Wave 7, the variable is constructed by using variables from the Employment section of Wave 8 and the Job History section of Wave 7.

When first interviewed, respondents were asked if they have ever worked for the federal, state, or local government and the start and end date of such jobs (in H61 to H62a of Wave 1 and GH52d to GH52g in Wave 4). Those questions are asked in the Job History section (H/GH/L) of each interview survey prior to Wave 8. From Wave 8 forward, they were asked directly if they were working for the government in their current job.

For constructing this variable in Waves 1 and 4, the index is constructed by comparing the start date and end date of any reported government jobs with the start and interview dates of current job in 1992 or 1998.

Status as a public/private employee in 2004 is calculated from two sources. First for respondents who reported working at the same employment in 2006, the information is taken back to 2004. For those not working at the same employment in 2006, the public/private employee index is constructed by comparing the start date and end date of any reported government jobs (in the L section) with the start and interview dates of the current job in 2004.

Respondents who were re-interviews in 2004 and were retired or changed jobs since their 2004 interview are not included in the sample.

Cross Wave Differences:

In the H, GH, and L sections (previous pension jobs) of Waves 1, 4, and 7, questions about working for the government are the same. But they are different from those asked in the J section (current employment) of Wave 8.

In the H, GH, and L sections, the wording of the two questions is:

Have you ever been employed by a unit of a state, county, or local government?

Aside from military service, have you ever been employed by the federal government?

In the J section of Wave 8, the wording is:

Are you employed by the government at the federal, state, or local level?

Would that be the federal, state, or local government?

Variable Used:

Wave 1:

V2816, V3941, V3943, V3946, V3948, V3942, V3944, V3947, V3949, aiwyear

Wave 4:

F3349s, F3131, F3988, F3990, F3993, F3995, F3989, F3991, F3994, F3996, fiwyear

Wave 7:

JJ249s, JJ020, KJ045, KJ720, JL078, JL080, JL083, JL085, JL079, JL081, JL84, JL086, jiwyear

**Pension Coverage
pension_i**

Variable “pension_i” indicates respondents’ pension coverage in Wave *i*, where in this chapter *i* = 1, 8.

How Constructed:

This variable is described in Chapter 1.

Chapter 4

Pension Data in the Health and Retirement Study

A number of features of the Health and Retirement Study make it a unique source of information for describing the course of pension outcomes, especially for the retirement age population. Respondents with pensions at their current job describe their plan(s) in detail. Comparisons of plan features and plan values from respondents and firms, and analyses of changes in pensions over time provided by respondents and obtained from employer plan descriptions, improve understanding of the pensions held by respondents and of respondents' knowledge about their pensions.

This chapter presents available pension information by sources and survey years, availability of employers' plan descriptions by respondents' report of plan type for employees with a pension plan on current job, match rates for employer plan description by job type and year of respondent survey, the number of respondents with matched plans and both plans in the core in 1992, 1998, and 2004 by importance of plan type, the number and percentage of responses reporting indicated plan characteristic in the plan characteristics module, arrayed by plan type reported in the plan documents collected in 2004/2005, and the number and percentage of responses reporting indicated plan characteristic in module 6/7 arrayed by plan type reported in module 6/7.

Pension Plan Type Index- Current Job Plan Documents Xspdi

The constructed variable "Xspdi" identifies respondents whose Administrative Data indicates one or more pension plan(s) that is only DB plan(s), only DC plan(s), or

combination/both plan(s) in Wave i, where i=1, 4, 7. The source of the data is the administrative data described in the sources of data section.

How Constructed:

For constructing plan type from plan documents for current job use following steps:

- Transfer the “Planinformation” and “Respondents” data from access to SAS.
- Merge those two files- using “codingid” for merging.
- Rename “RespondentNumber” to V1 in Wave 1 and HHIDPN in Wave 4 data files.
- Subset the data by “jobtype”; for “jobtype”=1 current job.
- Respondents with more than one matched plan have more than one record. For example, a respondent with three matched plans would have three records. Revise the data so that each respondent has one record.
- Merge with the core interview data to get self-reported pension characteristics.
- The constructed variable “Xspdi” is derived from plan type variables from the data file noted in the previous step.

Variables Used:

Wave 1:

Plan type from “planinformation”, “respondent” data files

Wave 4:

Plan type from “planinformation”, “respondent” data files

Wave 7:

Plan type from “planinformation”, “respondent” data files

**Pension Coverage- Last Job
Pension_G1, Pension_GG4**

Variables pension_G1 and Pension_GG4 indicate pension coverage from respondents' last job in Waves 1 and 4, respectively. Those variables are derived from the pension coverage questions, "V3430" in Wave 1 and "F3672" in Wave 4. Plan documents for respondents' last job in Wave 7 were not available at the time we conducted the study.

Pension Coverage- Previous Job Pension_H1, Pension_GH4

Variables pension_H1 and Pension_GH4 indicate pension coverage from respondents' most recent previous pension job in Waves 1 and 4, respectively. Those variables are derived from the pension coverage questions, "V3620" in Wave 1 and "F3854" in Wave 4. Plan documents for respondents' previous pension jobs in Wave 7 were not available at the time this study was conducted.

Match Rate for Plan Documents – Current, Last, and Previous Jobs

For calculating plan documents' match rates for current, last, and previous jobs use following steps:

- Transfer the "Planinformation" and "Respondents" data from access to SAS.
- Merge those two files- using "codingid" for merging.
- Rename "RespondentNumber" to V1 in Wave 1 and HHIDPN in Wave 4 data files.
- Subset the data by "jobtype"; for "jobtype"=1 current job, =2 last job, and =3 previous job.
- Respondents with more than one matched plan have more than one record. Revise each subset data to form each respondent with one record.

- The number of respondents with a plan indicates the number of matched respondents.
- Merge with the core data to get self-reported pension characteristics.

Data Files Used:

Wave 1:

“Planinformation” and “Respondents” data files

Wave 4:

“Planinformation” and “Respondents” data files

Wave 7:

“Planinformation” and “Respondents” data files

**Pension Coverage
pension_i**

Variable “pension_i” indicates respondents’ pension coverage in Wave *i*, where for this chapter *i*= 1, 4, 7.

This variable is described in Chapter 1.

**Employee/Self-employed
self_{se_i}**

Variable “self_{se_i}” indicates if the respondent was working for self or an employer in Wave *i*, where *i*= 1, 4, 7. This variable is described in Chapter 3.

**Start year
start_{y_i}**

The constructed variable “startyri” indicates the year that respondent’s current job has started in Wave i, where $i=1, 2, \dots, 8$.

How Constructed:

Self-employed respondents are asked the start year of the business question at every interview wave. But employees are asked the question only at their first interview and if started a new job. In Wave 5, all employees were asked the question regardless of working at the same or a new employment. For other wave interviews, we use the variable from the “Carry Forward”¹⁷ variable data files. The information from this variable is used for constructing the start year variable.

Cross wave Differences:

In Waves 1 and 5, all working respondents were asked about the start date of their current employment. In other waves, only respondents who were first interviewed or had started a new job were asked about the start date of that job.

Variables used:

Wave 1:

V2816, V2834

Wave 2:

W3663s, W4328

Wave 3:

E2826s

Wave 4:

F3349s

Wave 5:

G3608

Wave 6:

¹⁷ A brief description of “carry forward” variables can be found in the data source section of this document.

HJ249s

Wave 7:

JJ249s

Wave 8:

KJ249s

Job Tenure

Jobteni

Job tenure indicates the number of years respondents have worked on their current job in Wave i, where i=1 to 8.

How Constructed:

It is constructed for each of the interview wave as of that interview date. It is calculated by subtracting the start year of respondents' current job from their interview year in each wave.

The start year of the job is one of the "carry forward" variables. The interview years are from the tracker file.

Variables used:

Wave 1

V2816, V2834, aiwyear

Wave 2

W3663s, W4328, ciwyear

Wave 3

E2826s, eiwyear

Wave 4

F3349s, fiwyear

Wave 5

G3608, giwyear

Wave 6

HJ249s, hiwyear

Wave 7

JJ249s, jiwyear

Wave 8

KJ249s, kiwyear

DC Account Balances- Current Job

CurDCs_wi

The constructed variable “CurDCs_wi” includes the sum of all account balances from Defined Contribution (DC or type B) and the account part of the combination/both (type AB) plan(s) from respondents’ current job in Wave i , where $i = 1$ to 8.

How Constructed:

Respondents who reported having one or more DC or combination/both plan(s) from their current job are asked about their current account balances. The account balance question is one of the questions asked in every wave, either in the same or new pension sequence. Responses to this question are used for construction of this variable. These include the sum of account balances from DC and the account part of combination/both plans from current jobs in each wave. This constructed variable does not include any imputations. The components vary across waves. Differences are as follows.

Cross Wave Differences:

1. In Wave 1 to Wave 4, respondents were asked about up to 3 plans. From Wave 5 forward, they were asked about up to four plans.
2. In Wave 1, a set of range values follows Don’t Know and Refuse questions.
3. From Waves 5 forward, bracket questions follow Don’t Know and Refuse questions.
4. In Wave 1, there are 2 questions asking about DC/combo account balances, 1 question for DC and 1 question for the combination plan.

5. In Wave 2, there are 8 questions for DC/combo account balances. There are 4 questions in the FA section designed for employees, 1 question for DC and 1 for the combination/both plans in the same and new pension sequences each. Similarly, there are 4 questions in the FB section designed for self-employed respondents, 1 question for DC and 1 for the combination/both plans in the same and new pension sequences each.
6. In Wave 3 to Wave 6 and Wave 8, there are 4 questions for account balances; 2 from the same pension and 2 from the new pension sequences. That is one question for DC and one for the combination/both account balances in each sequence.
7. In Wave 7, there are only two questions about DC and combination account balances; one for the DC and the other for the combination plan.

Variables used:

Wave 1:

V2910, V3010, V3110, V2940, V3040, V3140

Wave 2:

W3713, W3725, W3737, W3723, W3735, W3747, W3757, W3809, W3861, W3797, W3849, W3901, W3912, W4416, W4468, W4520, W4456, W4508, W4560

Wave 3:

E2841_1, E2841_2, E2841_3, E2856_1, E2856_2, E2856_3, E2876_1, E2876_2, E2876_3, E2942_1, E2942_2, E2942_3

Wave 4:

F3365_1, F3365_2, F3365_3, F3383_1, F3383_2, F3383_3, F3404_1, F3404_2, F3404_3, F3470_1, F3470_2, F3470_3

Wave 5:

G3625_1, G3625_2, G3625_3, G3625_4, G3643_1, G3643_2, G3643_3, G3643_4, G3684_1, G3684_2, G3684_3, G3684_4, G3755_1, G3755_2, G3755_3, G3755_4

Wave 6:

HJ273_1, HJ273_2, HJ273_3, HJ273_4, HJ307_1, HJ307_2, HJ307_3, HJ307_4, HJ339_1, HJ339_2, HJ339_3, HJ339_4, HJ413_1, HJ413_2, HJ413_3, HJ413_4

Wave 7:

JJ339a, JJ339b, JJ339c, JJ339d, JJ413a, JJ413b, JJ413c, JJ413d

Wave 8:

KJ273a, KJ273b, KJ273c, KJ273d, KJ307a, KJ307b, KJ307c, KJ307d,
KJ339a, KJ339b, KJ339c, KJ339d, KJ413a, KJ413b, KJ413c, KJ413d

Prorated Present Value of Expected DB Benefit**prsrDBben_xpi**

The variable “prsrDBben_xpi” is the prorated self reported DB benefit(s) at expected retirement age. It is constructed for respondents who reported a DB or combination/both plan from their current job in Wave i, where for this chapter $i=1, 4, 7$. This variable is constructed for the most important DB or combination/both plan. The values are from the self-reported data.

How Constructed:

Pension wealth from a DB plan is calculated first by calculating the annual expected benefits and then summing the discounted values of each year of that benefit receipt back to the age of expected retirement. Then the present value of expected benefits is prorated to respondents’ interview year.

The expected future benefits may be reported as a percent of income, an amount per week/bi-weekly/month/year, or a lump-sum. Benefits reported as a percent of income or amounts per week/bi-weekly/month are converted to an annual amount. Pension wealth from a DB plan is calculated first by calculating the annual expected benefits and then summing the discounted values of each year of that benefit receipt back to the age of expected retirement. The annual benefit for respondents who reported percent of income¹⁸ is calculated by adjusting the income

¹⁸ Respondents are asked about their expected final pay. That is not used in the calculation. About half of the respondents have missing values and some have reported an expected earnings amount that is unreasonably far off from their current income.

by 3.9 percent¹⁹ for each year between the respondent's age in the wave and the age s/he expects to start receiving benefits²⁰. It is assumed that respondents will work until the age of their expected retirement. Present discounted value of lump sum benefits are calculated for those who reported expecting a lump-sum amount. Benefits are then further discounted back to the indicated wave year. Benefits are paid only if the respondent continues to survive. The future amount reported is discounted at 5.8 percent back to the year the question was asked. The discount rate of 5.8 percent is taken from Social Security Administration projections of the intermediate future inflation rate of 2.8 percent and a real interest rate of 3.0 percent. Whenever benefits are discounted, the inflation portion of the adjustment is always 2.8 percent, even when adjusting over historical periods where a different inflation rate was realized. By standardizing for the inflation rate over the period, we hope to eliminate changes in values resulting from projecting and discounting at different underlying inflation rates.

Those benefits then are prorated to the interview year. The values are prorated based on respondent's work to date (interview year) as a share of work from the date of hire until the expected age of retirement. Prorated benefits are obtained by multiplying the present discounted values of the plan by the ratio of years of service accumulated to date, divided by years of service that would be accumulated by the expected retirement date. For example, if a person had worked fifteen years through 1992 and expected to work another ten years until 2002, the benefit is computed as if the person worked through 2002, but that benefit is then multiplied by 15/25. Thus the present values where benefits are prorated, are lower than those not prorated. These

¹⁹ That is the future intermediate inflation rate of 2.8 percent and 1.1 percent real wage growth from the 2004 Annual Report of the Board of Trustees.

²⁰ There are two cases (hhidpn=015429010 and 085604010) with an unreasonable amount/per. Those are turned to missing.

values are prorated and discounted to allow comparison between individual DB and DC amounts. Imputed values are not included.

Cross Wave Differences:

1. In Wave 1 to Wave 4, respondents were asked about up to 3 plans. In Wave 5 forward, they were asked about up to four plans.
2. In Wave 1, a set of range values follow Don't Know and Refuse responses.
3. From Waves 6 forward, bracket questions follow Don't Know and Refuse responses in the amount question.
4. In Wave 1, the "Per" units for the amount of expected benefits are "2. Week, 3. Bi-weekly, 4. Month, 6. Year, and 8. Lump-sum".
5. In Wave 2 to Wave 5, the "Per" units are "2. Week, 3. Bi-weekly, 4. Month, and 6. Year".
6. From Wave 6 forward, the "Per" units are "4. Month and 6. Year".
7. In Wave 1, there is one questions asking about the expected amount of future benefits from DB and combination plans.
8. In Wave 2, there are 4 questions about the expected future benefits from DB and combination plans. There are 2 questions in the FA section, one in the same pension and the other in the new pension sequences. Similarly, there are 2 questions in the FB section, one for the same pension and the other in the new pension sequences.
9. In Wave 3 to Wave 6 and Wave 8, there are 2 questions about the expected future benefits from DB and combination plans. One of the questions is in the same pension and the other in the new pension sequences.

10. In Wave 7, there is only one question asking about the expected future benefits from DB and combination plans.

Variables used:

Wave 1:

V2916, V2917, V2918, V3016, V3017, V3018, V3116, V3117, V3118
V12735, V12739, V12743, V12748, V12825, V12828
srXPage1, jobten1, age1, aiwyear

Wave 2:

W3717, W3729, W3741, W3766, W3818, W3870,
W3718, W3730, W3742, W3767, W3819, W3871,
W3719, W3731, W3743, W3768, W3820, W3872,
W3720, W3732, W3744, W3769, W3821, W3873,
W3317, W4425, W4477, W4529, W4426, W4478,
W4530, W4427, W4479, W4531, W4428, W4480,
W4532, srXPage2, jobten2, age2, ciwyear

Wave 3:

E2846_1 - E2846_3, E2892_1 - E2892_3
E2847_1 - E2847_3, E2893_1 - E2893_3
E2848_1 - E2848_3, E2894_1 - E2894_3
E2850_1 - E2850_3, E2896_1 - E2896_3
srXPage3, jobten3, age3, eiwyear

Wave 4:

F3373_1 - F3373_3, F3420_1 - F3420_3
F3374_1 - F3374_3, F3421_1 - F3421_3
F3375_1 - F3375_3, F3422_1 - F3422_3
F3377_1 - F3377_3, F3424_1 - F3424_3
SrXPage4, jobten4, age4, fiwyear

Wave 5:

G3633_1 - G3633_4, G3700_1 - G3700_4
G3634_1 - G3634_4, G3701_1 - G3701_4
G3635_1 - G3635_4, G3702_1 - G3702_4
G3637_1 - G3637_4, G3704_1 - G3704_4
SrXPage5, jobten5, age5, giwyear

Wave 6:

HJ289_1 - HJ289_4, HJ356_1 - HJ356_4
HJ290_1 - HJ290_4, HJ357_1 - HJ357_4
HJ294_1 - HJ294_4, HJ361_1 - HJ361_4

HJ296_1 – HJ296_4, HJ363_1 – HJ363_4
SrXPage6, jobten6, age6, hiwyear

Wave 7:

JJ356a, JJ356b, JJ356c, JJ356d
JJ357a, JJ357b, JJ357c, JJ357d
JJ361a, JJ361b, JJ361c, JJ361d
JJ363a, JJ363b, JJ363c, JJ363d
SrXPage7, jobten7, age7, jiwyear

Wave 8:

KJ289a, KJ289b, KJ289c, KJ289d, KJ356a, KJ356b, KJ356c, KJ356d
KJ290a, KJ290b, KJ290c, KJ290d, KJ357a, KJ357b, KJ357c, KJ357d
KJ294a, KJ294b, KJ294c, KJ294d, KJ361a, KJ361b, KJ361c, KJ361d
KJ296a, KJ296b, KJ296c, KJ296d, KJ363a, KJ363b, KJ363c, KJ363d
SrXPage8, jobten8, age8, kiwyear

**Expected Starting Age of Receiving Benefits from DB Plans
srXPagei**

The constructed variable “srXPagei” is the self-reported expected age of receiving benefits in Wave i, where i=1 to 8. This variable is constructed for the most important DB (type A) or combination/both (type AB) plan from respondents’ current job.

How Constructed:

Respondents who reported a DB or combination/both plan are asked about the age at which they expect to start receiving benefits at each interview date. The variable is derived from this question. This variable does not include any imputations.

Cross Wave Differences:

- 1- This question is asked of respondents who reported a DB or combination/both plan. The body of the question “*At what age do you expect to start receiving benefits from this plan?*” is the same in all waves. However, from Wave 3 forward, a phrase is added at the beginning of the question if the plan is a combination/both plan. The phrase is “*Now, about the part of your pension where benefits are accumulated based on a formula ...*”.

- 2- In Wave 1, there is 1 question asking about the age respondents with a DB or combination/both plan are expecting to receive benefits. In Wave 2, there are 4 questions; 2 questions in the FA section designed for employees, 1 question in the same and new pension sequences each. Similarly, there are 2 questions in the FB section designed for self-employed respondents; 1 question in the same and new pension sequence each. In Wave 3 to Wave 6 and Wave 8, there are 2 questions; 1 from the same pension and 1 from the new pension sequences. In Wave 7, there is only one question.
- 3- In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.
- 4- From Wave 2 forward, “Already Receiving Benefits or Receiving Benefits Now” is added to the possible responses to the question. But this response is coded differently in Wave 2 from other waves. In Wave 2, it is coded as 95. From Wave 3 forward, it is coded as 97.
- 5- In Wave 1, a possible response “No Age Requirement”, coded as 96 is included. This response is not included in later waves.
- 6- Responses to the age of expecting to receive benefits could be in some number of “years”. In Waves 1, the “year” response is already converted to age. From Wave 2 forward, the number of “years” is coded as 96. The follow-up question indicates the number of years and should be converted to age.

Variables used:

Wave 1

V2915, V3015, V3115

Wave 2

W3710, W3714, W3726, W3738, W3715, W3727, W3739,

W3748, W3763, W3815, W3867, W3764, W3816, W3868,
W3317, W4380, W4392, W4404, W4422, W4462, W4474

Wave3

E2835, E2843_1, E2843_2, E2843_3, E2844_1, E2844_2, E2844_3
E2861, E2883_1, E2883_2, E2883_3, E2884_1, E2884_2, E2884_3

Wave 4

F3359, F3370_1, F3370_2, F3370_3, F3371_1, F3371_2, F3371_3
F3389, F3411_1, F3411_2, F3411_3, F3412_1, F3412_2, F3412_3

Wave 5

G3619, G3630_1, G3630_2, G3630_3, G3630_4, G3631_1, G3631_2, G3631_3, G3631_4
G3654, G3695_1, G3695_2, G3695_3, G3695_4, G3696_1, G3696_2, G3696_3, G3696_4

Wave 6

HJ268, HJ286_1, HJ286_2, HJ286_3, HJ286_4, HJ287_1, HJ287_2, HJ287_3, HJ287_4
HJ324, HJ353_1, HJ353_2, HJ353_3, HJ353_4, HJ354_1, HJ354_2, HJ354_3, HJ354_4

Wave 7

JJ353a, JJ353b, JJ353c, JJ353d, JJ354a, JJ354b, JJ354c, JJ354d

Wave 8

KJ268, KJ286a, KJ286b, KJ286c, KJ286d, KJ287a, KJ287b, KJ287c, KJ287d
KJ324, KJ353a, KJ353b, KJ353c, KJ353d, KJ354a, KJ354b, KJ354c, KJ354d

**Plan Type in Pension Characteristics Module
mod_ptype1 and mod_ptype2**

The constructed variables “mode_ptype1” and “mod_ptype2” identify the type of plan reported in the Pension Characteristics Module (Module 6/7) for respondents’ most important and second most important pension plans in Wave 7.

How Constructed:

In this module, in contrast to the core, plan types were not defined, but respondents were asked if they knew the technical name or the type of their plan. If they indicated they knew the technical name of their plan, they were asked to provide it. If they did not know the technical

name, they were presented with a list of technical names to choose from. Those respondents who did not know the type of their plan and could not identify it from the list were read the definition of a Defined Benefit plan and asked if their plan is DB. Variables mode_ptypes 1 and 2 are constructed by using the information from those three questions.

Cross Wave Differences:

This set of questions (in Modules 6/7) was designed to be asked on a one time basis in 2004 (Wave 7). A modified version of its plan type questions was used in the redesign of the pension sequence in 2008 (Wave 9).

Variables used:

Wave 7:

JV313_1, JV315_1, JV317_1, JV313_2, JV315_2, JV317_2

Chapter 5

Pension Plan Participation in the Health and Retirement Study

This chapter examines pension plan participation in current jobs by employment status, among those working by cohort, number of respondents with a pension plan in Wave 1 and the number of them leaving pension jobs in subsequent waves. It also examines the percentage of respondents with current plan, and dormant, in pay status, and live plans from last and previous jobs. At the end the percentage of households and respondents with any own/spouse/partner pension from current/last or previous jobs by cohort is presented. Following is the list of constructed variables, how they are constructed, and if there are any cross wave differences encountered when constructing tables in this chapter.

Gender, Race, Marital Status, Education

The source of these variables is the tracker file. For Waves 1 to 7, we have used the HRS tracker file 2004, version 1, and for Wave 8 the HRS tracker file 2006, version 1.

Labor force, employed, full-time, employee/self-employed, firm size, union Lbrfrci, worki, full_timei, self_elsei, frmszi, unioni

Variables employed and full-time are described in Chapter 1. Labor force, employee/self-employed, firm size, and union membership are described in Chapter 3.

Pension Coverage- Current Job CurrPeni

The constructed variable “CurrPen_i” identifies respondents who have pension coverage from their current job in Wave *i*, where *i*=1 to 8. This variable is the same as “pension_i” described in Chapter 3.

How Constructed:

All working respondents in Wave 1, new cohorts who were working, and re-interviewee respondents if reported a new job, or if working at the same employment but did not report a pension in their last interview survey, are asked the pension coverage question. If the response to this question was affirmative²¹ “CurrPen_i” is set to yes (=1). Otherwise, it is set to 5.

Re-interviewee respondents who reported working at the same employment and were included²² in a pension plan in their last interview are asked if the rules that govern their pension have changed. If the response to this question was 1, 5, 8, 9 then “CurrPen_i” is set to 1.

Otherwise, it is set to 5.

Cross Wave Differences:

- 1- In Waves 1 and 2 employees and self-employed respondents are asked the pension coverage question in separate questions.
- 2- From Wave 5 forward, the phrase “or a new plan been offered to you” was added to the question asking if the rules that govern their pension or the age they can receive benefits have changed.

²¹ Some questions have been raised about the reliability of self-reported participation data, especially for those who are covered by a defined contribution (DC) plan. Turner, Muller, and Vermer (2003) use data from the Survey of Income and Program Participation to explore this issue. Data from respondent reports are matched with data on contributions to 401(k) plans gleaned from W2 reports to judge participation. The W2 data indicate much higher participation than is found in self-reports of coverage for these same individuals. In contrast, payroll and survey data from the Wyatt Corporation examined in Chapter 7 of the book suggest that the degree of underreporting is relatively small. While these two data sets suggest that there is underreporting of participation, they disagree on the extent of underreporting. Another potential source of underreporting should be mentioned. Some who are covered by a DC plan and have an active account but are not contributing during the year the survey is taken will report that they are participating in a plan, while others in the same circumstances will report that they are not. W2 data will not always resolve this source of ambiguity.

²² Respondents are identified as having had a pension in their previous wave interview by a preloaded variable.

Variables used:

Wave 1:

V2901, V2838

Wave 2:

W3710, W3748, W4375, W4376

Wave 3:

E2835, E2861

Wave 4:

F3359, F3389

Wave 5:

G3619, G3654

Wave 6:

HJ268, HJ324

Wave 7:

JJ268, JJ324

Wave 8:

KJ268, KJ324

**Turnover from Pension Jobs
leftbeforeWi**

This variable identifies respondents who initially reported a pension in the first Wave of the HRS and left their pension covered job before Wave i , where $i = 2$ to 8.

How Constructed:

The construction of pension coverage “pension i ” is described earlier in Chapter 3. Respondents who have left a previous interview job are asked when they left that employment or business. Those who have gone through that question are identified as those who have left their previous interview employment. Respondents whose interview type was coded as “exit” interview ($iwtype=11,15$) are excluded. They are included in the “died” group.

For example, the constructed variable 'leftbeforew2' includes respondents who reported having pension coverage in their 1992 interview but left their 1992 job before Wave 2's interview. That is, v2901=1 or v2838=1 and the response to the quit year (w3319, w3504, w4201, w4801, or w4898) is not blank and the "ciwtype" was not the "exit" type (=11,15). Otherwise it would be included in the "died" group. Those who were not interviewed in Wave 2 and any later waves and are not among the "died" group are considered among the attritors group.

Another example, 'leftbeforew3' includes respondents who reported having pension coverage in their 1992 interview job but left that job before Wave 3's interview. That is, v2901=1 or v2838=1 and were not among the "leftbeforew2" and the response to their quit year (E2631, E668) was not blank and "eiwtype" not the "exit" type (=11,15). Otherwise they would be included in the "died" group. Those who were interviewed in Wave 2 but not in any later waves and not among the "died" group are considered among the attritors group.

Other constructed 'leftbeforewi's identify respondents who reported having pension coverage in 1992 and they reported working at the same employment/business since 1992 but they left that job before their Wave i's interview.

Variables used:

Wave 1

V2901, V2838, V2718

Wave 2

W3317, W4201, W3458, W3319, W3504, W4201, W4801, W4898, ciwtype, ciwWave

Wave 3

E2628, E2631, E2655, E2631, E2668, eiwtype, eiwWave

Wave 4

F3132, F3135, F3166, F3135, F3189, fiwtype, fiwWave

Wave 5

G3382, G3385, G3416, G3385, G3438, giwtype, giwWave

Wave 6

HJ021, HJ024, HJ045, HJ024, HJ064, hiwtype, hiwwave

Wave 7

JJ021, JJ024, JJ045, JJ024, JJ064, Jiwtype, jiwWave

Wave 8

KJ021, KJ024, KJ045, KJ024, KJ064, Kiwtype, kiwWave

Dormant Pensions**DormPenwi**

The constructed “DormPenwi” identifies respondents who have at least one dormant pension plan in Wave *i*, where *i*=1 to 8. A dormant pension plan is a pension plan where respondents reported expecting benefits in the future from a DB and not receiving benefits now or having a DC account that is left to accumulate. Dormant pension plans include plans from last/previous jobs reported in respondents’ initial interview. Plans reported in a subsequent interview identified as dormant are added to the list of dormant plans.

How Constructed:

Constructing dormant pension indices involves two steps:

- 1- Identifying dormant pension plans. Those are plans that respondents reported expecting future benefits and not receiving benefits now from a DB plan or have left a DC account to accumulate.
- 2- Adjusting the status of dormant pension plans identified in step 1. In Waves 3, 4, 6, 7, and 8, respondents are asked about the fate of those dormant pension plans. If respondents reported cashed out the plan, receiving benefits now, rolled over into an IRA, converted to an annuity, lost benefits, etc., in any of those waves, the dormant pension

plan's status is adjusted from being dormant to not dormant. The adjustment is applied to the waves according to the date that the action was reported. For example, in Wave 3, respondents are asked only about the date that they cashed out their dormant DB plan or converted their dormant DC plan to an annuity. If the reported date is before Wave 2 and after Wave 1 the index for that specific dormant DB or DC plan is kept dormant in Wave 1 data but not dormant from Wave 2 going forward. For responses without a date, the adjustment of the status of the plan is started from the wave that the action was reported and not from prior waves. For example, if the response was receiving benefits now, rolled over into IRA, etc., since they were not asked about the date they started receiving benefits, rolled over into IRA, etc., the index for the dormant plan is kept dormant in both Waves 1 and 2 but it is adjusted from Wave 3 forward.

In this step, identifying which dormant pensions have gone through the old pension sequence (see the description of the old pension sequence on p. 12), we use the information from the preload prepared for asking the old pension sequence questions. Each record in the preload data file identifies respondents who have one or more dormant plans. The preload indicates each dormant pension's plan type, the start and end date of the job that the plan belongs to, and the interview date that the dormant plan was initially reported. Each respondent may have records for up to four dormant plans. Plans reported in Wave 1 to Wave 4 are from different jobs. After Wave 4, they may be from the same job or different jobs²³.

The old pension sequence asks respondents for whom the preload records one or two DB and/or DC plan(s) several follow-up questions specific to each of those plans. We compare the plan type, the start, and end dates of the jobs that are associated with the

²³ During Wave 1 to Wave 4 interviews, respondents are asked about the details of only one pension plan from any previous or last job. In Wave 5, this number is increased to up to three plans and in Wave 6 and later waves to up to four plans.

dormant plans with the same information in the preload data file. For plans with a match we take the respondent's reports of the status of dormant plans from the old pension sequence responses. Based on those responses, if warranted we adjust the status of the plan. For example, if a respondent had an index identifying a dormant DB plan that was reported in the H section of Wave 1, we compare the plan type, start date, and end date of the job reported in the H section with that respondent's information from the preload data files from Wave 3, then Wave 4, then Wave 6, then Wave 7, and finally Wave 8. As soon as there is a match between plan types, and the dates in both files, then we turn to the response to the question asking about the fate of that old plan. Based on the response to that question, we adjust (or not adjust) the status of dormant pension plans.

Take another example. If the dormant pension was first reported in Wave 4, we check responses in the old pension sequence in Wave 6, then Wave 7, and finally Wave 8. If in any of those waves there was a report that the dormant plan was cashed out, rolled into IRA, etc., say in year 2001, the status of the dormant plan is adjusted in waves after 2001. The dormant status is kept unchanged for Waves 4 and 5. For respondents who report in a particular wave that they still expect future benefits and they are not receiving benefits, or their account is still accumulating, the status of their dormant plan is kept unchanged in that wave.

In brief, dormant pensions in Wave *i* are matched with the preload data from the waves after Wave *i*. Information in the preload data files in each Wave gives us the key to identify dormant pensions that have gone through the old pension sequence. Responses in the old pension sequence are the key the adjusting the status of dormant pensions.

Cross Wave Differences:

- 1- In Waves 3 and 4, the follow-up questions about old pensions are asked in the Assets and Income section of the survey. They start with J192²⁴ designed for dormant DB plans and J197²⁵ designed for dormant DC plans.
- 2- In Waves 3 and 4, respondents are asked about the dates of any action taken only if a dormant DB plan was cashed out or only if a DC plan was converted to an annuity. They are not asked about the date of other forms of disposing their dormant plans.
- 3- In Wave 5, questions in the old pension sequence were not asked.
- 4- In Wave 6, questions are moved to the Employment section of the survey. They start with J434 for dormant DB plans and J450 for dormant DC plans in the J section.
- 5- From Wave 6 forward, another possible response “ROLLED OVER INTO IRA” is added to the list of responses for disposing dormant DB plans (in J434). There are follow-up questions about the date that dormant pensions’ status changed for all responses except “lost benefits”. We use the reported dates to adjust the status of dormant pension according to those dates.

²⁴ J192 in Waves 3 & 4 asks: Our records show that as of 4 years ago, in (1992/1993), you were expecting future benefits from a job where you worked from approximately “*date*” until “*date*”. Are you still expecting future benefits, are you receiving benefits now, did you receive a cash settlement, have you lost your benefits, or what?
 STILL EXPECTING BENEFITS
 RECEIVING BENEFITS NOW
 RECEIVED CASH SETTLEMENT
 LOST BENEFITS
 RECORDS INACCURATE
 DK/RF

²⁵ J197 in Wave 3 and Wave 4 states: Our records show that as of 4 years ago, in (1992/1993), you had a pension account from a job where you worked from approximately “*date*” until “*date*”. Do you still have that pension account, did you withdraw the money, roll it over into an IRA, convert the account to an annuity, or what?
 INAP
 STILL HAVE ACCOUNT
 ROLL OVER INTO IRA
 WITHDREW MONEY
 CONVERT TO ANNUITY
 OTHER (SPECIFY)
 DK/RF

- 6- From Wave 6 forward, two other possible responses “TRANSFERRED TO NEW EMPLOYER” and “RECORDS INACCURATE” are added to the list of responses for disposing dormant DC plans (in J450). There are follow-up questions about the date that the dormant DC account’s status changed for all responses except “lost benefits”. We use the reported dates to adjust the status of dormant pension plans according to those dates.

Variables used:

Wave 1:

BIRTHYR, AIWYEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, E4324_1, E4324_2, E4327_1, E4327_2, E4329_1, E4329_2, E4331_1, E4331_2, F5084_1, F5084_2, F5087_1, F5087_2, F5089_1, F5089_2, F5091_1, F5091_2, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, J434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4, HJ443_1 - J443_4, HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, J450_2b, J450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, JJ434a1, JJ434b1, JJ434c1, JJ434d1, JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3, JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3, JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3, KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d, E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 2:

BIRTHYR, CIWYEAR, AIWYEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104,

W7105, W7108, W7109, W7110,W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171,W7196, W7197, W7202, W7203, W7205, W7225, E4324_1, E4324_2, E4327_1, E4327_2, E4329_1, E4329_2, E4331_1, E4331_2,F5084_1, F5084_2, F5087_1, F5087_2, F5089_1, F5089_2, F5091_1, F5091_2, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d,HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d,HJ436_1 - HJ436_4 HJ443_1 - HJ443_4 HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, JJ434a1, JJ434b1, JJ434c1, JJ434d1, JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3, JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3, JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3, KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d, E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 3:

BIRTHYR, EIWEAR, CIWEAR, AIWEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110, W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171, W7196, W7197, W7202, W7203, W7205, W7225, W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715, E3329, E3337, E3338, E3339, E3349, E3350, E3359M1 - E3359M3, E3352, E3379, E3146, E3147, E3148, E3154, E3155, E3164M1 - E3164M3, E3157, E3184, E4324_1, E4324_2, E4327_1, E4327_2, E4329_1, E4329_2, E4331_1, E4331_2, F5084_1, F5084_2, F5087_1, F5087_2, F5089_1, F5089_2, F5091_1, F5091_2, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4 HJ443_1 - HJ443_4 HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, JJ434a1, JJ434b1, JJ434c1, JJ434d1, JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3, JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3, JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c,

JJ469d,KJ434a1, KJ434b1, KJ434c1, KJ434d1,KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3,KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3,KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d,E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 4:

BIRTHYR, FIWYEAR, F461 EIWYEAR, CIWYEAR, AIWYEAR,V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524,V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307,W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996,W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110,W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171,W7196, W7197, W7202, W7203, W7205, W7225,W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715,E3329, E3337, E3338, E3339, E3349, E3350,E3359M1 - E3359M3, E3352, E3379,E3146, E3147, E3148, E3154, E3155,E3164M1 - E3164M3, E3157, E3184,E2826, W3663, W3316, W3663, W4328, W3458, V2816, V2834, F3135, F3189, F3202, F3203, E2627,F3212M1 - F3212M3, F3205, F3237,F3664, F3665, F3666, F3644, F3645, F3674,F3682M1 - F3682M3, F3702, F3676F3834, F3835, F3836, F3842, F3843, F3844, F3855,F3864M1 - F3864M3, F3857, F3884,F3903_1, F3904_1, F3908_1, F3917001, F3910_1, F3937_1,F3903_2, F3904_2, F3908_2, F3917007, F3910_2, F3937_2, F5084_1, F5084_2, F5087_1, F5087_2, F5089_1, F5089_2, F5091_1, F5091_2, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d,HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d,HJ436_1 - HJ436_4 HJ443_1 - HJ443_4 HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4,JJ434a1, JJ434b1, JJ434c1, JJ434d1,JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3,JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d,JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3,JJ452a, JJ452b, J452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d,KJ434a1, KJ434b1, KJ434c1, KJ434d1,KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3,KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3,KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d,E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 5:

BIRTHYR, GIWYEAR, F461 FIWYEAR, F461 EIWYEAR, CIWYEAR, AIWYEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110, W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171, W7196, W7197, W7202, W7203, W7205, W7225, W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715, E3329, E3337, E3338, E3339, E3349, E3350, E3359M1 - E3359M3, E3352, E3379, E3146, E3147, E3148, E3154, E3155, E3164M1 - E3164M3, E3157, E3184, E2826, W3663, W3316, W3663, W4328, W3458, V2816, V2834, F3135, F3189, F3202, F3203, E2627, F3212M1 - F3212M3, F3205, F3237, F3664, F3665, F3666, F3644, F3645, F3674, F3682M1 - F3682M3, F3702, F3676, F3834, F3835, F3836, F3842, F3843, F3844, F3855, F3864M1 - F3864M3, F3857, F3884, F3903_1, F3904_1, F3908_1, F3917001, F3910_1, F3937_1, F3903_2, F3904_2, F3908_2, F3917007, F3910_2, F3937_2, F3349s, E2826, G3452, G3385, G3438, G3455_1, - G3455_4, G3463001 - G3463003, G3463007, G3463008, G3463013, G3457_1 - G3457_4, G3487_1 - G3487_4, G3974, G3975, G3976, G3954, G3955, G3994_1 - G3994_3, G4002001, G4002007, G4002013, G3996_1, G3996_2, G3996_3, G4022_1, G4022_2, G4022_3, G4096, G4097, G4098, G4104, G4105, G4106, G4120_1, G4120_2, G4133001, G4133007, G4122_1, G4122_2, G4157_1, G4157_2, G4176_1, G4177_1, G4181_1, G4190001, G41214_1, G4176_2, G4177_2, G4181_2, G4190007, G41214_2, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4, HJ443_1 - HJ443_4, HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, JJ434a1, JJ434b1, JJ434c1, JJ434d1, JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3, JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3, JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3, KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d, E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 6:

BIRTHYR, HIWYEAR, GIWYEAR, F461 FIWYEAR, F461 EIWYEAR, CIWYEAR, AIWYEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110, W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171, W7196, W7197, W7202, W7203, W7205, W7225, W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715, E3329, E3337, E3338, E3339, E3349, E3350, E3359M1 - E3359M3, E3352, E3379, E3146, E3147, E3148, E3154, E3155, E3164M1 - E3164M3, E3157, E3184, E2826, W3663, W3316, W3663, W4328, W3458, V2816, V2834, F3135, F3189, F3202, F3203, E2627, F3212M1 - F3212M3, F3205, F3237, F3664, F3665, F3666, F3644, F3645, F3674, F3682M1 - F3682M3, F3702, F3676, F3834, F3835, F3836, F3842, F3843, F3844, F3855, F3864M1 - F3864M3, F3857, F3884, F3903_1, F3904_1, F3908_1, F3917001, F3910_1, F3937_1, F3903_2, F3904_2, F3908_2, F3917007, F3910_2, F3937_2, F3349s, E2826, G3452, G3385, G3438, G3455_1, - G3455_4, G3463001 - G3463003, G3463007, G3463008, G3463013, G3457_1 - G3457_4, G3487_1 - G3487_4, G3974, G3975, G3976, G3954, G3955, G3994_1 - G3994_3, G4002001, G4002007, G4002013, G3996_1, G3996_2, G3996_3, G4022_1, G4022_2, G4022_3, G4096, G4097, G4098, G4104, G4105, G4106, G4120_1, G4120_2, G4133001, G4133007, G4122_1, G4122_2, G4157_1, G4157_2, G4176_1, G4177_1, G4181_1, G4190001, G41214_1, G4176_2, G4177_2, G4181_2, G4190007, G41214_2, G3608, F3349s, HJ064, HJ024, HJ090_1, HJ090_2, HJ090_3, HJ095_1a, HJ095_1b, HJ095_1c, HJ095_2a, HJ095_2b, HJ095_2c, HJ095_3a, HJ095_3b, HJ095_3c, HJ095_4a, HJ095_4b, HJ095_4c, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HK002, HK003, HK018, HK019, HK020, HK029_1, HK029_2, HK034_1a, HK034_1b, HK034_2a, HK034_2b, HK046_1a, HK046_1b, HK046_2a, HK046_2b, HL012, HL016, HL017, HL018, HL031_1, HL031_2, HL036_1a, HL036_1b, HL036_1c, HL036_2a, HL036_2b, HL036_2c, HL048_1a, HL048_1b, HL048_1c, HL048_2a, HL048_2b, HL048_2c, HL078_1, HL079_1, HL078_2, HL079_2, HL082_1, HL082_2, HL087_1a, HL087_1b, HL087_2a, HL087_2b, HL099_1a, HL099_1b, HL099_2a, HL099_2b, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4, HJ443_1 - HJ443_4, HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, JJ434a1, JJ434b1, JJ434c1, JJ434d1, JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3, JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1, JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3, JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2,

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Wave 7:

BIRTHYR, JIWEAR, HIWEAR, GIWEAR, F461 FIWEAR, F461 EIWEAR, CIWEAR, AIWEAR, V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110, W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171, W7196, W7197, W7202, W7203, W7205, W7225, W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715, E3329, E3337, E3338, E3339, E3349, E3350, E3359M1 - E3359M3, E3352, E3379, E3146, E3147, E3148, E3154, E3155, E3164M1 - E3164M3, E3157, E3184, E2826, W3663, W3316, W3663, W4328, W3458, V2816, V2834, F3135, F3189, F3202, F3203, E2627, F3212M1 - F3212M3, F3205, F3237, F3664, F3665, F3666, F3644, F3645, F3674, F3682M1 - F3682M3, F3702, F3676, F3834, F3835, F3836, F3842, F3843, F3844, F3855, F3864M1 - F3864M3, F3857, F3884, F3903_1, F3904_1, F3908_1, F3917001, F3910_1, F3937_1, F3903_2, F3904_2, F3908_2, F3917007, F3910_2, F3937_2, F3349s, E2826, G3452, G3385, G3438, G3455_1, - G3455_4, G3463001 - G3463003, G3463007, G3463008, G3463013, G3457_1 - G3457_4, G3487_1 - G3487_4, G3974, G3975, G3976, G3954, G3955, G3994_1 - G3994_3, G4002001, G4002007, G4002013, G3996_1, G3996_2, G3996_3, G4022_1, G4022_2, G4022_3, G4096, G4097, G4098, G4104, G4105, G4106, G4120_1, G4120_2, G4133001, G4133007, G4122_1, G4122_2, G4157_1, G4157_2, G4176_1, G4177_1, G4181_1, G4190001, G41214_1, G4176_2, G4177_2, G4181_2, G4190007, G41214_2, G3608, F3349s, HJ064, HJ024, HJ090_1, HJ090_2, HJ090_3, HJ095_1a, HJ095_1b, HJ095_1c, HJ095_2a, HJ095_2b, HJ095_2c, HJ095_3a, HJ095_3b, HJ095_3c, HJ095_4a, HJ095_4b, HJ095_4c, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HK002, HK003, HK018, HK019, HK020, HK029_1, HK029_2, HK034_1a, HK034_1b, HK034_2a, HK034_2b, HK046_1a, HK046_1b, HK046_2a, HK046_2b, HL012, HL016, HL017, HL018, HL031_1, HL031_2, HL036_1a, HL036_1b, HL036_1c, HL036_2a, HL036_2b, HL036_2c, HL048_1a, HL048_1b, HL048_1c, HL048_2a, HL048_2b, HL048_2c, HL078_1, HL079_1, HL078_2, HL079_2, HL082_1, HL082_2, HL087_1a, HL087_1b, HL087_2a, HL087_2b, HL099_1a, HL099_1b, HL099_2a, HL099_2b, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4, HJ443_1 - HJ443_4, HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, HJ249s, G3608, JJ064,

JJ024,JJW001a, JJW001B, JJW001c, JJW001d,JJW006a1, JJW006a2, JJW006a3,JJW006b1, JJW006b2, JJW006b3,JJW006c1, JJW006c2, JJW006c3,JJW006d1, JJW006d2, JJW006d3, JJW021a1, JJW021a2, JJW021a3,JJW021b1, JJW021b2, JJW021b3,JJW021c1, JJW021c2, JJW021c3,JJW021d1, JJW021d2, JJW021d3,JK004, JK005, JK022, JK023, JK024,JKW001a, JKW001B, JKW001c, JKW001d,JKW006a1, JKW006a2, JKW006a3,JKW006b1, JKW006b2, JKW006b3,JKW006c1, JKW006c2, JKW006c3,JKW006d1, JKW006d2, JKW006d3, JKW021a1, JKW021a2, JKW021a3,JKW021b1, JKW021b2, JKW021b3,JKW021c1, JKW021c2, JKW021c3,JKW021d1, JKW021d2, JKW021d3,JL012, JL019, JLW001a, JLW001B, JLW001c, JLW001d,JLW006a1, JLW006a2, JLW006a3,JLW006b1, JLW006b2, JLW006b3,JLW006c1, JLW006c2, JLW006c3,JLW006d1, JLW006d2, JLW006d3,JLW021a1, JLW021a2, JLW021a3,JLW021b1, JLW021b2, JLW021b3,JLW021c1, JLW021c2, JLW021c3, JLW021d1, JLW021d2, JLW021d3,JL034a, JL034b, JL035a, JL035b,JLW006e1, JLW006e2, JLW006e3,JLW006f1, JLW006f2, JLW006f3, JLW021e1, JLW021e2, JLW021e3,JLW021f1, JLW021f2, JLW021f3,JJ434a1, JJ434b1, JJ434c1, JJ434d1,JJ434a2, JJ434b2, JJ434c2, JJ434d2, JJ434a3, JJ434b3, JJ434c3, JJ434d3,JJ436a, JJ436b, JJ436c, JJ436d, JJ443a, JJ443b, JJ443c, JJ443d, JJ448a, JJ448b, JJ448c, JJ448d, JJ450a1, JJ450b1, JJ450c1, JJ450d1,JJ450a2, JJ450b2, JJ450c2, JJ450d2, JJ450a3, JJ450b3, JJ450c3, JJ450d3,JJ452a, JJ452b, JJ452c, JJ452d, JJ457a, JJ457b, JJ457c, JJ457d, JJ459a, JJ459b, JJ459c, JJ459d, JJ469a, JJ469b, JJ469c, JJ469d, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3,KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d, E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Wave 8:

BIRTHYR, KIWYEAR, JIWYEAR, HIWYEAR, GIWYEAR, F461 FIWYEAR, EIWYEAR, CIWYEAR, AIWYEAR,V3604, V3607, V3620, V3621, V3624, V3644, V3704, V3705, V3708, V3710, V3711, V3731, V3804, V3805, V3808, V3810, V3811, V3831, V3418, V3403, V3430, V3501, V3503, V3504, V3524, V2816, V2834, W3319, W3504, W3421, W3422, W3424, W3452, W3571, W3572, W3574, W3575, W3602, W4201, W4272, W4273, W4275, W4276, W4307, W4801, W4898, W4861, W4966, W4863, W4891, W4968, W4969, W4970, W4971, W4996, W4965, W4966, W4968, W4969, W4970, W4971, W4996, W7002, W7018, W7019, W7020, W7032, W7033, W7035, W7036, W7038, W7063, W7103, W7104, W7105, W7108, W7109, W7110, W7123, W7124, W7126, W7127, W7129, W7154, W7162, W7163, W7166, W7168, W7169, W7171,W7196, W7197, W7202, W7203, W7205, W7225, W3663, W3317, W4328, W3458, V2816, V2834, E2631, E2668, E2680, E2681, E2690M1 - E2690M3, E2683, E2715, E3329, E3337, E3338, E3339, E3349, E3350, E3359M1 - E3359M3, E3352, E3379, E3146, E3147, E3148, E3154, E3155, E3164M1 - E3164M3, E3157, E3184, E2826, W3663, W3316, W3663, W4328, W3458, V2816, V2834, F3135, F3189, F3202, F3203, E2627, F3212M1 - F3212M3, F3205, F3237, F3664, F3665, F3666, F3644, F3645, F3674, F3682M1 - F3682M3, F3702, F3676,F3834, F3835, F3836, F3842, F3843, F3844, F3855, F3864M1 - F3864M3, F3857, F3884,F3903_1, F3904_1, F3908_1, F3917001, F3910_1, F3937_1, F3903_2,

F3904_2, F3908_2, F3917007, F3910_2, F3937_2, F3349s, E2826, G3452, G3385, G3438, G3455_1, - G3455_4, G3463001 - G3463003, G3463007, G3463008, G3463013, G3457_1 - G3457_4, G3487_1 - G3487_4, G3974, G3975, G3976, G3954, G3955, G3994_1 - G3994_3, G4002001, G4002007, G4002013, G3996_1, G3996_2, G3996_3, G4022_1, G4022_2, G4022_3, G4096, G4097, G4098, G4104, G4105, G4106, G4120_1, G4120_2, G4133001, G4133007, G4122_1, G4122_2, G4157_1, G4157_2, G4176_1, G4177_1, G4181_1, G4190001, G41214_1, G4176_2, G4177_2, G4181_2, G4190007, G41214_2, G3608, F3349s, HJ064, HJ024, HJ090_1, HJ090_2, HJ090_3, HJ095_1a, HJ095_1b, HJ095_1c, HJ095_2a, HJ095_2b, HJ095_2c, HJ095_3a, HJ095_3b, HJ095_3c, HJ095_4a, HJ095_4b, HJ095_4c, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HK002, HK003, HK018, HK019, HK020, HK029_1, HK029_2, HK034_1a, HK034_1b, HK034_2a, HK034_2b, HK046_1a, HK046_1b, HK046_2a, HK046_2b, HL012, HL016, HL017, HL018, HL031_1, HL031_2, HL036_1a, HL036_1b, HL036_1c, HL036_2a, HL036_2b, HL036_2c, HL048_1a, HL048_1b, HL048_1c, HL048_2a, HL048_2b, HL048_2c, HL078_1, HL079_1, HL078_2, HL079_2, HL082_1, HL082_2, HL087_1a, HL087_1b, HL087_2a, HL087_2b, HL099_1a, HL099_1b, HL099_2a, HL099_2b, HJ434_1a, HJ434_1b, HJ434_1c, HJ434_1d, HJ434_2a, HJ434_2b, HJ434_2c, HJ434_2d, HJ434_3a, HJ434_3b, HJ434_3c, HJ434_3d, HJ436_1 - HJ436_4, HJ443_1 - HJ443_4, HJ448_1 - HJ448_4, HJ450_1a, HJ450_1b, HJ450_1c, HJ450_1d, HJ450_2a, HJ450_2b, HJ450_2c, HJ450_2d, HJ450_3a, HJ450_3b, HJ450_3c, HJ450_3d, HJ452_1 - HJ452_4, HJ457_1 - HJ457_4, HJ459_1 - HJ459_4, HJ469_1 - HJ469_4, HJ249s, G3608, JJ064, JJ024, JJW001a, JJW001B, JJW001c, JJW001d, JJW006a1, JJW006a2, JJW006a3, JJW006b1, JJW006b2, JJW006b3, JJW006c1, JJW006c2, JJW006c3, JJW006d1, JJW006d2, JJW006d3, JJW021a1, JJW021a2, JJW021a3, JJW021b1, JJW021b2, JJW021b3, JJW021c1, JJW021c2, JJW021c3, JJW021d1, JJW021d2, JJW021d3, JK004, JK005, JK022, JK023, JK024, JKW001a, JKW001B, JKW001c, JKW001d, JKW006a1, JKW006a2, JKW006a3, JKW006b1, JKW006b2, JKW006b3, JKW006c1, JKW006c2, JKW006c3, JKW006d1, JKW006d2, JKW006d3, JKW021a1, JKW021a2, JKW021a3, JKW021b1, JKW021b2, JKW021b3, JKW021c1, JKW021c2, JKW021c3, JKW021d1, JKW021d2, JKW021d3, JL012, JL019, JLW001a, JLW001B, JLW001c, JLW001d, JLW006a1, JLW006a2, JLW006a3, JLW006b1, JLW006b2, JLW006b3, JLW006c1, JLW006c2, JLW006c3, JLW006d1, JLW006d2, JLW006d3, JLW021a1, JLW021a2, JLW021a3, JLW021b1, JLW021b2, JLW021b3, JLW021c1, JLW021c2, JLW021c3, JLW021d1, JLW021d2, JLW021d3, JL034a, JL034b, JL035a, JL035b, JLW006e1, JLW006e2, JLW006e3, JLW006f1, JLW006f2, JLW006f3, JLW021e1, JLW021e2, JLW021e3, JLW021f1, JLW021f2, JLW021f3, JJ249s, HJ249s, KJ064, KJ024, KJW001a, KJW001B, KJW001c, KJW001d, KJW006a1, KJW006a2, KJW006a3, KJW006b1, KJW006b2, KJW006b3, KJW006c1, KJW006c2, KJW006c3, KJW006d1, KJW006d2, KJW006d3, KJW021a1, KJW021a2, KJW021a3, KJW021b1, KJW021b2, KJW021b3, KJW021c1, KJW021c2, KJW021c3, KJW021d1, KJW021d2, KJW021d3, KK004, KK005, KK022, KK023, KK024, KKW001a, KKW001B, KKW001c, KKW001d, KKW006a1, KKW006a2, KKW006a3, KKW006b1, KKW006b2, KKW006b3, KKW006c1, KKW006c2, KKW006c3, KKW006d1, KKW006d2, KKW006d3, KKW021a1, KKW021a2, KKW021a3, KKW021b1, KKW021b2, KKW021b3, KKW021c1, KKW021c2, KKW021c3, KKW021d1, KKW021d2, KKW021d3, KL012, KL019, KLW001a, KLW001B, KLW001c, KLW001d, KLW006a1, KLW006a2, KLW006a3, KLW006b1, KLW006b2, KLW006b3, KLW006c1, KLW006c2, KLW006c3,

KLW006d1, KLW006d2, KLW006d3, KLW021a1, KLW021a2, KLW021a3, KLW021b1, KLW021b2, KLW021b3, KLW021c1, KLW021c2, KLW021c3, KLW021d1, KLW021d2, KLW021d3, KL034a, KL034b, KL035a, KL035b, KLW006e1, KLW006e2, KLW006e3, KLW006f1, KLW006f2, KLW006f3, KLW021e1, KLW021e2, KLW021e3, KLW021f1, KLW021f2, KLW021f3, KJ434a1, KJ434b1, KJ434c1, KJ434d1, KJ434a2, KJ434b2, KJ434c2, KJ434d2, KJ434a3, KJ434b3, KJ434c3, KJ434d3, KJ436a, KJ436b, KJ436c, KJ436d, KJ443a, KJ443b, KJ443c, KJ443d, KJ448a, KJ448b, KJ448c, KJ448d, KJ450a1, KJ450b1, KJ450c1, KJ450d1, KJ450a2, KJ450b2, KJ450c2, KJ450d2, KJ450a3, KJ450b3, KJ450c3, KJ450d3, KJ452a, KJ452b, KJ452c, KJ452d, KJ457a, KJ457b, KJ457c, KJ457d, KJ459a, KJ459b, KJ459c, KJ459d, KJ469a, KJ469b, KJ469c, KJ469d, E192_1, E192_2, F298_1, F298_2, HZ142_1 - HZ142_4, JZ142_1 - JZ142_4, KZ142_1 - KZ142_4, E193_1, E193_2, F299_1, F299_2, HZ143_1 - HZ143_4, JZ143_1 - JZ143_4, KZ143_1 - KZ143_4

Pensions in Pay Status

PayStatwi

The constructed variable “PayStatwi” identifies respondents who reported receiving benefits now from at least one DB or combination/both plan or has at least one DC account left to accumulate in Wave *i*, where *i*=1 to 8. The index includes plans that were reported to be in pay status in the respondent’s last and/or previous pension jobs. The index also includes plans that were reported in pay status in a subsequent interview. It also includes DB plans that were initially reported dormant but reported receiving benefits when they were asked follow-up questions (in the old pension sequence) about the fate of those dormant plans.

How Constructed:

Constructing the pay status indices involves two stages:

- 1) Identifying plans that are in pay status. That is when respondents report receiving benefits now when they are asked about the disposition of their DB plans from:
 - a. Respondents’ last and/or previous jobs in their initial interview.
 - b. A terminated employment after respondents’ initial interview.

2) Respondents with dormant DB²⁶ plans are asked follow-up questions about the fate of those plans in the old pension sequences in Waves 3, 4, 6, 7, and 8. If they report receiving benefits now the status of affected plans is changed from dormant to pay status according to the date that that change has occurred²⁷. For example, a war baby respondent may have reported a dormant DB plan from his/her first pension job in Wave 4, i.e., expecting some benefits in the future from that plan. This respondent is asked about the fate of that dormant pension in Wave 6: if s/he is still expecting future benefits, receiving benefits, received cash settlements, etc. If the response is receiving benefits now, the dormant pension's status is changed to 'pay status'. If the response is still expecting future benefits, s/he will be asked the same question again in Wave 7. Otherwise, again in Wave 8 s/he will be asked about the fate of that pension plan unless s/he reported cashed out the plan, rolled over into IRA, etc. in Wave 7.

If a plan is cashed out, rolled over, or lost at the time a person leaves a job, participation in that plan ends with the termination of the job. Plans that enter into pay status remain alive after employment is terminated. We assume they would stay in pay status for life.

Variables used:

They are the same as variables used for dormant pension except they do not include the follow-up questions on dormant DC plans in the old pension sequence.

Live pensions

LivePen_Wi

²⁶ At this stage the pay status indices include only DB plans that changed from dormant to receiving benefits.

²⁷ The conversion process of DB plans' status from dormant to pay status is similar to the adjustment process used for the dormant pension plan described earlier.

The constructed variable “LivePen_Wi” identifies respondents who have reported pension coverage from current job in Wave i, where i=1 to 8, and/or have at least one pension plan that is dormant or is in pay status.

How Constructed:

This variable is derived from current pension coverage “CurrPeni”, dormant “DormPenwi”, and in pay status “PayStatwi” plans described earlier.

Variables used:

Variables are the same as variables used for identifying current pension, dormant pension, and pensions that are in pay status.

**Any Pension
AnyPensioni**

The constructed index variable “AnyPensioni” identifies respondents who ever held a pension as of Wave i, where i=1 to 8.

How Constructed:

This index identifies respondents who have a pension from at least one job held in any wave to date, or previous to the initial wave in the survey. It includes any live, cashed out, or lost pension from respondent’s current job, last or previous jobs in respondent’s initial interview. It also includes pension coverage reported in a subsequent interview where the respondent reports that previous employment was terminated after his/her previous interview.

Variables used:

Wave 1:

V2901, V2838, V3620, V3708, V3808, V3430, V3448

Wave 2:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W3710, W3748, W4272, W4375, W4376, W4860, W4965, W7032

Wave 3:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2835, E2837, E2861, E2870, E2680, E3154, E3349

Wave 4:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2680, E3154, E3349, E2627, F3202, F461, F3359, F3361, F3389, F3398, F3854, F3908_1, F3908_2, F3672

Wave 5:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2680, E3154, E3349, E2627, F3202, F461, F3854, F3908_1, F3908_2, F3672, G3452, G3453, G3619, G3621, G3654, G3678, G3991, G4118, G4120_1, G4120_2, G3991

Wave 6:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2680, E3154, E3349, E2627, F3202, F461, F3854, F3908_1, F3908_2, F3672, G3452, G3453, G3991, G4118, G4120_1, G4120_2, G3991, HJ084, HJ085, HK027, HL028, HL082_1, HL082_2, HJ268, HJ324

Wave 7:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2680, E3154, E3349, E2627, F3202, F461, F3854, F3908_1, F3908_2, F3672, G3452, G3453, G3991, G4118, G4120_1, G4120_2, G3991, HJ084, HJ085, HK027, HL028, HL082_1, HL082_2, JJ084, JJ085, JK027, JL028, JL028, JLW001e, JJ268, JJ324

Wave 8:

V3620, V3708, V3808, V3430, V3448, W3421, W3571, W4860, W4965, W7032, E2680, E3154, E3349, E2627, F3202, F461, F3854, F3908_1, F3908_2, F3672, G3452, G3453, G3991, G4118, G4120_1, G4120_2, G3991, HJ084, HJ085, HK027, HL028, HL082_1, HL082_2, JJ084, JJ085, JK027, JL028, JL082_1, JL082_2, KJ084, KJ085, KK032, KL028, KLW001e, KLW001f, KJ268, KJ269, KJ324, KJ335

Aggregating Individual Data into Households

To construct household data we first identify households by their “hhid” and “sub-household” ids. Respondents and spouses with the same hhid and sub-household ids are assigned to the same household. The respondent who is identified as the financial respondent (finr=1) is considered to be the primary respondent in the household. The other member of the household is

the spouse in a “married” household. In the next step, we construct two \underline{x} variables, one for the primary respondent, the other for his/her spouse. The \underline{x} varies depending on which pension related outcome we are constructing. Finally, we sort the data by hhid and subhhid for each wave. Then we select the first record with the same hhid and subhhid.

Any Pension by Households **AnyPension_HHi**

This variable identifies households where either respondent is or was covered by a pension as of Wave i , where for this chapter $i=1, 4, 7$.

How Constructed:

This variable is derived from the “AnyPension i ” described earlier. Households’ indices are constructed first by setting up the household data files. The household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the pension coverage. If the respondent or his/her spouse in the household has or had pension coverage, the household is identified as have/had pension participation. The variable any pension is identified as “Ranypension i ” for the primary respondent and “Sanypension i ” for his/her spouse. The variable “Anypension_HHi” identifies households where the respondent and/or his/her spouse have had any pension for married/partnered households. In single households the “Ranypension i ” identifies the household’s any pension.

Variables used:

Wave 1:

hhid, asubhh, afinr, acouple, gender, anypension1

Wave 4:

hhid, fsubhh, ffinr, fcouple, gender, anypension4

Wave 7:

hhid, jsubhh, jfinr, jcouple, gender, anypension7

Chapter 6

Pension Plan Type

Plan type is the most important single pension feature and, perhaps only after pension coverage, is the most important pension outcome to document and to understand. In this chapter, differences and trends in plan type among subgroups, percentage of public and private employees by self-reported plan type, percentage of public and private employees by self-reported plan type, pension plan type among full-time employees with a pension, average number of years of job tenure and pension tenure by plan type, and pension dynamics between waves are presented. Following is the list of constructed variables, how constructed, and cross wave differences that are used for preparing the tables in this chapter.

Gender, Race, Marital Status, Education

The source of these variables is the tracker file. For Waves 1 to 7, we have used the HRS tracker file 2004, version 1, and for Wave 8 the HRS tracker file 2006, version 1.

Employee/Self-employed, Firm size, Union self_elsei, frmszi, unioni

These variables are described in Chapter 3.

Pension Plan Type Index Xhrs

This variable indicates whether the respondent reported Defined Benefit (DB) plan(s) only, Defined Contribution (DC) plan(s) only, or combination/both plans in Wave i , where $i=1, 4, 7$, and 8 .

How Constructed:

This variable is described in Chapter 1.

Public or Government Employees Govtemp8

This variable identifies respondents who are government employees at the federal, state, or local levels in Wave 8 (2006). The construction of this variable is described in Chapter 1.

Employees, Full_time selfelsei, full_timei

The “selfelsei” is described in Chapter 3. Variable “full_timei” is described in Chapter 1.

Pension Tenure- Plan Type DB PenTenAi

The constructed variable “PenTenAi” identifies the number of years (pension tenure for type A) respondents have been included in their most important DB or combination/both plan from current job in Wave i , where $i=1, 4, 7$.

How Constructed:

The “penTenAi” is derived from responses to the question asking respondents who reported a DB or combination/both plan “*How many years altogether you have been included in this plan?*”. All respondents with a DB or combination/both plan in Waves 1 and 8, or those from new cohorts with a DB or combination plan, are asked this question. The re-interviewee respondents who reported a new job or a new pension with a DB or combination plan are also asked this question. That means, this question is not asked²⁸ of respondents who were working at the same employment and reported no change in their pension. For our purpose in this chapter,

²⁸ This is one of the questions that can be carried forward from the wave when the respondent was first interviewed. However, carrying forward information from a previous interview for a plan is complicated. Respondents are not consistent in reporting their plan types from wave to wave. While in a previous interview an R may have reported only a DB plan (or the most important plan to be a DB plan) in a subsequent interview the respondent may report only a DC plan or the most important plan to be a DC plan. In such cases one has to make several assumptions about carrying information from one plan to another plan in a different interview wave.

since we compare new cohorts in the three waves, and new cohorts are asked all the questions, that is not an issue.

Cross Wave Differences:

The question asks “*For how many years altogether you have been included in this plan?*”. This is the same in all waves. However, from Wave 3 forward, a phrase is added at the beginning of the question if the plan is a combination/both plan. The phrase is “*(Now, about the part of your pension where benefits are based on a formula)*”.

Variables Used:

Wave 1:

V2914, V3014, V3114

Wave 4:

F3410_1, F3410_2, F3410_3

Wave 7:

JJ352a, JJ352b, JJ352c

**Pension Tenure- Plan Type DC
PenTenBi**

The constructed variable “PenTenBi” identifies the number of years (pension tenure for type B) respondents have been included in their most important DC plan from current job in Wave i, where i=1, 4, 7.

How Constructed:

The construction of this pension tenure variable is very similar to the pension tenure for DB plans described above.

Variables Used:

Wave 1:

V2933, V3033, V3133

Wave 4:

F3458_1, F3458_2, F3458_3

Wave 7:

JJ395a, JJ395b, JJ395c

**Same Pension
SamePeni**

The variable “SamePeni” identifies re-interviewee respondents whose pension stayed the same since their last interview in Wave i , where $i=2$ to 8.

How Constructed:

Respondents who reported working at the same employment were asked if the rules that govern their pension or the age they can receive benefits have changed since their last interview. If the response to this question was “No” the pension is considered to be the same. If the response was affirmative, the pension is considered to be changed since last interview.

Cross Wave Differences;

1. From Wave 5 forward, the phrase “or a new plan been offered to you” is added to the question asking if the rules that govern their pension or the age they can receive benefits have changed.
2. The question in Wave 2 for the self-employed respondents is somewhat different from the question asked of employees. They are asked first “*Now I would like to ask about pension or retirement plans on your job. Aside from IRA or Keogh plans, are you included in any pension plan or tax deferred savings plan through your work?*”. If the answer is “YES” then they are asked “*Have the rules that govern your pension*

benefits or the age you can receive them changed since Wave 1?” If the answer is “No” then they are asked questions in the same pension sequence.

Variables Used:

Wave 2:
W3710

Wave 3:
E2835

Wave 4:
F3359

Wave 5:
G3619

Wave 6:
HJ268

Wave 7:
JJ268

Wave 8:
KJ268

**New Pension
NewPeni**

The variable “NewPeni” identifies respondents who were asked the pension coverage question in Wave *i*, where *i*=1 to 8. This question excludes respondents who reported the same employment and same pension since last interview. Those respondents are asked the same pension question noted earlier.

How Constructed:

Respondents who when first interviewed, or in a subsequent interview wave, reported their employment has changed, or did not report pension coverage in their last interview, are

asked the pension coverage question. The information from that question is used for constructing this variable.

Cross Wave Differences;

- 1- In Waves 1 and 2, there are two separate coverage questions; one for the employees, and the other for the self-employed respondents. From Wave 3 forward, those two questions are combined.
- 2- The question in Wave 2 for the self-employed respondents is some what different. They are asked first *“Now I would like to ask about pension or retirement plans on your job. Aside from IRA or Keogh plans, are you included in any pension plan or tax deferred savings plans through your work?”*. If the answer is “YES” then they are asked *“Have the rules that govern your pension benefits or the age you can receive them changed since Wave 1?”* If the answer is “NO” then they are asked about the number of plans and follow-up questions in the new pension sequence.

Variables Used:

Wave 2:

W3748, W4375

Wave 3:

E2861

Wave 4:

F3389

Wave 5:

G3654

Wave 6:

HJ324

Wave 7:
JJ324

Wave 8:
KJ324

Same Business SameBusi

The constructed variable “SameBusi” identifies respondents who were self-employed in two consecutive interview surveys conditioning on having the same start year in both waves.

How Constructed:

For constructing this variable, we need two variables in each wave; if employee or self-employed and the start date²⁹ of the business. Both questions are asked at every wave. The information from those two questions is used for constructing this variable.

Cross Wave Differences;

- 1- In Waves 1 and 2, there are two separate coverage questions; one for the employees, and the other for self-employed. From Wave 3 forward, those two questions are combined.
- 2- In Wave 1, only the start year is asked and recorded. After Wave 1, respondents are asked about the month and the year they started working at the employment/business.

Variables Used:

Wave 1:
V2718, V2834

Wave 2:
W3317, W4328

Wave 3:
E2628, E2826

Wave 4:
F3132, F3349

²⁹ For employees the start date of employment is skipped for respondents with the same employment.

Wave 5:
G3382, G3608

Wave 6:
HJ021, HJ249

Wave 7:
JJ021, JJ249

Wave 8:
KJ021, KJ249

Plan Types after the Job Termination 1992 **Xhrs_term92**

The constructed variable “Xhrs_term92” identifies plan type from respondents’ current job just prior to the wave that a job was terminated. The variable is constructed for members of the original HRS cohort here.

How Constructed:

Re-interviewee respondents who reported they have left their previous interview’s employment; we have constructed the plan type variable reported in the interview wave just prior to that job’s termination. For example, a respondent who reported in Wave 5 that his Wave 1 employment was terminated before Wave 5 (and after Wave 4), we have constructed this variable using the plan type information from Wave 4. If that job was terminated before Wave 8 and after Wave 7, this variable would have included the information from plan type reported in Wave 7.

Cross Wave Differences:

- 1- In Waves 1 to 4, respondents were asked about up to three pension plans from their current job. In Wave 5 and later waves, they were asked about up to four plans. As a

result in Waves 1 to 4, there are up to three plan types reported. But after Wave 4, up to four plan types is reported.

- 2- In Wave 2, questions about pension are included in four sets of questions; in FA, FB, for the new and same pensions. In other waves (except in Wave 7), there are two sets of questions; the new and same pension sequences.

Variables Used:

Wave 2:

W3712, W3756, W4415, W3724, W3808, W4467, W3736, W3860, W4519, W3316, W3317, W3458, W3421

Wave 3:

E2840_1, E2840_2, E2840_3, E2875_1, E2975_2, E2875_3, E2627, E2628, E2655, E2680

Wave 4:

F3364_1, F3364_2, F3364_3, F3403_1, F3403_2, F3403_3, F3131, F3132, F3166, F3202

Wave 5:

G3624_1, G3624_2, G3624_3, G3624_4, G3683_1, G3683_2, G3683_3, G3683_4, G3381, G3382, G3416, G3452

Wave 6:

HJ272_1, HJ272_2, HJ272_3, HJ272_4, HJ338_1, HJ338_2, HJ338_3, HJ338_4, HJ020, HJ021, HJ045, HJ084

Wave 7:

JJ338a, JJ338b, JJ338c, JJ338d, JJ020, JJ021, JJ045, JJ084

Wave 8:

KJ272a, KJ272b, KJ272c, KJ272d, KJ338a, KJ338b, KJ338c, KJ338d, KJ020, KJ021, KJ045, KJ084

Plan Types after the Job Termination -1998

Xhrs_term98

The constructed variable “Xhrs_term98” is very similar to “Xhrs_term92” except it is constructed for the War babies cohort. i.e. the base year is 1998.

Variables Used:

Wave 5:

G3624_1, G3624_2, G3624_3, G3624_4, G3683_1, G3683_2, G3683_3, G3683_4, G3381, G3382, G3416, G3452

Wave 6:

HJ272_1, HJ272_2, HJ272_3, HJ272_4, HJ338_1, HJ338_2, HJ338_3, HJ338_4, HJ020, HJ021, HJ045, HJ084

Wave 7:

JJ338a, JJ338b, JJ338c, JJ338d, JJ020, JJ021, JJ045, JJ084

Wave 8:

KJ272a, KJ272b, KJ272c, KJ272d, KJ338a, KJ338b, KJ338c, KJ338d, KJ020, KJ021, KJ045, KJ084

Number of Plans

Pnumbi

This variable identifies the number of pension plans from respondents current job in wave i, where i=1 to 8.

How Constructed:

The number of plans may be from the same pension or the new pension sequence. Respondents are asked “In how many different pension plans are you included on this job?” The information from this question is used for constructing this variable.

Cross Wave Differences:

After the Wave 5 interview survey, respondents who reported “don’t know” to this question were asked a follow-up question: “Is this just one plan or more than one?” The response could be one plan or more than one plan. If the response was more than one plan, the exact number of plans is still unknown. They are included in the “don’t know” category.

Variables used:

Wave 1:

V2908

Wave 2:

W3711, W3748

Wave 3:

E2837, E2870

Wave 4:

F3361, F3398

Wave 5:

G3621, G3678

Wave 6:

HJ269, HJ270, HJ335, HJ336

Wave 2:

JJ269, JJ270, JJ335, JJ336

Wave 2:

KJ269, KJ270, KJ335, KJ336

Chapter 7

Imperfect Knowledge of Pension Plan Type

Evidence continues to accumulate that there are substantial differences between pension outcomes reported by some pension-covered workers and the corresponding outcomes gleaned from employer-produced data. This chapter documents the extent to which reported pension plan type differs between respondent and firm-produced data in the Health and Retirement Study and discusses the reasons for these differences and their implications. Most important, we would like to know whether differences between respondent and firm reports of pension plan type are the result of respondents' imperfect knowledge and understanding of their pensions, or whether there are other reasons for these differences.

More specifically, this chapter includes discussions about the distribution of self-reported versus firm-reported plan type as reported by the respondent and the firm, the distribution of self-reported plan type for respondents reporting the same pension plan over the waves with matched data, firm versus respondent reports of plan type using 2003 Watson Wyatt data, number of respondents reporting the same pension across HRS waves but reporting different plan numbers and plan types, percentage of respondents with a given number of seams reporting the indicated number of matches for plan type for their most important plan, comparisons of plan type reported in panel, and at time of job termination, with plan type from firm plan descriptions, the percentage of respondents reporting various plan types in the pension characteristics module conditioned on the plan types reported in the employer documents, and respondents with DB plans answering to DC questions and vice versa in 2006.

Following is the list of constructed variables, how constructed, and cross wave differences that are used in constructing the tables in this chapter.

Plan Types Index from Self-report and Plan Documents

Xhrsi, Xspdi

The “Xhrsi” identifies plan types from the self-report data in Wave i, where in this case i=1, 4, 7. This is described in Chapter 1.

The “Xspdi” identifies plan types from plan documents in the Administrative data in Wave i, where in this case i=1, 4, 7. This is described in Chapter 4.

Type DB Plan

TypeA_Wi

This constructed variable “TypeA_wi” indicates respondents who reported at least one DB (type A) plan from their pension in Wave i, from Wave 1 to Wave 8.

How Constructed:

The pension is constructed from respondents’ reported plan types from current job conditioning on having the same pension since last interview.

Cross Wave Differences:

Respondents are asked about plan types and their follow-up questions for up to three plans from Waves 1 to 4 interview surveys. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 1:

V2909, V3009, V3109

Wave 2:

W3710, W3712, W3724, W3736

Wave 3:

E2835, E2840_1, E2840_2, E2840_3

Wave 4:

F3359, F3364_1, F3364_2, F3364_3

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, G3624_4

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d

**Type DC Plan
TypeB_Wi**

This constructed variable “TypeB_wi” indicates respondents who reported at least one DC (type B) plan from their pension in Wave i from Wave 1 to Wave 8.

How Constructed:

The pension is constructed from respondents’ reported plan types from current job conditioning on having the same pension since last interview.

Cross Wave Differences:

Respondents are asked about plan types and their follow-up questions for up to three plans from Waves 1 to 4 interview surveys. From Wave 5 forward, they are asked about up to four plans.

Variables used:**Wave 1:**

V2909, V3009, V3109

Wave 2:

W3710, W3712, W3724, W3736

Wave 3:

E2835, E2840_1, E2840_2, E2840_3

Wave 4:

F3359, F3364_1, F3364_2, F3364_3

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, G3624_4

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d

No DB Plan

NotA_Wi

The constructed variable “NotA_wi” indicates respondents who reported at least one DB (type A) plan from their pension in Wave i, where i= 2 to 8, but did not report any DB plan in Wave i-1.

How Constructed:

This variable is constructed by comparing the plan types reported in a wave with the reported plan types in the previous wave conditioning on having reported the same pension.

The pensions are from respondents’ current job.

Cross Wave Differences:

Respondents are asked about plan types and their follow-up questions for up to three plans from Waves 1 to 4 interview surveys. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 2:

W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 3:

E2835, E2840_1, E2840_2, E2840_3, W3712, W3724, W3736

Wave 4:

F3359, F3364_1, F3364_2, F3364_3, E2840_1, E2840_2, E2840_3

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, G3624_4, F3364_1, F3364_2, F3364_3

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4, G3624_1, G3624_2, G3624_3, G3624_4

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ272_1, HJ272_2, HJ272_3, HJ272_4

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d, JJ338a, JJ338b, JJ338c, JJ338d

No DC Plan

NotB_Wi

The constructed variable “NotB_wi” indicates respondents who reported at least one DC (type B) plan from their pension in Wave i, where i= 2 to 8, but did not report any DC plan in Wave i-1.

How Constructed:

This variable is constructed by comparing the plan types reported in a wave with the reported plan types in the previous wave conditioning on having reported the same pension.

The pensions are from respondents’ current job.

Cross Wave Differences:

Respondents are asked about plan types and their follow-up questions for up to three plans from Waves 1 to 4 interview surveys. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 2:

W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 3:

E2835, E2840_1, E2840_2, E2840_3, W3712, W3724, W3736

Wave 4:

F3359, F3364_1, F3364_2, F3364_3, E2840_1, E2840_2, E2840_3

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, G3624_4, F3364_1, F3364_2, F3364_3

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4, G3624_1, G3624_2, G3624_3, G3624_4

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ272_1, HJ272_2, HJ272_3, HJ272_4

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d, JJ338a, JJ338b, JJ338c, JJ338d

DB Plan in Wave i

AinotAPrevW

The constructed variable “AinotAPrevW” identifies respondents reported at least one DB (type A) plan in Wave i, from Waves 2 to 8, and did not report a DB plan at least in one of their previous interview waves (Wi-1).

How Constructed:

This variable is constructed by comparing the plan types reported in a wave with the reported plan types in all previous waves conditioning on having reported the same pension through waves. The pensions are from respondents' current job.

Cross Wave Differences:

Respondents are asked about plan types and their follow-up questions for up to three plans from Waves 1 to 4 interview surveys. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 2:

W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 3:

E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 4:

F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d, JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

DC plan in Wave i
BinotBPrevW

The constructed variable “BinotBPrevW” identifies respondents reported at least one DC (type B) plan in Wave i, from Waves 2 to 8, and did not report a DC plan at least in one of their previous interview waves.

How Constructed:

This variable is constructed by comparing the plan types reported in a wave with the reported plan types in all previous waves conditioning on having reported the same pension through waves. The pensions are from respondents’ current job.

Cross Wave Differences:

From Waves 1 to 4 interview surveys, respondents are asked about plan types and their follow-up questions for up to three plans. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 2:

W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 3:

E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 4:

F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d, JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Number of Seams**Nseams**

The constructed variable “Nseams” identifies the number of seams. A seam is defined as a connection between two waves, starting with Wave 1, over which respondents report no change in their employment and in their pension plans’ rules. The number of seams then reports over how many seams in a row the respondent has reported no change in the particular plan feature. The book then examines whether, even though there is a report of no change in the pension, whether the plan feature reported on each side of the seam is the same.

How Constructed:

This variable is constructed by comparing the same pension variable over waves. One seam is reported if there is no change in the pension between Wave 1 (respondent’s first interview) and Wave 2 or respondent’s next interview if Wave 2’s interview was skipped. Over two seams there is no change in the pension from Wave 1 through the next two interviews. For six seams there is no change from Wave 1 through the next six interviews, etc.

The number of seams could be 0, 1, 2, 3, 4, 5, 6, or 7, where 0 indicates a respondent reported a change in plan rules or change in the job after the Wave 1 interview; 1 indicates no

plan change between the first and second interview, but that the third wave differs from the first, and 7 indicates the plan did not change over the life of the survey; from Wave 1 to Wave 8.

Cross Wave Differences;

From Wave 5 forward, the phrase “or a new plan been offered to you” is added to the question asking if the rules that govern their pension or the age they can receive benefits have changed.

Variables used:

Wave 1:

V2901

Wave 2:

W3710

Wave 3:

E2835, W3710

Wave 4:

F3359, E2835, W3710

Wave 5:

G3619, F3359, E2835, W3710

Wave 6:

HJ268, G3619, F3359, E2835, W3710

Wave 7:

JJ268, HJ268, G3619, F3359, E2835, W3710

Wave 8:

KJ268, JJ268, HJ268, G3619, F3359, E2835, W3710

**Seams and Same Plan Type
Same_pentype**

The constructed variable “Same_pentype” includes respondents with the number of matches for plan type for their most important plan across the seams. The overall sample includes respondents who reported coverage by a pension in Wave 1. The number of seams is the number of waves starting in 1992 over which the respondent reported no change in pension plan.

How Constructed:

This variable is constructed by comparing the plan type from respondents’ most important plans across adjacent seams. In a one seam category where a respondent reported the same pension and no change in the pensions across first two waves, the reported plan type may match or not cross those two waves. This variable indicates the number of matched plan type in the first two waves. If there was a match of plan types between those two waves, this variable would have a value of one, otherwise zero. Two seams are reported if the respondent had the same pension in the first three interviews, and the pension remained unchanged. This variable indicates the number of matched plan types in the first three waves. A respondent in this group may have zero match, one match, or two matches. The six seams category includes those who were interviewed in seven waves and had reported no pension change in any of the interviews. Respondents in this group may have consistently reported the same plan type in all seven waves, across five, four, etc. waves from Wave 1 to Wave 7. Respondents who did not have a match in reported plan type across any seam nevertheless they may have reported the same plan type in different waves that were not adjoining.

Cross Wave Differences:

- 1- From Wave 5 forward, the phrase “or a new plan been offered to you” is added to the question asking if the rules that govern their pension or the age they can receive benefits have changed.

2- From Waves 1 to 4 interview surveys, respondents are asked about plan types and their follow-up questions for up to three plans. From Wave 5 forward, they are asked about up to four plans.

Variables used:

Wave 1:

V2909, V3009, V3109

Wave 2:

W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 3:

E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 4:

F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 5:

G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 6:

HJ268, HJ272_1, HJ272_2, HJ272_3, HJ272_4, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 7:

JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Wave 8:

KJ268, KJ272a, KJ272b, KJ272c, KJ272d, JJ268, JJ338a, JJ338b, JJ338c, JJ338d, HJ268, HJ272_1, HJ272_2, HJ272_3, G3619, G3624_1, G3624_2, G3624_3, F3359, F3364_1, F3364_2, F3364_3, E2835, E2840_1, E2840_2, E2840_3, W3710, W3712, W3724, W3736, V2909, V3009, V3109

Chapter 8

Pension Retirement Ages

Pensions' early and normal retirement ages are determined by formulas that depend on the covered worker's age and the number of years spent under the plan. The formulas vary among pension plans.

The Health and Retirement Study asks respondents with a pension to indicate their expected ages of eligibility for early and normal retirement benefits at the time they enter the survey, in Wave 7 (2004) where respondents were asked all pension questions, and again whenever there is a report that the plan has changed. Respondent's expected early retirement age is the age at which a person expects to first become eligible to receive a pension benefit. Respondent's expected normal retirement age is the age at which the respondent expects to first be eligible to receive an unreduced benefit.

Respondents are also asked at what age they expect to first receive benefits. All respondents are asked that age at every wave. i.e. this question is included in both shorter (same pension) and longer (new pension) versions of the pension sequence. Respondent's expected age of benefit receipt is determined by the pension rules and the individual's decisions as to when to retire and when to claim benefits. Respondent's actual age of first benefit receipt may be reported in the wave after a respondent leaves a pension-covered job and is also reported in the Assets and Income section of the survey after the respondent retires and starts to receive benefits.

This chapter examines and compares the values of different measures of retirement age. It considers the differences in retirement ages reported by members of different demographic and employment groups. Trends in retirement age are examined. Retirement ages based on respondent reports are compared with those computed from employer-provided pension

formulas. Expected ages of benefit receipt are also compared with actual age of benefit receipt. Following is the list of variables and how constructed underlying tables presented in this chapter.

Self Reported Expected Early Retirement Age srERAgei

The constructed variable “srERAgei” indicates the self-reported early retirement age in Wave i, where here $i=1, 4, \text{ or } 7$. The indicated age is for the most important DB or combination/both plan from respondents’ current job. Pensions’ early retirement age is determined by formulas that depend on the covered worker’s age and the number of years spent under the plan. The formulas vary among pension plans.

How Constructed:

Respondent’s expected early retirement age is the age at which a person expects to first become eligible to receive a pension benefit.

Cross Wave Differences:

- 1- In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.
- 2- In Wave 1, there is 1 question asking respondents with a DB or combination/both plan about their early retirement age. In Wave 2, there are 2 questions; 1 question in the the FA section designed for employees and 1 question in the FB section designed for self-employed respondents. Those two questions are in the new pension sequence of those sections. In Wave 3 to Wave 6 and Wave 8, there is 1 question asking respondents with a new pension. Similarly, in Wave 7, there is only one question but all respondents with the same or new pension are asked the question. In all waves the body of the question is the same. But from Wave 5 forward, there is an interviewer instruction and a revised wording

of the question designed for respondents who report already eligible. That is; *[IWER: IF R REPORTS THAT S/HE IS ALREADY ELIGIBLE, ASK:] What is the earliest age at which you could have done so (that is, started to receive benefits from that plan)?*

- 3- A possible response to the question is “Anytime, No Age Requirement”. This response is coded as 96 in Wave 1. In other waves, it is coded as 95.

Variables used:

Wave 1:

V2925, V3025, V3125

Wave 4:

F3441_1 – F3441_3

Wave 7:

JJ383a, JJ383b, JJ383c, JJ383d

**Self Reported Normal Retirement Age
srNRage1, srNRage4, srNRage7**

The constructed variable “srNRagei” indicates the self-reported normal retirement age in Wave i, where i=1, 4, or 7. The indicated age is for the most important DB or combination/both plan from respondents’ current job. Pensions’ normal retirement age is determined by formulas that depend on the covered worker’s age and the number of years spent under the plan. The formulas vary among pension plans.

How Constructed:

The Health and Retirement Study asks respondents with a pension to indicate their expected age of eligibility for normal retirement benefits at the time they enter the survey and again whenever there is a report that the plan has changed. Respondent’s expected normal retirement

age is the age at which the respondent expects to first be eligible to receive an unreduced benefit. This variable is constructed based on the response to this question.

Cross Wave Differences:

- 1- In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.
- 2- In Wave 1, there is 1 question asking respondents with a DB or combination/both plan about their normal retirement age. In Wave 2, there are 2 questions; 1 question in the the FA section designed for employees and 1 question in the FB section designed for self-employed respondents. Those two questions are in the new pension sequence of those sections. In Wave 3 to Wave 6 and Wave 8, there is 1 question asking respondents with a new pension. Similarly, in Wave 7, there is only one question but all respondents with the same or new pension are asked the question. In all waves the body of the question is the same. But from Wave 5 forward, there is an interviewer instruction and a revised wording of the question designed for respondents who report already eligible. That is; *[IWER: IF R REPORTS THAT S/HE IS ALREADY ELIGIBLE, ASK:] What is the earliest age at which you could have been eligible (to receive full or unreduced pension benefits from this plan)?*
- 3- A possible response to the question is “anytime, no age requirement”. This response is coded as 96 in Wave 1. In other waves, it is coded as 95.

Variables used:

Wave 1:

V2919, V3019, V3119

Wave 4:

F3425_1 – F3425_3

Wave 7:

JJ367a, JJ367b, JJ367c, JJ367d

**Self Reported Expected Retirement Age
PenAgeDBi**

The constructed variables “PenAgeDBi” indicate the age at which respondents with a DB/combination plan expect to retire and start to receive benefits. The indicated age is for the most important DB plan from respondents’ current job in Wave *i*, where in this case *i*=1, 4, 7. The data is from the self-report.

How Constructed:

Respondents who reported a DB or combination/both plan are asked at what age they expect to first receive benefits. Respondent’s expected age of benefit receipt is determined by the pension rules and the individual’s decisions as to when to retire and when to claim benefits. This question is asked at every interview wave. The “PenAgeDBi” is derived from responses to this question.

Cross Wave Differences:

- 1- This question is asked of respondents who reported a DB or combination/both plan. The body of the question “*At what age do you expect to start receiving benefits from this plan?*” is the same in all waves. However, from Wave 3 forward, a phrase is added at the beginning of the question if the plan is a combination/both plan. The phrase is “*Now, about the part of your pension where benefits are accumulated based on a formula ...*”.
- 2- In Wave 1, there is 1 question asking about the age respondents with a DB or combination/both plan are expecting to receive benefits. In Wave 2, there are 4 questions; 2 questions in the FA section designed for employees, 1 question in the same and new

pension sequences each. Similarly, there are 2 questions in the FB section designed for self-employed respondents; 1 question in the same and new pension sequence each. In Wave 3 to Wave 6 and Wave 8, there are 2 questions; 1 from the same pension and 1 from the new pension sequences. In Wave 7, there is only one question.

- 3- In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.
- 4- From Wave 2 forward, “Already Receiving Benefits or Receiving Benefits Now” is added to the possible responses to the question. But this response is coded differently in Wave 2 from other waves. In Wave 2, it is coded as 95. From Wave 3 forward, it is coded as 97.
- 5- In Wave 1, a possible response “No Age Requirement”, coded as 96 is included. This response is not included in later waves.
- 6- Responses to the age of expecting to receive benefits could be in some number of “years”. In Waves 1, the “year” response is already converted to age. From Wave 2 forward, the number of “years” is coded as 96. The follow-up question indicates the number of years and should be converted to age.

Variables used:

Wave 1:

V2915, V3015, V3115

Wave 4:

F3370_1 – F3370_3, F3371_1 – F3371_3, F3411_1 – F3411_3, F3412_1 – F3412_3

Wave 7:

JJ353a, JJ353b, JJ353c, JJ353d, JJ354a, JJ354b, JJ354c, JJ354d

Early Retirement Age from the Administrative Data mpERAgei

The constructed variables “mpERAgei” indicates the early retirement age for employee respondents with a DB or combination plan from the employer provided information. The indicated age is for the most important DB plan from respondents’ current job in Wave i , where $i= 1, 4, 7$. The source of the data is the Supplemental Plan Descriptions (SPD) documents.

Reminder: to obtain the restricted data one must enter into an agreement with HRS.

How Constructed:

We have used the *Pension Calculator*® (Version 2) to process the employer provided plan descriptions and determine respondents’ early retirement age according to their plan formula. The economic assumptions³⁰ for running the calculator are 2.8 percent for the inflation rate, 3 percent for the real interest rate, and 1.1 percent for the real wage growth. The output from running the software includes Respondent, code id, respondent’s birth date, hire date, gender, quit date, wage, ASY (Actual Service Year), “PV_NR_”, “PV_ER_”, PV(VD), and “maxnrervd”. Variable “respondent” is the respondent’s id number. It is the same as “V” in Wave 1 and “hhidpn” in other Waves. Variable “code id” identifies pensions’ plan types. Code id values between 1 and 3000 identify DB plans and between 5000 and 7000 combination/both plans. “PV_ER_” indicates present value of benefits at early retirement age and “PV_NR_” the present value of benefits at normal retirement age. The “maxnrervd” indicates the maximum present value of benefits at early retirement age, normal retirement age, or vested deferred. Values for the Actual Service Year (ASY) start from zero, the start year of the job, and ends with

³⁰ From The 2004 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds.

the year (we assigned) the respondent reach age 70. Variable “Age” indicates respondent’s age at each Actual Service Year.

To identify the “Early” retirement age, we compared the variable “Age” column with the “PV_ER_” column. The Early Retirement Age is the earliest age at which the benefit at early retirement age (PV_ER_) is a positive value³¹. The present value of the benefit at that age is described in Chapter 9.

Variables used:

Wave 1:

age, “PV_ER_”, “PV_NR_”, codeid, bdate, respondent, “maxnrervd”, V1, V2909, V3009, V3109

Wave 4:

age, “PV_ER_”, “PV_NR_”, codeid, bdate, respondent, “maxnrervd”, HHIDPN, F3364_1 - F3364_3, F3403_1 - F3403_3

Wave 7:

age, “PV_ER_”, “PV_NR_”, codeid, bdate, respondent, “maxnrervd”, HHIDPN, JJ338a, JJ338b, JJ338c, JJ338d

Normal Retirement Age From Administrative Data mpNRagei

The constructed variables “mpNRagei” indicates the Normal Retirement age for employee respondents with a DB or combination plan from the employer provided information. The indicated age is for the most important DB plan from respondents’ current job in Wave i, where i= 1, 4, 7. The source of the data is the supplemental plan descriptions.

How Constructed:

We have used the *Pension Calculator*® (Version 2) to process the employer provided plan descriptions and determine respondents’ early retirement age according to their plan

³¹ Before that age, the pv_ER_ indicates a value of zero.

formula. The economic assumptions for running the calculator are 2.8 percent for the inflation rate, 3 percent for the real interest rate, and 1.1 percent for the real wage growth. The output from running the software includes some information such as respondent, code id, respondent's birth date, hire date, gender, quit date, wage, ASY (Actual Service Year), "PV_NR_", "PV_ER_", PV(VD), and "maxnrervd". Variable "respondent" is the respondent's id number. It is the same as "V" in Wave 1 and "hhidpn" in other Waves. Variable "code id" identifies pensions' plan types. Code id values between 1 and 3000 identify DB plans and between 5000 and 7000 combination plans. "PV_ER_" indicates present value of benefits at early retirement age and "PV_NR_" present value of benefits at normal retirement age. The "maxnrervd" indicates the maximum present value of benefits at early retirement age, normal retirement age, or vested deferred. Values for the Actual Service Year (ASY) start from zero, the start year of the job, and ends with the year (we assigned) the respondent reach age 70. Variable "Age" indicates respondent's age at each Actual Service Year.

To identify the "Normal" retirement age, we compared the variable "Age" column with the "PV_NR_" column. The Normal Retirement Age is the earliest age at which the benefit at normal retirement age (PV_NR_) starts to be a positive value. The present value of the benefit at that age is described in Chapter 9.

Variables used:

Wave 1:

age, "PV_ER_", "PV_NR_", codeid, bdate, respondent, "maxnrervd", V1, V2909, V3009, V3109

Wave 4:

age, "PV_ER_", "PV_NR_", codeid, bdate, respondent, "maxnrervd", HHIDPN, F3364_1 - F3364_3, F3403_1 - F3403_3

Wave 7:

age, “PV_ER_”, “PV_NR_”, codeid, bdate, respondent, “maxnrervd”, HHIDPN, JJ338a, JJ338b, JJ338c, JJ338d

**Imputed Expected Retirement Age
PenAgeDB1x, PenAgeDB4x, PenAgeDB7x**

Variables “PenAgeDB1x, PenAgeDB4x, and PenAgeDB7x” are the imputed versions of “PenAgeDB1, PenAgeDB4, and PenAgeDB7”. Those are the ages at which respondents with a DB or combination plan expect to retire and start to receive benefits. They are constructed for the most important DB or combination/both plan. The imputation method is the “Mixed”³² method. The data is from the self-report. In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.

Variables used:**Wave 1:**

V2915, V3015, V3115

Wave 4:

F3370_1 – F3370_3, F3371_1 – F3371_3, F3411_1 – F3411_3, F3412_1 – F3412_3

Wave 7:

JJ353a, JJ353b, JJ353c, JJ353d, JJ354a, JJ354b, JJ354c, JJ354d

**Imputed Expected Early Retirement Age From Administrative Data
mpERAge1x, mpERAge4x, mpERAge7x**

Variables “mpERAge1x, mpERAge4x, and mpERAge7x” are the imputed versions of “mpERAge1, mpERAge4, and mpERAge7”. Those are the early retirement age for employee respondents with a DB or combination plan from the employer provided formulas. The

³² The imputation is based on a regression results. Covariates include gender, age, education, marital status, race, full-time/part-time, industry, occupation, firm size, earnings, job tenure, and union membership.

imputation method is the “Mixed”³³ method. The data is from the employer provided documents. The indicated age is for the most important DB or combination plan from respondents’ current job in Wave 1, Wave 4, and Wave 7.

Variables used:

Wave 1:

mpERage1, V2909x, V3009x, V3109x

Wave 4:

mpERage4, F3364_1x - F3364_3x, F3403_1x - F3403_3x

Wave 7:

mpERage7, JJ338ax, JJ338bx, JJ338cx, JJ338dx

**Imputed Expected Normal Retirement Age From Administrative Data
mpNRage1x, mpNRage4x, mpNRage7x**

Variables “mpNRage1x, mpNRage4x, and mpNRage7x” are the imputed versions of “mpNRage1, mpNRage4, and mpNRage7”. Those are the normal retirement age for employee respondents with a DB or combination plan from the employer provided formulas. The imputation method is the “Mixed” method. The data is from the employer provided documents. The indicated age is for the most important DB or combination plan from respondents’ current job in Wave 1, Wave 4, and Wave 7.

Variables used:

Wave 1:

mpERage1, V2909x, V3009x, V3109x

Wave 4:

mpERage4, F3364_1x - F3364_3x, F3403_1x - F3403_3x

Wave 7:

³³ See footnote 28.

mpERage7, JJ338ax, JJ338bx, JJ338cx, JJ338dx

DC Plan's Expected Retirement Age
PenAgeDC1, PenAgeDC4_1, PenAgeDC7_1

The constructed variables “PenAgeDC1, PenAgeDC4_1, and PenAgeDC7_1” indicate the age at which respondents with a DC plan expect to retire and start to receive benefits. The indicated age is for the most important DC plan from respondents’ current job in Wave 1, Wave 4, and Wave 7. The data is from the self-report.

How Constructed:

Respondents with a DC plan are asked about the age they expect to start receiving any benefits at their first interview. In subsequent interviews they are asked this question only if their pension or employment was changed. That means re-interviewee respondents with the same pension are not asked about their expected age of retirement from their DC plans. In Wave 4, only War babies are included. Similarly in Wave 7, only Early boomers are included.

Response to this question is used in the construction of this variable.

Cross Wave Differences:

In Waves 1 and 4, respondents are asked about up to three plans. In Wave 7, they are asked about up to four plans.

Variables used:

Wave 1:
V2946

Wave 4:
F3476_1

Wave 7:
JJ424a

Retirement Plans

Rtplani_1, Rtplani_2, Rtplani_3, Rtplani_4, Rtplani_5, Rtplani_6, Rtplani_7, Rtplani_8

The constructed variable “Rtplani_1” indicates respondent’s plan to stop work altogether in Wave i, where i=1 to 8. The constructed variable “Rtplani_2” indicates respondents plan to never stop working in Wave i, where i=1 to 8. The constructed variable “Rtplani_3” indicates that respondents have not given it much thought in Wave i, where i=1 to 8. The constructed variable “Rtplani_4” indicates respondents do not have any retirement plans in Wave i, where i=1 to 8. The constructed variable “Rtplani_5” indicates respondents plan to reduce hours of work in Wave i, where i=1 to 8. The constructed variable “Rtplani_6” indicates respondents plan to change jobs in Wave i, where i=1 to 8. The constructed variable “Rtplani_7” indicates respondents plan to work for themselves in Wave i, where i=1 to 8. The constructed variable “Rtplani_8” indicates respondents plans to work until their health fails in Wave i, where i=1 to 8.

How Constructed:

Respondents are asked about their plan for retirement in each wave. They report whether they expect to stop work altogether, never stop, have not given it a thought, have no plan, plan to reduce hours, intend to change jobs, work for themselves, or work until their health fails. Some may have multiple responses. Response to the question(s) is used for constructing this set of variables.

Cross Wave Differences:

- 1- In Wave 1, separate questions ask about each of those options. In Wave 2 and later waves all options are included in one question and respondents may report multiple responses.

- 2- In Waves 1 and 2, the question starts with “*Are you currently planning to stop ...*”. From Wave 3 forward, the question starts with an introduction “*Now I want to ask about your retirement plans.*”. Then the question starts with: *Do you plan to stop ...*”.

Variables used:

Wave 1:

V3338, V3339, V3340, V3341, V3342, V3343, V3344, V3345

Wave 2:

W3967, W3968, W3969, W3970, W4622, W4623, W4624

Wave 3:

E3028m1 - E3028m4

Wave 4:

F3559m1 - F3559m4

Wave 5:

G3848m1 – G3848m4

Wave6:

HJ566m1 – HJ566m4

Wave 7:

JJ566m1 – JJ566m4

Wave 8:

KJ566m1 – KJ566m4

**Age Stop Working
Stopagei**

The variable “stopagei” indicates the age respondents plan to stop working altogether in wave i, where i=1 to 8.

How Constructed:

Respondents who reported they plan to stop working altogether when they were asked about their retirement plans, are asked at what age you plan to stop working. Response from that question is used to construct this variable.

Cross Wave Differences:

From Wave 2 forward, a possible response “Never” is included in as a response. In wave 2, this response is coded as “96”. In later waves, it is coded as “95”.

Variables used:

Wave 1:

V3346

Wave 2:

W3975, W3976, W4630, W4631, CIWYEAR, BIRTHYR

Wave 3:

E3029, E3030, EIWYEAR, BIRTHYR

Wave 4:

F3560, F3561, FIWYEAR, BIRTHYR

Wave 5:

G3849, G3850, GIWYEAR, BIRTHYR

Wave6:

HJ568, HJ569, HIWYEAR, BIRTHYR

Wave 7:

JJ568, JJ569, JIWYEAR, BIRTHYR

Wave 8:

KJ568, KJ569, KIWYEAR, BIRTHYR

**Think Stop Working-Age
thoughti**

The variable “thoughti” indicates the age they think they will stop working, reported in Wave i, where i=3 to 8.

How Constructed:

Respondents who reported they have not given much thought to their retirement plans are asked at what age you think you will stop working. Response to this question is used in the construction of this variable.

Cross Wave Differences:

From Wave 2 forward, a possible response “Never” is included in as a response. In Wave 2, this response is coded as “96”. In later waves, it is coded as “95”.

Variables used:**Wave 3:**

E3031, E3032, EIWYEAR, BIRTHYR

Wave 4:

F3562, F3563, FIWYEAR, BIRTHYR

Wave 5:

G3851, G3852, GIWYEAR, BIRTHYR

Wave6:

HJ570, HJ571, HIWYEAR, BIRTHYR

Wave 7:

JJ570, JJ571, JIWYEAR, BIRTHYR

Wave 8:

KJ570, KJ571, KIWYEAR, BIRTHYR

Age Working Fewer Hours**feweragei**

The variable “feweragei” indicates the age they plan to start working fewer hours, reported in wave i, where i=1 to 8.

How Constructed:

Respondents who reported they plan to work fewer hours are asked at what age you plan to start working fewer hours. Response to this question is used in the construction of this variable.

Cross Wave Differences:

- 1- In Wave 2, a possible response is “Already working fewer hours”. This response is coded as “95”.
- 2- From Wave 2 forward, a possible response “Never” is included in as a response. In Wave 2, this response is coded as “96”. In later waves, it is coded as “95”.

Variables used:

Wave 1:

V3347

Wave 2:

W3977, W3978, W4632, W4633, CIWYEAR, BIRTHYR

Wave 3:

E3033, E3034, EIWYEAR, BIRTHYR

Wave 4:

F3564, F3565, FIWYEAR, BIRTHYR

Wave 5:

G3853, G3854, GIWYEAR, BIRTHYR

Wave6:

HJ572, HJ573, HIWYEAR, BIRTHYR

Wave 7:

JJ572, JJ573, JIWYEAR, BIRTHYR

Wave 8:

KJ572, KJ573, KIWYEAR, BIRTHYR

**Age Change Kind of Work
changeagei**

The variable “changeagei” indicates the age they plan to change the kind of work they do in wave i, where i=1 to 8.

How Constructed:

Respondents who reported they plan to change the kind of work they do, are asked at what age they plan to change the kind of work they do. Response to this question is used in the construction of this variable.

Cross Wave Differences:

- 1- In Wave 2, a possible response is “Already working fewer hours”. This response is coded as “95”.
- 2- From Wave 2 forward, a possible response “Never” is included in as a response. In Wave 2, this response is coded as “96”. In later waves, it is coded as “95”.

Variables used:

Wave 1:
V3348

Wave 2:
W3979, W3980, W4634, W4635, CIWYEAR, BIRTHYR

Wave 3:
E3035, E3036, EIWYEAR, BIRTHYR

Wave 4:
F3566, F3567, FIWYEAR, BIRTHYR

Wave 5:
G3855, G3856, GIWYEAR, BIRTHYR

Wave6:
HJ574, HJ575, HIWYEAR, BIRTHYR

Wave 7:
JJ574, JJ575, JIWYEAR, BIRTHYR

Wave 8:
KJ574, KJ575, KIWYEAR, BIRTHYR

Age Work for Self selfi

The variable “selfi” indicates the age respondents plan to start working for themselves in wave i, where i=1 to 8.

How Constructed:

Respondents who reported they plan to start working for themselves, are asked at what age they plan to start working for themselves. Response to this question is used in the construction of this variable.

Cross Wave Differences:

- 1- In Wave 2, a possible response is “Already working for self”. This response is coded as “95”.
- 2- From Wave 2 forward, a possible response “Never” is included in as a response. In Wave 2, this response is coded as “96”. In later waves, it is coded as “95”.

Variables used:

Wave 1:
V3349

Wave 2:
W3981, W3982, W4636, W4637, CIWYEAR, BIRTHYR

Wave 3:
E3037, E3038, EIWYEAR, BIRTHYR

Wave 4:
F3568, F3569, FIWYEAR, BIRTHYR

Wave 5:

G3857, G3858, GIWYEAR, BIRTHYR

Wave6:

HJ576, HJ577, HIWYEAR, BIRTHYR

Wave 7:

JJ576, JJ577, JIWYEAR, BIRTHYR

Wave 8:

KJ576, KJ577, KIWYEAR, BIRTHYR

**Actual Age of Benefit Receipt
Start_Age8**

The variable “Start_Age8” indicates the age respondents began to receive benefits in Wave 8. It is reported in the Assets and Income section of the Wave 8 interview survey.

How Constructed:

Respondents who reported receiving income from their retirement pensions are asked at what year did they first began to receive that pension. This variable is derived from responses to this question.

Variables used:**Wave 8:**

KQ231_1, KQ257_1, BIRTHYR

**Age Left 1992 Job
Ageleft**

The variable “ageleft” indicates the age respondents have left their 1992 job.

How Constructed:

This variable is constructed by following respondents with a current job in Wave 1 through waves till they report not working or changed their 1992 job. At that point, the age that respondents left the Wave 1 job is calculated by adding respondents' age to the number of years between the interview year in Wave 1 and the interview year when they left the Wave 1 job.

Variables used:

Wave 1:

V2901, V2838, V2909, V3009, V3109, V2915, V3015, V3115, V2946, V2919, V3019, V3119, V2925, V3025, V3125, V2945, V3045, V3145, V3046, V3146, aiwyear

Wave 2:

W3319, W3504, W4202, W4801, W4898, ciwyear

Wave 3:

E2631, E2668, eiwyear

Wave 4:

F3135, F3189, fiwyear

Wave 5:

G3385, G3438, giwyear

Wave 6:

HJ024, HJ064, hiwyear

Wave 7:

JJ024, JJ064, jiwyear

Wave 8:

KJ024, KJ064, kiwyear

Chapter 9

Pension Values

This chapter is concerned with the question of what pensions are worth. Given the rapid trends in pensions, and in particular in plan type, it is important to learn how pension values have changed over time and among cohorts in the HRS. It is also interesting to consider differences in plan values by demographic group and among those with different job characteristics. Given the trends observed in previous chapters, special attention is paid to differences in pension values between men and women and how those differences have changed over time.

This chapter begins with respondent reports of pension payments at the expected age of retirement for those with DB plans and respondent reports of the value in the pension account for those with DC plans. It then proceeds to place the defined benefit values on the same footing with defined contribution plans, using a prorated measure of the value of the DB pension and calculating its present value. Once the plan valuation is placed on the same footing, we are in a position to add the values of each covered person's DB and DC plan. The discussion then turns to the employer-provided formulas to allow an alternative calculation of the value of DB pensions. Note that employer plan descriptions are not used to value DC plans. Account balances for DC plans are estimated from respondent reports. Once DB plan values based on employer plan descriptions have been generated, a next natural step is to compare those values with the values provided by respondents.

In addition to pension wealth from current jobs, a full accounting of pension wealth must include pensions from previous jobs. We use the HRS to calculate the total value of pensions ever held by respondents. To bring these calculations together, this chapter concludes with tables reporting total pension wealth held by respondents and by households, the share of wealth

associated with each plan type, and the share of household pension wealth attributable to men and to women and reporting how these various measures of pension wealth have changed over time.

Following is the list of constructed variables, how constructed, and cross wave differences that is used in constructing this chapter's tables.

Full Time Employment
full_timei

This variable is described earlier in Chapter 1.

Employees/Self-employed
Self_elsei

This variable is described earlier in Chapter 3.

Annual Expected Future Benefits
XPbeni

The constructed variable "XPbeni" is the annual value of expected future benefits from the most important Defined Benefit (DB or type A) or combination/both (type AB) plan from respondents' current job in Wave i, where $i = 1, 2, \dots, 8$. Benefits are reported by respondents as of the first year the benefit will be received.

How Constructed:

The benefit may be reported as a percent of income, an amount per week/bi-weekly/month/year, or a lump-sum. Benefits reported as a percent of income or amounts per week/bi-weekly/month are converted to an annual amount. The annual benefit for respondents

who reported percent of income³⁴ is calculated by adjusting the income by 3.9 percent³⁵ for each year between the respondent's age in the wave and the age s/he expects to start receiving benefits³⁶. Benefits that are reported as a lump-sum amount are not included in here. Imputed values are not included.

Cross Wave Differences:

1. In Wave 1 to Wave 4, respondents were asked about up to 3 plans. From Wave 5 forward, they were asked about up to four plans.
2. In Wave 1, set of range values follow Don't Know and Refuse responses.
3. From Waves 6 forward, bracket questions follow Don't Know and Refuse responses in the amount question.
4. In Wave 1, the "Per" units for the amount of expected benefits are "2. Week, 3. Bi-weekly, 4. Month, 6. Year, and 8. Lump-sum".
5. In Wave 2 to Wave 5, the "Per" units are "2. Week, 3. Bi-weekly, 4. Month, and 6. Year".
6. From Wave 6 forward, the "Per" units are "4. Month" and "6. Year".
7. In Wave 1, there is one questions asking about the expected amount of future benefits from DB and combination/both plans. In Wave 2, there are 4. There are 2 questions in the FA section, one in the same pension and the other in the new pension sequences. Similarly, there are 2 questions in the FB section, one for the same pension and the other in the new pension sequences.

³⁴ Respondents are asked about their expected final pay if they work until their normal retirement age. About half of the respondents have missing values and some have reported an expected earning that is unreasonably far off from their current income. The final pay is not used in the calculation.

³⁵ That is the future intermediate inflation rate of 2.8 percent and 1.1 percent real wage growth from the 2004 Annual Report of the Board of Trustees.

³⁶ There are two cases (hhidpn=015429010 and 085604010) with an unreasonable amount/per. Those are turned to missing.

In Wave 3 to Wave 6 and Wave 8, there are 2 questions about the expected future benefits from DB and combination/both plans. One of the questions is in the same pension and the other in the new pension sequences. In Wave 7, there is only one question asking about the expected future benefits from DB and combination/both plans.

Variables used:

Wave 1:

V2916, V3016, V3116, V2917, V3017, V3117, V2918, V3018, V3118,

Wave 2:

W3717, W3729, W3741, W3766, W3718, W3730, W3742, W3719, W3731, W3743, W3766, W3818, W3870, W3767, W3819, W3871, W3768, W3820, W3872, W4425, W4477, W4529, W4426, W4478, W4530

Wave 3:

E2846_1 - E2846_3, E2892_1 - E2892_3, E2847_1 - E2847_3, E2848_1 - E2848_3, E2893_1 - E2893_3, E2848_1 - E2848_3, E2894_1 - E2894_3, E2850_1 - E2850_3, E2896_1 - E2896_3

Wave 4:

F3365_1, F3365_2, F3365_3, F3383_1, F3383_2, F3383_3, F3404_1, F3404_2, F3404_3, F3470_1, F3470_2, F3470_3

Wave 5:

G3625_1, G3625_2, G3625_3, G3625_4, G3643_1, G3643_2, G3643_3, G3643_4, G3684_1, G3684_2, G3684_3, G3684_4, G3755_1, G3755_2, G3755_3, G3755_4, G3773, IncomeYr_5, PenAgeDB5

Wave 6:

HJ273_1, HJ273_2, HJ273_3, HJ273_4, HJ307_1, HJ307_2, HJ307_3, HJ307_4, HJ339_1, HJ339_2, HJ339_3, HJ339_4, HJ413_1, HJ413_2, HJ413_3, HJ413_4, HJ431, IncomeYr_6, PenAgeDB6

Wave 7:

JJ339a, JJ339b, JJ339c, JJ339d, JJ413a, JJ413b, JJ413c, JJ413d, jj431, IncomeYr_7, PenAgeDB7

Wave 8:

KJ273a, KJ273b, KJ273c, KJ273d, KJ307a, KJ307b, KJ307c, KJ307d, KJ339a, KJ339b, KJ339c, KJ339d, KJ413a, KJ413b, KJ413c, KJ413d, KJ431, IncomeYr_8, PenAgeDB1

Imputed Annual Expected Future Benefits XPbenix

The constructed variable “XPbenix” is the same as the “XPbeni” except it includes imputations for respondents with missing values.

How Imputed:

The imputation process involves two steps. First, the ratio of benefits to earnings is calculated and imputed through the mixed method where necessary for respondents with missing benefit amounts. The mixed method involves a regression using covariates such as age, the interaction of full-time/part-time and gender, education, race, marital status, firm size, earnings, job tenure, industry, occupation, and union membership. We use the predicted benefit earnings ratio and a random number for sorting the data. Then we select the closest observation preceding the one with a missing value and replace the missing with that observed value. In the second step, the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information.

Current DC Account Balances CurDCs_wi

The constructed variable “CurDCs_wi” includes the sum of all account balances from Defined Contribution (DC or type B) and the account part of the combination/both (type AB) plan(s) from respondents’ current job in Wave i , where $i = 1$ to 8.

How Constructed:

In Chapter 4, we described how this variable is constructed.

Current DC Account Balances- with imputations
CurDCs_wix

The constructed variable “CurDCs_wix” is the same as “CurDCs_wi” except it includes imputed values for respondents with missing values.

How Imputed:

Account balances from all DC and/or combination plans are included in this variable. The imputation process for this set of account balances involves imputing separately for account balances in DC plans and in combination plans. The donors in each plan are the respondents with observed values in that plan. For example, in Wave 1 imputations are performed for 3 DC plans and 3 combination plans. The sum of account balances from those 6 plans makes up the “CurDCs_w1x”.

A mixed method is used for imputing the missing values in account balances from plans with a sample size that is large enough to give a meaningful regression results. Otherwise, a hot-decking process is used. In Wave 1, where range values followed Don’t Know (DK) and Refused (RF) responses, the geometric means of those values are used. In Wave 4, a separate imputation is performed for HRS and war baby cohorts. The donors for each cohort are those from among their own cohort. In Wave 7, bracket questions follow DK and RF responses. That information from those brackets is used in the imputations. The missing values for the most important and second most important DC plans are imputed by the mixed method for HRS, war babies, and early boomers. For the third and fourth DC plans and for the Ahead and Coda cohorts, missing values are imputed by hot-decking.

Present Value of Expected Benefits
srDBben_xpi

The constructed variable “srDBben_xpi” is the present discounted value of expected benefits from the most important DB or combination/both plan in Wave i, where i=1, 4, and 7. Benefits are from the self-report and reported as of the first year the benefit will be received.

How Constructed:

Pension wealth from a DB plan is calculated first by calculating the annual expected benefits (XPbeni described earlier) and then summing the discounted values of each year of that benefit receipt back to the age of expected retirement. Present discounted value of lump sum benefits are calculated for those who reported expecting a lump-sum amount. Benefits are then further discounted back to the indicated wave year. Benefits are paid only if the respondent continues to survive. The future amount reported is discounted at 5.8 percent back to the year the question was asked. The discount rate of 5.8 percent is taken from Social Security Administration projections of the intermediate future inflation rate of 2.8 percent and a real interest rate of 3.0 percent. Whenever benefits are discounted, the inflation portion of the adjustment is always 2.8 percent, even when adjusting over historical periods where a different inflation rate was realized. By standardizing for the inflation rate over the period, we hope to eliminate changes in values resulting from projecting and discounting at different underlying inflation rates.

Cross wave Differences;

Differences are the same as those noted for the XPbeni variable.

Variables used:

Wave 1:

Surv0 - Surv119³⁷, XPben1, penageDB1

³⁷ These are the survival probabilities of living from age 0 to 119. The source of the mortality data is the Social Security Administration.

Wave 4:

Surv0 - Surv119, XPben4, penageDB4

Wave 7:

Surv0 - Surv119, XPben7, penageDB7, age7

Present Value of Expected Benefits with Imputations**srDBben_xpix**

The constructed variable “srDBben_xpix” is the same as “srDBben_xpi” except respondents with missing values for the expected amount of benefits have imputed values.

How Imputed:

For imputing the present value of expected benefits from DB or combination plans, we use the calculated present value of expected benefits “srDBben_xpi” and impute for those who have missing values. The donors would be among respondents with a calculated present value of benefits. We use the mixed method in the imputation process.

Prorated Present Value of Expected DB Benefit**prsrDBben_xpi**

The variable “prsrDBben_xpi” is the prorated present discounted value of expected benefits from the self-reported data. It is constructed for respondents who reported a DB or combination/both plan from their current job in each wave. This variable is constructed for the most important DB or combination/both plan.

How Constructed:

Prorated benefits are obtained by multiplying the present values in “srDBben_xpi” (described earlier) by the ratio of years of service accumulated to date, divided by years of service that would be accumulated by the expected date of the start of receiving benefits. For

example, if a person had worked fifteen years through 1992 and expected to work another ten years until 2002, the benefit is computed as if the person worked through 2002, but that benefit is then multiplied by 15/25. Thus the present values where benefits are prorated are lower than those not prorated.

Cross Wave Differences:

Differences are the same as those noted for the XPbeni variable.

Variables used:

Wave 1:

srDBben_xp 1, penageDB1, jobten1, age1, aiwyear

Wave 4:

srDBben_xp4, penageDB4, jobten4, age4, fiwyear

Wave 7:

srDBben_xp7, penageDB7, jobten7, age7, jiwyear

**Prorated Present Value of Expected DB Benefit with Imputed Values
prsrDBben_xpix**

The variable “prsrDBben_xpix” is the prorated present discounted value of expected benefits with imputations for missing values included.

How Constructed:

This variable is constructed by multiplying the “srDBben_xpix” which includes imputations for missing benefit values (described earlier) by the ratio of years of service accumulated to date, divided by years of service that would be accumulated by the expected retirement date. Where necessary, start date of the job is imputed for respondents with missing start year of current job needed for calculating the job’s tenure.

Pension Values from Current Job **SRpencurri**

The constructed variable “SRpencurri” indicates total pension values from Defined Benefit, Defined Contribution, and combination/both plans from respondents’ current job in Wave *i*, where *i*=1, 4, 7. Plan values are from the self-reported data and include imputations for respondents with missing expected age of receiving benefits and/or the amount of benefits from DB plans and/or DC account balances. They are in 1992 dollars.

How Constructed:

The pension value from a current job includes the prorated projected pension value from the most important DB or combination/both plan (prsrDBben_xpix described earlier) and current account balances from all DC plans (CurDCs_wix described earlier).

Defined Benefit plans are valued as of the expected retirement age and then an imputation is performed for respondents with missing values. The expected benefits are discounted back to the base year for the particular cohort. Once all values are discounted back to the appropriate base year for the respondent, they are further prorated. The prorated DB amounts and account balances are further converted to 1992 dollars. The prorated DB amounts and account balances are converted to 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts. Imputations are included.

Variables Used:

Wave 1-

prSRDBben_XP1x, CurDCs_w1x

Wave 4-

RprSRDBben_XP4x, RCurDCs_w4x

Wave 7-

Current Job:

prSRDBben_XP7x, CurDCs_w7x

Gender, Race, Marital Status, Education

The source of these variables is the tracker file 2004, version 1

Employee/self-employed, firm size, union self_elsei, frmszi, unioni

Labor force, employee/self-employed, firm size, and union membership are described in Chapter 3.

Pension Values from Last and Previous Jobs

Present Value of Expected Future Benefits- From Last and Previous Jobs pdvEFB92x, RpdvEFB98x, RpdvEFB04

Constructed variables “pdvEFB92x, RpdvEFB98x, RpdvEFB04x” indicate the sum of the present discounted values of expected future benefits from DB and/or combination/both plans from respondents’ last and previous pension jobs in 1992, 1998, and 2004, respectively. Pension values are all in 1992 dollars.

How Constructed:

Respondents who reported a DB (type A) or combination/both (type AB) plan from their last and/or previous pension job are asked about the disposition of that plan. If their response is “Expecting Future Benefits” they are asked at what age they expect to start receiving benefits and how much. The response to the amount of expected benefits may be in the form of “percent of earnings”, an “amount per month/year” or just a “lump sum”.

For constructing the present value of the future benefits, first we have constructed an expected amount of benefits per year for those who reported the benefits in the form of percent

of their earnings or an amount per month for each job. Second, we have imputed for respondents who had missing values.

The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information.

Third, we have adjusted the amount of expected benefits per year and the lump sum amounts using 5.8 percent for every year between the expected age of receiving benefits and age 120. We also have used the 5.8 percent to discount back the present values of expected benefits to respondent's age in 1992, 1998, or 2004, respectively. This value is also adjusted by survival probability rate.

Fourth, we have summed up the present values of expected benefits from last job and three previous pension jobs in each wave. Present values of expected benefits are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Expected Future Benefits in Each Wave:

The constructed variable pdvEFB92x is the sum of expected benefits from sections G and H of Wave 1. It includes constructed variables “pdvEFB_g1x” which is the present discounted value of expected benefits from respondents' last job³⁸ and “pdvEFB_ha1x”, “pdvEFB_hb1x”, and “pdvEFB_hc1x” are from previous (up to three) pension jobs. They indicate the present discounted value of expected benefits from DB or combination/both plans from those jobs in

³⁸ There is one respondent (hhidpn=034213010) in the G section (last job) of Wave 1 with an incorrect amount of expected benefits \$40,000 per month. This respondent's earnings from that job is \$17,500 per year. Also when he was asked the follow up question about that benefit in the old pension sequence in the 2002 survey, he reported receiving \$400 per month. We have adjusted his expected benefits in the G section of Wave 1 to \$400 per month.

Wave 1. The “g” in the variable name indicates the benefits is reported in the G section, “ha” indicates the first previous pension job, “hb” and “hc” indicate the second and third previous pension jobs in the H section of Wave 1.

The constructed variable pdvEFB98x is the sum of “pdvEFB_gg4x, pdvEFB_ha4x, pdvEFB_hb4x, pdvEFB_hc4x”. Those are the present discounted value of expected benefits from DB or combination/both plans from respondents’ last and previous pension jobs in Wave 4. The “gg” in the variable name indicates the GG section, “ha” indicates the first previous pension job, “hb” and “hc” indicate the second and third previous pension jobs in the GH section of Wave 4.

The constructed variable pdvEFB04x is the sum of “pdvEFB_K17x, pdvEFB_K27x, pdvEFB_K37x, pdvEFB_K47x”, Rpdvefb_L17x, Rpdvefb_L27x, Rpdvefb_L37x, Rpdvefb_L47x, Rpdvefb_L57x, and/or Rpdvefb_L67x. The first four (“pdvEFB_K17x, pdvEFB_K27x, pdvEFB_K37x, pdvEFB_K47x”) indicate the present discounted value of expected benefits from DB or combination/both plans from last job in Wave 7 for plans 1 to 4. Variables “Rpdvefb_L17x, Rpdvefb_L27x, Rpdvefb_L37x, Rpdvefb_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “Rpdvefb_L57x” from second previous pension job, and “Rpdvefb_L67x” from respondents’ third previous pension job in Wave 7.

It should be noted that pension benefits have not been adjusted to incorporate updated information from periodic reports collected by the HRS about dormant pensions. This information is available in several surveys (1996, 1998, 2002, 2004, and 2006) where respondents were asked about the status of dormant pensions (DB plans that will pay benefits in

the future) from their last and previous jobs reported when first interviewed or from jobs left after their initial interviews.

Cross Wave Differences:

1. In Wave 1, for the amount of expected benefits range values follow “Don’t Know” and “Refuse” responses.
2. In Wave 4, the “per” values for the amount of expected benefits in the GH section are coded as 1 and 2, where 1 indicates per “month” and 2 per “year”. In the GG section, the values are 4 and 6 indicating per “month” and 6 for per “year” respectively. In all other waves and sections the code values for “per” are 4 and 6 indicating per “month” and “year”.
3. In Wave 7, brackets follow “Don’t Know” and “Refuse” responses for the amount of expected benefits question. To be consistent with other waves, we have not used information from brackets.

Variables used:

Wave 1:

V3519, V3520, V3521, V3522, V3639, V3640, V3641, V3642, V3726, V3727, V3728, V3729, V3826, V3827, V3828, V3829

Wave 4:

F3694, F3695, F3696, F3697, F398, F3700,
F3876, F3877, F3878, F3879, F3880, F3882, F3929_1, F3930_1, F3931_1, F3932_1, F3933_1,
F3935_1, F3929_2, F3930_2, F3931_2, F3932_2, F3933_2, F3935_2

Wave 7:

JKW035a, JKW036a, JKW037a, JKW038a, JKW039a, JKW041a, JK133a, JK134a, JKW035b,
JKW037b, JKW038b, JKW039b, JKW041b, JK133a, JK134a, JKW035c, JKW037c, JKW038c,
JKW039c, JKW041c, JK133c, JK134c, JKW035d, JKW037d, JKW038d, JKW039d, JKW041d,
JK133d, JK134d,
JLW035a, JLW036a, JLW037a, JLW038a, JLW039a, JLW041a, JL133a, JL134a, JLW035b,
JLW036b, JLW037b, JLW038b, JLW039b, JLW041b, JL133b, JL134b, JLW035c, JLW036c,

JLW037c, JLW038c, JLW039c, JLW041c, JL133c, JL134c, JLW035d, JLW036d, JLW037d, JLW038d, JLW039d, JLW041d, JL133d, JL134d, JLW035e, JLW036e, JLW037e, JLW038e, JLW039e, JLW041e, JL133e, JL134e, JLW035f, JLW036f, JLW037f, JLW038f, JLW039f, JLW041f, JL133f, JL134f

**Present Value of Remaining Benefits- in Pay Status- From Last and Previous Jobs
pdvRBremain92x, RpdvRBremain98x, RpdvRBremain04x**

The constructed variables “pdvRBremain92x, RpdvRBremain98x, RpdvRBremain04x” indicate the sum of present values of the remaining benefits from DB and/or combination/both plan(s) as of 1992, 1998, or 2004 from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004. Pension values are all in 1992 dollars. They include imputed values.

How Constructed:

Respondents who reported a DB or combination/both plan from their last or previous pension jobs are asked about the disposition of that plan. If their response is “Receiving Benefits Now” they are asked when they started receiving benefits and how much the benefits are per month or year. These values are calculated for respondents who reported their plan is in pay status.

For constructing the present value of the remaining benefits, first we have constructed an annual amount of benefits per year for those who reported the benefits an amount per month. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information.

Third, we have calculated the present value of the remaining amount of benefits per year using 5.8 percent for every year between the respondents' age in 1992, 1998, and 2004 and age 120 for 1992, 1998, and 2004 surveys, respectively. This value is also adjusted by respondent's survival probability of living³⁹ each year.

Fourth, we have summed up the present values of expected benefits from last job and three previous pension jobs in each wave. Present values of expected benefits are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Receiving Benefits Variable in Each Wave:

Respondents who report pensions from their last and/or previous jobs are in pay status, the remaining value of those pensions in 1992, 1998, and 2004 are calculated. The constructed variables "pdvRBremain92_g1x, pdvRBremain92_ha1x, pdvRBremain92_hb1x, pdvRBremain92_hc1x" indicate the present value of remaining benefits as of 1992 from respondents' DB or combination/both plan from last and/or previous pension jobs in Wave 1. "g" indicates the G section, "ha" the first pension job, "hb" and "hc" indicate the second and third pension jobs in the H section of Wave 1.

The constructed variables "RpdvRBremain98_gg4x, RpdvRBremain98_ha4x, RpdvRBremain98_hb4x, RpdvRBremain98_hc4x" indicate the present values of remaining benefits as of 1998 from DB or combination/both plan from respondents' last and/or previous pension jobs in Wave 4. "gg" indicates the GG section, "ha" the first pension job, "hb" the second pension job, and "hc" the third pension job in the GH section of Wave 4.

The constructed variables "RpdvRBremain04_K17x, RpdvRBremain04_K27x, RpdvRBremain04_K37x, RpdvRBremain04_K37x, RpdvRBremain04_K47x" indicate the

³⁹ Survival probability is measured as a function of respondents' birth year and gender. It is provided by the Social Security Administration.

present values of remaining benefits as of 2004 from DB/combination plans from last job in Wave 7. Variables “RpdvRBremain04_L17x, RpdvRBremain04_L27x, RpdvRBremain04_L37x, RpdvRBremain04_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “RpdvRBremain04_L57x” from second previous pension job, and “RpdvRBremain04_L67x” from respondents’ third previous pension job in Wave 7.

Cross Wave Differences:

1. In Wave 4, the “per” values for the amount of receiving benefits in the GH section are 1 and 2, where 1 indicates per month and 2 per year. In the GG section⁴⁰, the “per” units are 4 and 6, where 4 indicates per month, and 6 per year. In all other Waves and Sections the code values for “per” unit of amount of receiving benefits are 4 and 6.
2. In Wave 7, brackets follow “Don’t Know” and “Refuse” responses for the amount of receiving benefits question. To be consistent with other waves, we have not used brackets.

Variables used:

Wave 1:

V3504, V3511, V3512, BIRTHYR, V3624, V3631, V3632, V3711, V3718, V3719, V3811, V3818, V3819

Wave 4:

F3685, F3686, F3867, F3868, F3919_1, F3920_1, F3919_2, F3920_2

Wave 7:

JKW025a, JKW026a, JKW025b, JKW026b, JKW025c, JKW026c, JKW025d, JKW026d, JLW025a, JLW026a, JLW025b, JLW026b, JLW025c, JLW026c, JLW025d, JLW026d, JLW025e, JLW026f

⁴⁰ One respondent (hhidpn=175393010) in the GG section of Wave 54 reported \$29,100 in benefit per hour. His earnings are \$60,000. We have converted the per “hour” to per “year” for this case.

Pension Values From Last Job **SRpenlasti**

The constructed variable “SRpenlasti” indicates total pension values from DB and/or combination/both plans and DC account balances from respondents’ last job reported in their initial interview in Wave i , where $i=1, 4, 7$. The pension wealth from last job in Waves 4 and 7 also include the wealth from younger spouses of HRS and war babies cohorts. The pension information from their last job was collected in Wave 1 or Wave 4 respectively. Since they were ineligible to be included in the sample when they were first interviewed, their pension wealth is brought forward into Wave 4 or Wave 7 respectively. Plan values are from the self-reported data and they are in 1992 dollars.

Pension wealth from respondents’ last job includes pension values from DB or combination/both plan and DC plans. Pension values from DB and/or combination/both plans include pension values from respondents who reported expecting future benefits or already receiving benefits. Other forms of benefits such as cash settlements, rolled over into an IRA, etc. are not included. Plan values are from the self-reported data and they are in 1992 dollars.

How Constructed:

For constructing “SRpenlasti”, first we have calculated the present discounted value of expected future benefits (described earlier) for respondents who reported expecting some future benefits, and present value of remaining benefits (described earlier) if they were in pay status. The benefits are from their DB or combination/both from their last job as of Wave i .

Second, we calculated the present value of the account part of combination/both⁴¹ plans by adjusting those account balances upward for each year from the jobs’ termination dates

⁴¹ Account balances from the account part of combination plans are reported as of termination dates. For DC plans, account balances are reported as of the current interview date. There is no need to adjust the account balances for DC plans.

through 1992, 1998, or 2004 respectively. Similarly, for younger spouses of age-eligible members of the HRS or war baby cohorts who were first interviewed in 1992 or 1998 but became age eligible only in 1998 or 2004, their benefits from their last jobs are adjusted upward by 5.8 percent for each of the years between the time when those jobs ended and the base year of their cohort; 1998 or 2004.

Third, present values of DB plans from expecting future benefits if plan is dormant, remaining benefits if in pay status, and DC plans from last job in Wave i are summed up for each wave to construct the “SRpenlasti”. Values are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts. Imputations are included. The imputation process is described earlier.

Variables Used:

Wave 1:

pdvEFB_g1x, pdvRBremain92_g1x, Rv3502x, V3525x

Wave 4:

Rpdvefb_GG4x, RpdvRBremain98_GG4x, RpdvACCT_ggab4x, RpdvACCT_ggb4x

From younger spouse of HRS cohort:

Rpdvefbin98_g1x, RpdvRBremain98_g1x, RpdvACCTin98_g1x, Rv3502in98x

Wave 7:

Rpdvefb_K17x, Rpdvefb_K27x, Rpdvefb_K37x, Rpdvefb_K47x, RpdvRBremain04_K17x, RpdvRBremain04_K27x, RpdvRBremain04_K37x, RpdvRBremain04_K47x, RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K47x

From younger spouse of WBs cohort:

Rpdvefb_GG4x, RpdvRBremain04_GG4x, RpdvACCT_ggab4x, RpdvACCT_ggb4x

From younger spouse of HRS cohort:

Rpdvefbin04_g1x RpdvRBremain04_g1x RpdvACCTin04_g1x, Rpdv3502in04x

Pension Values from Previous Job

SRpenprevi

The constructed variable “SRpenprevi” includes pension wealth from two sets of previous jobs. The first set includes previous pension jobs that were reported when respondents were first interviewed in Wave *i*. The second set of previous jobs includes jobs that were terminated in subsequent waves. Naturally, the wealth from previous jobs in Wave 1 includes only those from the first set of previous jobs. However, in Waves 4 and 7 both sets of previous jobs are included.

The pension wealth from previous jobs in Waves 4 and 7 also include the wealth from younger spouses of HRS and war babies cohorts. The pension information from their previous jobs was collected in Wave 1 or Wave 4 respectively. Since they were ineligible to be included in the sample when they were first interviewed, we have brought forward and adjusted their pension wealth into Wave 4 or Wave 7 respectively.

Pension wealth from previous jobs includes total pension values from DB or combination/both plan and DC plans. Pension values from DB and/or combination/both plans include pension values from respondents who reported expecting future benefits or already receiving benefits. Other forms of benefits such as cash settlements, rolled over into an IRA, etc. are not included. Plan values are from the self-reported data and they are in 1992 dollars.

How Constructed:

For constructing “SRpenprevi”, first we have calculated the present discounted expected future benefits (described earlier) if respondents reported expecting future benefits from their DB or combination/both from their previous jobs. For respondents who reported they are already receiving benefits we have calculated the present value of the remaining benefits as of Wave *i*. Second, we calculated the present value of the account part of combination/both plans by

adjusting those account balances from when left the previous job by 5.8 percent for each of the years between the time when that job ended and Wave i. Third, present values of DB plans from expecting future benefits and the remaining benefits if in pay status, and values of DC plans from previous jobs reported after respondents' initial interviews, are calculated. Fourth, present values of DB plans from expecting future benefits, the remaining benefits if in pay status, and DC account balances from younger spouses of HRS or war babies cohorts are calculated and adjusted. For younger spouses of the HRS cohort, their account balances and expected future benefits from previous jobs are first calculated as of the base year. Then they are adjusted upward by 5.8 percent for each year from 1992 through 1998. For those who reported "Receiving Benefits Now", the present value of their remaining benefits is calculated as of 1998. The adjustments for pension benefits from previous jobs held by members of the war baby and early boomer cohorts are analogous, except that 1998 and 2004 are the base years for these cohorts.

Fifth, values are converted to 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts. Finally, the present values of those DB benefits and DC account balances from all previous jobs are summed up to construct "SRpenprevi". Imputed values are included. The imputation process is described earlier.

Variables Used:

Wave 1- from the new cohort:

pdvEFB_ha1x, pdvEFB_hb1x, pdvEFB_hc1x, pdvRBremain92_ha1x, pdvRBremain92_hb1x, pdvRBremain92_hc1x, V3645x, V3732x, V3832x, Rv3622x, RV3709x, and RV3809x

Wave 4:

From Section GH in Wave 4- from the new cohort:

Rpdvefb_ha4x, Rpdvefb_hb4x, Rpdvefb_hc4x, RpdvRBremain98_ha4x, RpdvRBremain98_hb4x, RpdvRBremain98_hc4x, RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:
RpdvEFBin98_g3x, RpdvRBremain98_g3x, RpdvACCTin98_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:

RpdvEFBin98_f2x, RpdvRBremain98_f2x, RpdvACCTin98_f2x

Components of “pdvEFBin98_f2x”:

pdvEFB_FA2x, pdvEFB_FB2x, pdvEFB_FC2x

Components of “pdvRBremain98_f2x”:

pdvRBremain98_FA2x, pdvpdvRBremain98_FA2x, pdvpdvRBremain98_FC2x

Components of “pdvACCTin98_f2x”:

pdvACCT_FA2x, pdvACCT_FB2x, pdvACCT_FC2x

From Section H in Wave 1- from younger spouses of HRS cohort:

Rpdvdfbin98_ha1x, Rpdvdfbin98_hb1x, Rpdvdfbin98_hc1x, RpdvRBremain98_ha1x,
RpdvRBremain98_hb1x, RpdvRBremain98_hc1x, RpdvACCTin98_ha1x,
RpdvACCTin98_hb1x, RpdvACCTin98_hc1x, Rv3622in98x, Rv3709in98x, Rv3809in98x

Wave 7:

From Section L in Wave 7- from the new cohort:

Rpdvdfb_L17x, Rpdvdfb_L27x, Rpdvdfb_L37x, Rpdvdfb_L47x, Rpdvdfb_L57x,
Rpdvdfb_L67x,
RpdvRBremain04_L17x, RpdvRBremain04_L27x, RpdvRBremain04_L37x,
RpdvRBremain04_L47x,
RpdvRBremain04_L57x, RpdvRBremain04_L67x, RpdvACCT_L17x, RpdvACCT_L27x,
RpdvACCT_L37x, RpdvACCT_L47x, RpdvACCT_L57x, RpdvACCT_L67x

From Section J in Wave 7- from jobs terminated between 2002 and 2004 interviews:

Rpdvdfb_J17x, Rpdvdfb_J27x, Rpdvdfb_J37x, Rpdvdfb_J47x, RpdvRBremain04_J17x,
RpdvRBremain04_J27x, RpdvRBremain04_J37x, RpdvRBremain04_J47x, RpdvAcct_J17x,
RpdvAcct_J27x, RpdvAcct_J37x, RpdvAcct_J47x,

From Section J in Wave 6- from jobs terminated between 2000 and 2002 interviews:

Rpdvdfb_J16x, Rpdvdfb_J26x, Rpdvdfb_J36x, Rpdvdfb_J46x, RpdvRBremain04_J16x,
RpdvRBremain04_J26x, RpdvRBremain04_J36x, RpdvRBremain04_J46x, RpdvAcct_J16x,
RpdvAcct_J26x, RpdvAcct_J36x, RpdvAcct_J46x,

From Section G in Wave 5- from jobs terminated between 1998 and 2000 interviews:

Rpdvdfb_g15x, Rpdvdfb_g25x, Rpdvdfb_g35x, Rpdvdfb_g45x, RpdvRBremain04_g15x,
RpdvRBremain04_g25x, RpdvRBremain04_g35x, RpdvRBremain04_g45x, RpdvAcct_gab15x,
RpdvAcct_gab25x, RpdvAcct_gab35x, RpdvAcct_gab45x, RpdvAcct_gb15x, RpdvAcct_gb25x,
RpdvAcct_gb35x, RpdvAcct_gb45x

From Section G in Wave 4- from jobs terminated between 1996 and 1998 interviews:
pdvEFB_g4x, pdvRBremain04_g4x, pdvACCT_g4x

From Section GH in Wave 4- from younger spouses of WBs cohort:
RpdvEFB_ha4x, RpdvEFB_hb4x, RpdvEFB_hc4x, RpdvRBremain04_ha4x,
RpdvRBremain04_hb4x, RpdvRBremain04_hc4x, RpdvACCT_ha4x, RpdvACCT_hb4x,
RpdvACCT_hc4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:
RpdvEFB_g3x, RpdvRBremain04_g3x, RpdvACCT_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:
RpdvEFBin04_f2x, RpdvRBremain04_f2x, Rpdvacctin04_f2x

From Section H in Wave 1:
Rpdvefbin04_ha1x, Rpdvefbin04_hb1x, Rpdvefbin04_hc1x, RpdvRBremain04_ha1x,
RpdvRBremain04_hb1x, RpdvRBremain04_hc1x, RpdvACCTin04_ha1x,
RpdvACCTin04_hb1x, RpdvACCTin04_hc1x, Rv3622in04x, Rv3709in04x, Rv3809in04x

Total Pension Value from Current Job RplanValuei

The constructed variable “RplanValuei” indicates total pension values from defined benefit or combination/both and defined contribution plans from respondents’ current job in Wave i, where i=1, 4, 7. Plan values are from the self-reported data and they are in 1992 dollars. This variable is the same as “SRpencurri”⁴² except it does not include imputations.

How Constructed:

The pension value “RplanValuei” from a current job includes the prorated projected pension value from the most important DB or combination/both plan and current account balances from all DC plans. Defined Benefit plans are valued as of the expected retirement age and then discounted back to the base year for the particular cohort. Once all values are

⁴² These two variables are the same except “RplanValuei” does not include imputations. The difference in their names is because they were constructed at different time period, possibly a few years apart.

discounted back to the appropriate base year for the respondent, they are further prorated (prsrDBben_xpi). The prorated DB amounts and account balances are further converted to 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts. Imputations are not included.

Variables Used:

Wave 1:

prSRDBben_XP1, CurDCs_w1

Wave 4:

RprSRDBben_XP4, RCurDCs_w4

Wave 7:

RprSRDBben_XP7, RCurDCs_w7

Pension Values from the Administrative Data

Present Value of Defined Benefits at Expected Age of Retirement - Administrative Data mpDBben_XPi, mpDBben_ERi, mpDBben_NRi

The constructed variables “ mpDBben_XPi, mpDBben_ERi, mpDBben_NRi” indicate present values of benefits at alternative retirement ages—expected retirement age, early and normal retirement ages from employer-produced summary plan descriptions. The indicated benefits are for the most important DB or combination plans from respondents’ current job in Wave i, where i=1, 4, and 7.

How Constructed:

We have used the *Pension Calculator*® (Version 2) to process the employer produced summary plan descriptions and determine respondents’ benefits at alternative ages of retirement. This software and its output are described in Chapter 8.

For constructing the present value of expected benefit at respondents’ expected age of the start of receiving benefits from their plan documents, there are four steps. First, we identify the expected age of receiving benefits from the self-reported data for the most important DB or combination/both plan. Second, we merge that age variable with the output from the software. Third, we identify the benefit from the “maxnrervd” column (from the pension calculator’s output) that corresponds with that age. That benefit is the benefit at respondents’ expected age of retirement. Finally, we merge this data with the data from the core interview to get respondents’ other characteristics.

For constructing the benefits at early and normal retirement ages we follow three steps. First, we identify the early and normal retirement ages from the pension calculator’s output.

Those ages are determined⁴³ by the plan formula. Second, we identify the amount of “maxnrervd” for the earliest age that the “PV_ER_” or “PV_NR_” takes a positive value at early and normal retirement ages, respectively. Third, we merge this data with the data from the core interview to get respondents’ other characteristics.

Variables used:

Wave 1:

pv_NR_, “PV_ER_” “maxnrervd”, age, respondent, codeid, bdate, penageDB1

Wave 4:

pv_NR_, “PV_ER_” “maxnrervd”, age, respondent, codeid, bdate, penageDB4

Wave 7:

pv_NR_, “PV_ER_” “maxnrervd”, age, respondent, codeid, bdate, penageDB7

**Present Value of Defined Benefits at Alternative Ages- Administrative Data
pvage50_i, pvage55_i, pvage60_i, pvage65_i**

The constructed variables “pvage50_i, pvage55_i, pvage60_i, pvage65_i” indicate present values of benefits at alternative retirement ages—age 50, age55, age60, and age 65 as calculated from the summary plan descriptions. The indicated benefits are for the most important DB or combination plan from respondents’ current job in Wave i, where i=1, 4, and 7.

How Constructed:

We have used the *Pension Calculator*® (Version 2) to process the employer provided summary plan descriptions and determine respondents’ benefits at those alternative ages. This software, economic assumptions, and the output are described in Chapter 8.

Constructing the present values of benefits at alternative ages from the plan formula is very similar to the construction of benefits at respondents’ early and normal retirement ages

⁴³ See Chapter 8.

described earlier. Briefly, we take the output from the pension calculator's software. We identify benefits at each of those ages by using the "maxnrervd" value that corresponds with ages 50, 55, 60, 65. Then we merge this data with the data from the core interview to obtain the respondents' other characteristics.

Variables used:

Wave 1:

"maxnrervd", age, respondent, codeid, bdate

Wave 4:

"maxnrervd", age, respondent, codeid, bdate

Wave 7:

"maxnrervd", age, respondent, codeid, bdate

**Present Value of Defined Benefits at Ages in 1992, 1998, 2004- Administrative Data
pvage92, pvage98, pvage04**

The constructed variables "pvage92, pvage98, pvage04" indicate present values of benefits at ages in 1992, 1998, and 2004 from summary plan descriptions. The indicated benefits are for the most important DB or combination plan from respondents' current job in Wave *i*, where *i*=1, 4, and 7.

How Constructed:

We have used the *Pension Calculator*® (Version 2) to process the employer provided plan descriptions and determine respondents' annual benefits at alternative ages. This software, economic assumptions, and generated output are described in Chapter 8.

Constructing the present value of benefits at respondents' ages in 1992, 1998, and 2004 from the plan formula is very similar to the construction of benefits at respondents' expected retirement age described earlier. Briefly, we use the software's output from the 1992 data for

calculating the benefit at the respondent's age in 1992. The process starts with identifying the age of the respondents in 1992 from the core data. Then we merge that age information with the 1992 output from the pension calculator's software. Finally, we identify benefits at that age by using the "maxnrervd" value that corresponds with the respondents' age in 1992. That is "pvage92".

For constructing the benefits at respondents' age in 1998 and 2004, we follow the same process. For the age, we use respondents' ages in 1998 and 2004. For the benefits, we use the software's output from 1998 and 2004 plan documents data.

Variables used:

Wave 1:

Age1, "maxnrervd", age, respondent, codeid, bdate

Wave 4:

Age4, "maxnrervd", age, respondent, codeid, bdate

Wave 7:

Age7, "maxnrervd", age, respondent, codeid, bdate

**Pension Plan Type Index- Current Job Administrative Data
Xspdi**

The constructed variable "Xspdi" identifies respondents whose Administrative Data indicates one or more pension plan(s) that is only DB plan(s), only DC plan(s), or combination/both plan(s) in Wave i, where i=1, 4, 7. This variable is described earlier in Chapter 4.

**Total Pension Values: Current, Last, and Previous Jobs
SRtotpeni**

The constructed variable “SRtotPeni” indicates respondent’s lifetime pension values as of Wave i. The values indicate total pension values from Defined Benefit, Defined Contribution, and combination/both plans from current, last ,and previous jobs from respondents’ self-reported data as of Wave i, where i=1, 4, and 7.

How Constructed:

It is calculated by summing all pension values from current, last, and previous jobs in each wave. Those are “SRpenCurri, SRpenLasti, SRpenPrevi” described earlier. Plan values are in 1992 dollars. They include imputations.

Variables Used:

Wave 1:

SRpencurr1, SRpenlast1, SRpenprev1

Wave 4:

SRpencurr4, SRpenlast4, SRpenprev4

Wave 7:

SRpencurr7, SRpenlast7, SRpenprev7

**Household Pension Values from Current, Last, and Previous Jobs
HHpenCurri, HHpenLasti, HHpenPrevi**

The constructed variables “HHpenCurri, HHpenLasti, HHpenPrevi” indicate total pension values from current, last, and previous jobs for households in Wave i, where i=1, 4, and 7.

How Constructed:

The pension value in each household is constructed by summing up the pension values from the respondent and his/her spouse in the household. The household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the pension

value. We rename the current job's pension wealth⁴⁴ (SRpencurri) for the respondent "Rpencurri". For his/her spouse the current job's pension wealth is "Spencurri". Then we sum up the wealth from the respondent and his/her spouse to construct the household wealth. The process for respondents' last and previous jobs is analogous.

These constructed variables for pension wealth include imputed values. The imputation is performed for each component of the wealth (DB and DC plans) separately. The imputation process is defined earlier.

Variables Used:

Wave 1:

Current job:

$$\text{HHpenCurr1} = \text{Rpencurr1} + \text{Spencurr1}$$

Last job:

$$\text{HHpenlast1} = \text{Rpenlast1} + \text{Spenlast1}$$

Previous job:

$$\text{HHpenprev1} = \text{Rpenprev1} + \text{Spenprev1}$$

Wave 4:

Current job:

$$\text{HHpenCurr4} = \text{Rpencurr4} + \text{Spencurr4}$$

Last job:

$$\text{HHpenlast4} = \text{Rpenlast4} + \text{Spenlast4}$$

Previous job:

$$\text{HHpenprev4} = \text{Rpenprev4} + \text{Spenprev4}$$

Wave 7:

Current job:

$$\text{HHpenCurr7} = \text{Rpencurr7} + \text{Spencurr7}$$

Last job:

$$\text{HHpenlast7} = \text{Rpenlast7} + \text{Spenlast7}$$

Previous job:

$$\text{HHpenprev7} = \text{Rpenprev7} + \text{Spenprev7}$$

⁴⁴ Note that pension wealth from current job is described earlier in Self Reported Pension Values from Current Job in Wave i: "SRpencurri".

Household Total Pension Values

HHtotpeni

The constructed variable “HHtotpeni” indicates total pension values for households. The pension values are from all jobs including current, last, and all previous jobs for the respondent (identified by R) and his/her spouse (identified by S) in Wave i, where i=1, 4, and 7.

How Constructed:

Household total pension wealth is calculated by first constructing total pension wealth (SRtotpeni described earlier) for each respondent. The household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the total pension wealth. The household’s total pension wealth is constructed by summing up the primary respondent’s total pension wealth and his/her spouse’s wealth. We have renamed the respondent’s total pension wealth (SRtotpeni) ⁴⁵for the respondent “Rtotpeni”. For his/her spouse’s total pension wealth the label is “Stotpeni”. Then we sum up the wealth from the respondent and his/her spouse to construct the household’s wealth “HHtotpeni”.

Variables Used:

Wave 1:

$$\text{HHtotpen1} = \text{RTotpen1} + \text{STotpen1}$$

Wave 4:

$$\text{HHtotpen4} = \text{RTotpen4} + \text{STotpen4}$$

Wave 7:

$$\text{HHtotpen7} = \text{RTotpen7} + \text{STotpen7}$$

Household Total DB Values

SRTotHHDBsi

⁴⁵ Note that total pension wealth “SRtotpeni” is constructed by summing up respondent’s total pension values from current, last, and previous jobs in Wave i(i=1, 4, and 7).

The constructed variable “SRTotHHDBsi” indicates households’ pension values from all DB plans from current, last, and previous jobs in Wave i (i=1, 4, and 7) from respondents’ self-report data.

How Constructed:

For constructing total households’ DB values, first total DB values are calculated by summing all DB values (AllDBsi) for each respondent with one or more DB plans. That includes those who reported expecting future benefits and/or already receiving benefits from DB plans. Then the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is all DB values. We rename the AllDBsi for the primary respondent as RAllDBsi and for his/her spouse as SAllDBsi. Households’ total DB values are calculated by summing up respondents’ and their spouses’ total DB values.

Variables Used:

Wave 1:

Current job: prSRdbben_xp1x

Last job: pdvEFB_G1x, pdvRBremain92_G1x

Previous job:

pdvEFB_ha1x, pdvEFB_hb1x, pdvEFB_hc1x,
pdvRBremain92_ha1x, pdvRBremain92_hb1x, pdvRBremain92_hc1x

Total

AllDBs1= prSRdbben_xp1x + pdvEFB_G1x + pdvRBremain92_G1x + pdvEFB_ha1x +
pdvEFB_hb1x + pdvEFB_hc1x + pdvRBremain92_ha1x + pdvRBremain92_hb1x +
pdvRBremain92_hc1x

Wave 4:

Current job: RprSRdbben_xp4x

Last job: RpdvEFB_gg4x, RpdvRBremain98_gg4x

Previous Jobs:

From Wave 1:

RpdvEFBin98_g1x, RpdvEFBin98_ha1x, RpdvEFBin98_hb1x, RpdvEFBin98_hc1x,
RpdvRBremain98_g1x, RpdvRBremain98_ha1x, RpdvRBremain98_hb1x,
RpdvRBremain98_hc1x

From the job left after Wave 1 and before Wave 2:

RpdvEFBin98_f2x, RpdvRBremain98_f2x

From the job left after Wave 2 and before Wave 3:

RpdvEFBin98_g3x, RpdvRBremain98_g3x

From the job left after Wave 3 and before Wave 4:

RpdvEFB_g4x, RpdvRBremain98_g4x

From the new cohort in Wave 4:

RpdvEFB_ha4x RpdvEFB_hb4x RpdvEFB_hc4x, RpdvRBremain98_gg4x,
RpdvRBremain98_ha4x, RpdvRBremain98_hb4x, RpdvRBremain98_hc4x

Total

AllDBs4 = RprSRdbben_xp4x + RpdvEFB_gg4x + RpdvRBremain98_gg4x + RpdvEFBin98_g1x
+ RpdvEFBin98_ha1x + RpdvEFBin98_hb1x + RpdvEFBin98_hc1x + RpdvRBremain98_g1x +
RpdvRBremain98_ha1x + RpdvRBremain98_hb1x + RpdvRBremain98_hc1x +
RpdvEFBin98_f2x + RpdvRBremain98_f2x + RpdvEFBin98_g3x + RpdvRBremain98_g3x +
RpdvEFB_g4x + RpdvRBremain98_g4x + RpdvEFB_ha4x + RpdvEFB_hb4x + RpdvEFB_hc4x
+ RpdvRBremain98_gg4x + RpdvRBremain98_ha4x + RpdvRBremain98_hb4x +
RpdvRBremain98_hc4x

Wave 7-

Current Job:

RprSRDBben_XP7x

Last Job:

Rpdvefb_K17x, Rpdvefb_K27x, Rpdvefb_K37x, Rpdvefb_K47x, RpdvRBremain04_K17x,
RpdvRBremain04_K27x, RpdvRBremain04_K37x, RpdvRBremain04_K47x

Previous Jobs:

From last and previous jobs in Wave 1:

RpdvEFBin04_g1x, RpdvEFBin04_ha1x, RpdvEFBin04_hb1x, RpdvEFBin04_hc1x,
RpdvRBremain04_g1x, RpdvRBremain04_ha1x, RpdvRBremain04_hb1x,
RpdvRBremain04_hc1x,

From the job left after Wave 1 and before Wave 2:

RpdvEFBin04_f2x, RpdvRBremain04_f2x

From the job left after Wave 2 and before Wave 3:

RpdvEFBin04_g3x, RpdvRBremain04_g3x

From the job left after Wave 3 and before Wave 4:

RpdvEFBin04_g4x, RpdvRBremain04_g4x

From the new cohort in Wave 4:

RpdvRBremain04_GG4x, RpdvRBremain04_ha4x, RpdvRBremain04_hb4x,
RpdvRBremain04_hc4x, Rpdvxfb_GG4x, RpdvEFB_ha4x, RpdvEFB_hb4x RpdvEFB_hc4x

From the job left after Wave 4 and before Wave 5:

RpdvEFB_g5x, RpdvRBremain04_g5x

From the job left after Wave 5 and before Wave 6:

RpdvEFB_J6x, RpdvRBremain04_J6x

From the job left after Wave 6 and before Wave 7:

RpdvEFB_J7x, RpdvRBremain04_J7x

From the new cohort in Wave 7:

Rpdvxfb_L17x, Rpdvxfb_L27x, Rpdvxfb_L37x, Rpdvxfb_L47x, Rpdvxfb_L57x,
Rpdvxfb_L67x, RpdvRBremain04_L17x, RpdvRBremain04_L27x, RpdvRBremain04_L37x,
RpdvRBremain04_L47x, RpdvRBremain04_L57x, RpdvRBremain04_L67x

Total

AIIDBs7 = RprSRDBben_XP7x + Rpdvxfb_K17x + Rpdvxfb_K27x + Rpdvxfb_K37x +
Rpdvxfb_K47x + RpdvRBremain04_K17x + RpdvRBremain04_K27x +
RpdvRBremain04_K37x + RpdvRBremain04_K47x + Rpdvxfb04_g1x + Rpdvxfb04_ha1x +
Rpdvxfb04_hb1x + Rpdvxfb04_hc1x + RpdvRBremain04_g1x + RpdvRBremain04_ha1x +
RpdvRBremain04_hb1x + RpdvRBremain04_hc1x + RpdvEFBin04_f2x + RpdvRBremain04_f2x
+ RpdvEFBin04_g3x + RpdvRBremain04_g3x + RpdvEFBin04_g4x + RpdvRBremain04_g4x +
RpdvRBremain04_GG4x + RpdvRBremain04_ha4x + RpdvRBremain04_hb4x +
RpdvRBremain04_hc4x + Rpdvxfb_GG4x + RpdvEFB_ha4x + RpdvEFB_hb4x +
RpdvEFB_hc4x + RpdvEFB_g5x + RpdvRBremain04_g5x + RpdvEFB_J6x +
RpdvRBremain04_J6x + RpdvEFB_J7x + RpdvRBremain04_J7x + Rpdvxfb_L17x +
Rpdvxfb_L27x + Rpdvxfb_L37x + Rpdvxfb_L47x + Rpdvxfb_L57x + Rpdvxfb_L67x +
RpdvRBremain04_L17x + RpdvRBremain04_L27x + RpdvRBremain04_L37x +
RpdvRBremain04_L47x + RpdvRBremain04_L57x + RpdvRBremain04_L67x

Household Total DC Values

SRTotHHDCsi

The constructed variable “SRTotHHDCsi” indicates pension values from all DC plans from current, last, and previous jobs for households in Wave i, where i=1, 4, and 7. The values

are from self-reported data. The DC values include present value of DC account balances in Wave i.

How Constructed:

For constructing total household DC balances, first total DC values are calculated by summing all DC account balances for each respondent with DC accounts. Then the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is all DC account balances. We rename the AllDCsi for the primary respondent as RAllDCsi and for his/her spouse as SAllDCsi. Households' total DC values are calculated by summing the respondents' total DC values AND their spouses' DC account balances. DC values are in 1992 dollars.

Variables Used:

Wave 1-

Current Job: CurDCs_w1x

Last Job: V3403, V3502x, V3524x, V3525x

Previous Job: V3607, V3705, V3805, V3622x, V709x, V3809x, V3644x, V3731x, V3831x

AllDCs1= CurDCs_w1x + V3403 + V3502x + V3524x + V3525x + V3607 + V3705 + V3805 + V3622x + V709x + V3809x + V3644x + V3731x + V3831x

Wave 4-

Current Job: RCurDCs_w4x

Last Job: RpdvACCTin98_g1x, Rv3502in98x,

Previous Job:

From Wave 1:

RpdvACCTin98_ha1x, RpdvACCTin98_hb1x, RpdvACCTin98_hc1x, RpdvACCTin98_g1x, Rv3622in98x, Rv3709in98x, Rv3809in98x, Rv3502in98x

From the job left after Wave 1 and before Wave 2:

RpdvACCTin98_F2x

From the job left after Wave 2 and before Wave3:

RpdvACCTin98_g3x

From the job left after Wave 3 and before Wave 4:

RpdvACCT_g4x,

From the new cohort in Wave 4:

RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

AIIDCs4 = RCurDCs_w4x + RpdvACCTin98_g1x + Rv3502in98x + RpdvACCTin98_ha1x + RpdvACCTin98_hb1x + RpdvACCTin98_hc1x + RpdvACCTin98_g1x + Rv3622in98x + Rv3709in98x + Rv3809in98x + Rv3502in98x + RpdvACCTin98_F2x + RpdvACCTin98_g3x + RpdvACCT_g4x + RpdvACCT_ha4x + RpdvACCT_hb4x + RpdvACCT_hc4x

Wave 7-

Current Job: RCurDCs_w7x

Last Job: RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K47x,

Previous Jobs:

From last and previous jobs in Wave 1:

RpdvACCTin04_ha1x, RpdvACCTin04_hb1x, RpdvACCTin04_hc1x,
RpdvACCTin04_g1x, Rv3622in04x, Rv3709in04x, Rv3809in04x, Rv3502in04x

From the job left after Wave 1 and before Wave 2:

RpdvACCTin04_F2x

From the job left after Wave 2 and before Wave 3:

RpdvACCTin04_g3x

From the job left after Wave 3 and before Wave 4:

RpdvACCT_g4x

From the new cohort in Wave 4:

RpdvACCT_ggab4x, RpdvACCT_ggb4x,
RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

From the job left after Wave 4 and before Wave 5:

RpdvACCT_g5x

From the job left after Wave 5 and before Wave 6:

RpdvACCT_J6x

From the job left after Wave 6 and before Wave 7:

RpdvACCT_J7x

From the new cohort in Wave 7:

RpdvACCT_L17x, RpdvACCT_L27x, RpdvACCT_L37x, RpdvACCT_L47x,
RpdvACCT_L57x, RpdvACCT_L67x

AIIDCs7 = RCurDCs_w7x + RpdvACCT_K17x + RpdvACCT_K27x + RpdvACCT_K37x +
RpdvACCT_K47x + RpdvACCTin04_ha1x + RpdvACCTin04_hb1x + RpdvACCTin04_hc1x +
RpdvACCTin04_g1x + RV3622in04x + RV3709in04x + RV3809in04x + RV3502in04x +
RpdvACCTin04_F2x + RpdvACCTin04_g3x + RpdvACCT_g4x + RpdvACCT_ggab4x +
RpdvACCT_ggb4x + RpdvACCT_ha4x + RpdvACCT_hb4x + RpdvACCT_hc4x +
RpdvACCT_g5x + RpdvACCT_J6x + RpdvACCT_J7x + RpdvACCT_L17x +
RpdvACCT_L27x + RpdvACCT_L37x + RpdvACCT_L47x + RpdvACCT_L57x +
RpdvACCT_L67x

Pension Values from Administrative Data
MPpencurri, MPpenlasti, MPpenprevi

The constructed variables “MPpencurri, MPpenlasti, MPpenprevi” indicate total pension values from defined benefit and defined contribution plans from current, last and/or previous jobs in Wave i, where i=1 and 4. Plan values are from the administrative data and they are in 1992 dollars. In Wave 7, the Administrative Data are not available for respondents’ last and previous jobs.

How Constructed:

Each variable is constructed by summing the present value of expected benefit at expected age of receiving benefits from the administrative data and DC account balances from respondents’ report from all DC accounts for current, last, and or previous jobs from that wave. The present value of expected DB benefit for current job is prorated. However, that benefit from previous and last jobs is calculated as of termination dates of those jobs. Pension values are in 1992 dollars. Respondents with missing values have imputed values. The imputation process for each component of pension values is described earlier.

Variables Used:

Wave 1:**Current job:**

$$\text{MPpencurr1} = \text{prmpdbben_xp1x} + \text{CurDCs_w1x}$$

Last job:

$$\text{MPpenlast1} = \text{mpdbbenend_g1x} + \text{V3525x}, \text{RV3502x}$$

Previous jobs:

$$\text{MPpenprev1} = \text{mpdbbenend_h1x} + \text{V3644x} + \text{V3645x} + \text{V3731x} + \text{V3732x} + \text{V3831x} + \text{V3832x} + \text{RV3622x} + \text{RV3709x} + \text{RV3809x}$$

Wave 4:**Current job:**

$$\text{MPpencurr4} = \text{Rprmpdbben_xp4x} + \text{RcurDCs_w4x}$$

Last job:

$$\text{MPpenlast4} = \text{Rmpdbbenend_gg4x} + \text{RF3702x} + \text{RF3703x} + \text{RF3674x} + \text{RF3677x}$$

Previous job:

$$\text{MPpenprev4} = \text{Rmpdbbenend_gh4x} + \text{F3884x} + \text{RF3858x} + \text{RF3885x} + \text{RF3910_1x} + \text{RF3910_2x} + \text{RF3911_1x} + \text{RF3911_2x} + \text{RF3938_1x} + \text{RF3938_2x}$$

Household Pension Values- Administrative Data
mpHHpencurri, mpHHpenlasti, mpHHpenPrevi

The constructed variables “mpHHpencurri, mpHHpenLasti, mpHHpenPrevi” indicate total pension values from current, last, and previous jobs for households in Wave i (i=1, 4).

How Constructed:

Pension values are constructed very similar to “HHpencurri, HHpenLasti, and HHpenPrevi” described earlier, except the DB components of each of these pension values are from summary plan documents. The DC balances are from respondents’ reports.

Variables Used:**Wave 1:****Current job:**

$$\text{mpHHpencurr1} = \text{RmpPenCurr1} + \text{SmpPenCurr1}$$

Last job:

$$\text{mpHHpenlast1} = \text{RmpPenlast1} + \text{SmpPenlast1}$$

Previous job:

$$\text{mpHHpenprev1} = \text{RmpPenprev1} + \text{SmpPenprev1}$$

Wave 4:**Current job:**

$$\text{mpHHpencurr4} = \text{RmpPencurr4} + \text{SmpPencurr4}$$

Last job:

$$\text{mpHHpenlast4} = \text{RmpPenlast4} + \text{SmpPenlast4}$$

Previous job:

$$\text{mpHHpenprev4} = \text{RmpPenprev4} + \text{SmpPenprev4}$$

Household Total Pension Values- Administrative Data **mpHHtotpeni**

The constructed variable “mpHHtotpeni” indicates total pension values for households with benefits from DB plans from the administrative data and DC balances from respondents self-reports. First, total pension value “mpTotpeni” is constructed by summing up total pension values from current, last, and previous jobs for each respondent in Wave i. Then the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the total pension values for households. Next we rename mpTotpeni as RmpTotpeni for the primary respondent and SmpTotpeni for the spouse. Household total pension value “mpHHtotpeni” is the sum of the respondent and his/her spouse’s total benefits. Pension values include imputed values and they are in 1992 dollars.

Variables Used:**Wave 1:**

RmpTotpen1, SmpTotpen1

Wave 4:

RmpTotpen4, SmpTotpen4

Household Total DB Values- Administrative Data mpTotHHDBsi

The constructed variable “mpTotHHDBsi” indicates DB pension values from all DB plans from current, last, and previous jobs in Wave i (i=1, 4). The DB values include the sum of benefits from the respondent (identified by R) and his/her spouse (identified by S) in Wave i (i=1, 4).

How Constructed:

This variable is constructed very similar to “srTotHHDBsi”. The difference is that the DB wealth is calculated based on the plan descriptions from the administrative data.

The variable “RmpallDBsi” is the respondent’s sum of DB values from current, last, and or previous job from the employer report in Wave i. The variable “SmpallDBsi” is the sum of DB values from current, last, and or previous job from respondent’s spouse provided by the employer report in Wave i. The administrative data is not available for previous and last jobs for Wave 7.

Variables Used:

Wave 1:

mpallDBs1 = prmpdbben_xp1x + mpdbbenend_g1x + mpdbbenend_h1x

mpTotHHDBs1 = RmpallDBs1 + SmpallDBs1

Wave 4:

mpallDBs4 = Rprmpdbben_xp4x + Rmpdbbenend_gg4x + Rmpdbbenend_gh4x

mpTotHHDBs4 = RmpallDBs4 + SmpallDBs4

Chapter 10

Retirement Incentives from Defined Benefit Pensions

Researchers have long known that benefits from defined benefit plans accumulate very unevenly for covered workers. Benefit accrual is calculated as the change in the present value of benefits from another year of work. Any number of plan features may be responsible for the spikes in benefit accrual at key ages. The benefit formula itself may be changed and increased in generosity. For those qualifying for early retirement benefits, a lower rate may be used to reduce benefits for each year preceding eligibility for a normal retirement benefit when the person has retired before reaching eligibility. Or benefits may be supplemented temporarily to substitute for Social Security until the person becomes eligible for Social Security benefits. Other DB plan features may also contribute to the benefit spikes.

As a result, employer-provided pension plan descriptions are particularly important for describing the retirement incentives generated by DB plans. Fortunately, because detailed plan descriptions are available for an important fraction of HRS respondents, the researcher can measure how benefits from DB plans accrue with age and service and how benefits change at the point of eligibility for early and normal retirement benefits. Using benefit formulas collected in 1992, 1998, and 2004, plan descriptions are used to analyze changes in benefit levels and accruals by year and cohort; how the rates at which benefits accrue differ between men and women; and whether, over time, those who report continuing coverage by the same plan nevertheless experience differences in the rates at which their plans accrue benefits.

Following is the list of constructed variables and how they are constructed for use in this chapter's tables.

Early and Normal Retirement Ages- Administrative Data **mpERagei, mpNRagei**

The constructed variables “**mpERagei, mpNRagei**” indicate alternative retirement ages—early retirement age and normal retirement age from employer-produced summary plan descriptions. The indicated ages are for the most important DB or combination plan from respondents’ current job in Wave 1, Wave 4, and Wave 7.

How Constructed:

The construction of these two ages is described in detail in Chapter 8.

Variables used:

Wave 1:

pv_NR_, “PV_ER_” age, respondent, codeid, bdate

Wave 4:

pv_NR_, “PV_ER_” , age, respondent, codeid, bdate

Wave 7:

pv_NR_, “PV_ER_” , age, respondent, codeid, bdate

Increment in DB Benefits- Administrative Data **pre_retmnti, ERlagi_diff, NRlagi_diff, ER_NRagei, After_NRI**

The constructed variable "pre_retmnti" indicates the increments in DB values for working during the third through first year before qualifying for early retirement benefits, if available, or from working over the analogous period before normal retirement age if there is no early retirement in Wave *i* (*i*=1, 4, 7). The values are the average of the differences in the values per year of work. "ERlagi_diff" indicates the increment in the benefit from working in the year during which the individual qualifies for early retirement benefits. "NRlagi_diff" indicates the

increment in the benefit from working in the year just before qualifying for normal retirement benefits. "ER_NRagei" refers to the difference in benefits for the working the years between early retirement and the year before qualifying for normal retirement. The values are the average values per year. "After_NRi" indicates the increment in the value of DB benefits from working one year after qualifying for normal retirement age. The source of the data is the firm provided plan descriptions for current job in each wave.

How Constructed:

Following is the description of how the above variables are constructed in Wave 1. Analogous variables in Wave 4 and Wave 7 are constructed in the same way except that Wave 4 and Wave 7's data files are used.

A) The construction of "pre_retmnt1" involves three steps.

- 1- Construct four variables using the "maxernrvd" column in the *pension calculator software's* output using the Wave 1 data file. The first two variables include the "maxernrvd" values by one year lag and three years lag. Call them lag_ER1 and lag_ER3. The second two variables are constructed similar to the first two but call them lag_NR1 and lag_NR3.
- 2- Identify the Early Retirement (ER) age and Normal Retirement (NR) age as it is described in Chapter 8. Identify the lag_ER1 and lag_ER3 values at the ER age. Similarly, identify lag_NR1 and lag_NR3 values at NR age.
- 3- Pre-retrmnt1 is calculated by averaging the difference between lag_ER1 and lag_ER3. For respondents without an early retirement age use lag_NR1 and lag_NR3.

B) The construction of ERlag1_diff involves 3 steps:

- 1- Identify the lag_ER1 as it is constructed in step 1 above.

2- Identify the benefit at respondents' early retirement age "mpDBben_ER1" as it is described in Chapter 9.

3- The ERlag1_diff is $ERlag1_diff = mpDBben_ER1 - lag_ER1$

C) The construction of NRlag1_diff involves 3 steps:

1- Identify the lag_NR1 as it is constructed in step 1 above.

2- Identify the benefit at respondents' normal retirement age "mpDBben_NR1" as it is described in Chapter 9.

3- The NRlag1_diff is $NRlag1_diff = mpDBben_NR1 - lag_NR1$

D) The construction of ER_NRlag1 involves 3 steps:

1- Identify the lag_NR1 as it is constructed in step 1 above.

2- Identify the benefit at respondents' early retirement age "mpDBben_ER1" as it is described in Chapter 9.

3- The ER_NRage1 is $ER_NRage1 = (lag_NR1 - mpDBben_er1) / (mpNRage1 - mpERage1 - 1)$

D) The construction of After_NR1 involves 3 steps:

1- Construct a variable using the "maxernrvd" column in the *pension calculator software's* output using by assigning the "maxernrvd" value from an age later. Call it After_NR.

2- Identify the Normal Retirement (NR) age as it is described in Chapter 8 and the benefits at that age "mpDBbenNR1" as described in Chapter 9.

3- The variable "After_NR1" is the difference between "After_NR" and "mpDBbenNR1"

Variables used:

Wave 1:

pv_NR_, "PV_ER_", age, respondent, codeid, bdate, "maxnrervd"

Wave 4:

pv_NR_, "PV_ER_", age, respondent, codeid, bdate, "maxnrervd"

Wave 7:

pv_NR_, "PV_ER_", age, respondent, codeid, bdate, "maxnrervd"

Chapter 11

Disposition of Pensions upon Leaving a Job and Pension Incomes in Retirement

This chapter describes what happens to the pensions covering HRS respondents when they leave their jobs. This requires descriptions of pension coverage, plan type, and plan values for job leavers as well as a detailed description of the fate of those pensions. In this chapter we also investigate pension incomes as reported in the assets and income section of the Health and Retirement Study.

Disposition of Pensions from Last and Previous Jobs

Respondents who reported not working at their initial interview are asked about their last job. Those respondents and respondents who reported working are also asked about up to three previous pension jobs they worked on for at least five years at that initial interview. They are asked the detail of pensions from those jobs, including their dispositions. Questions about the dispositions of pension plans include detailed questions about what the respondent did with the plan; if withdrew the money, rolled it over into an IRA, left it to accumulate in the old plan, converted it to an annuity, is expecting future benefits, receiving benefits, transferred to the new employer, received a cash settlement, or lost the benefit. There are follow-up questions asking about the amounts of the benefits and the dates of the reported action the respondent has taken. Pension questions from last job are asked in the G section of Waves 1 and 2, GG section of Waves 3 to 5, and K section of Wave 6 and later waves. For previous jobs, questions are asked in the H section of Waves 1 and 2, GH section of Waves 3 to 5, and L section of Wave 6 and later waves. Following is a list of constructed variables capturing the value of those pensions.

Last Job

Lastjobi

The constructed variable “lastjobi” indicates respondents who were not working at their initial interview and reported details about their last job in Wave i, where i=1, 4, 7.

How Constructed:

When respondents were interviewed for the first time, if they were not working they were asked “Have you ever worked for pay for more than a few months?” An affirmative response to this question indicates respondents had a “Last” job. Last jobs are reported in Section G of the 1992 survey, Section GG of the 1998 survey, and Section K of the 2004 survey.

Cross Wave Differences:

There is no difference in the wording of the question across waves. However there are some differences in the questions about pension plans from that job.

1. In Waves 1 to 4, respondents were asked about only one pension plan from their last and previous pension jobs. In Wave 5, they were asked about up to three plans. In Waves 6 and later waves they were asked about up to four plans.
2. In Waves 1 and 2, respondents with a combination (type AB/Both) are not asked about the disposition of the account part of that plan.
3. In Waves 3 to 5, respondents with a combination (type AB/Both) plan were asked about the disposition of that plan.
4. From Wave 6 forward, respondents with a combination (type AB/Both) plan were asked the disposition question. That question is combined with the disposition question for DC (type B) plan.

5. In Waves 1 and 2, there is one variable for each of the possible responses in the disposition of DB plans. But for DC plans, there is only one variable assigned for all possible disposition responses.
6. In Waves 3 and 4, there is more than one possible response allowed for the disposition of DB plans. But for DC plans and the account part of combination plans, there is only one variable assigned for all possible disposition responses.
7. From Wave 5 forward, multiple responses are allowed for DB, DC, and combination plans.

Variables used:

Wave 1:
V3401

Wave 4:
F3643

Wave 7:
JK003

**Previous Job
prevjobi**

The constructed variable “prevjobi” indicates respondents at their initial interview reported holding at least one job prior to their current job, or if not working prior to their last job in Wave i ($i=1, 4, 7$).

How Constructed:

Respondents who were interviewed for the first time, regardless of having a current employment or not, were asked “Besides (your current job/the job you just told me about), have

you worked for any other employer for at least 5 years or more, including self-employment?" An affirmative response to this question indicates respondents had at least one "Previous" job. They are asked "For how many such employer have you worked?". Then they were asked about the details of up to three of such jobs.

Previous jobs are reported in section H of the 1992 survey, section GH of the 1998 survey, and section L of the 2004 survey.

Cross Wave Differences:

There is no difference in the wording of the question across waves. However, there are some differences in questions about pension plans from those previous pension jobs.

1. In Waves 1 to 4, respondents were asked about only one pension plan from their last and previous pension jobs. In Wave 5, they were asked about up to three plans. In Waves 6 and later waves they were asked about up to four plans.
2. In Waves 1 and 2, respondents with a combination (type AB/Both) were not asked about the disposition of the account part of that plan.
3. In Waves 3 to 5, respondents with a combination (type AB/Both) plan were asked about the disposition of that plan.
4. From Wave 6 forward, respondents with a combination (type AB/Both) plan were asked the disposition question. That question is combined with the disposition question for DC (type B) plan.
5. In Waves 1 and 2, there is one variable assigned to each of the possible responses in the disposition of DB plans. But for DC plans, there is only one variable assigned for all possible disposition responses. For example, in Wave 2 for the disposition of DB plans there is a variable "W7035" assigned to "Expect Future Benefits" and "W7036"

assigned to "Receiving Benefits Now", etc. Those variables will have a value of "1" or "5", depending on the action a respondent has taken. For the disposition of DC plan, there is only one variable "W7063" assigned. It may have a value of "1, 2, 3, 4, etc." for "Withdrew the money, Rolled over into an IRA, Left to accumulate, Convert to annuity, etc."

6. In Waves 3 and 4, there is more than one possible response allowed for the disposition of DB plans. But for DC plans and the account part of combination plans, there is only one variable assigned for all possible disposition responses.

7. From Wave 5 forward, multiple responses are allowed for DB, DC, and combination plans.

Variables used:

Wave 1:

V3601

Wave 4:

F3830

Wave 7:

JL005

**Present Value of Expected Future Benefits-Last and Previous Jobs
pdvEFB92x, RpdvEFB98x, RpdvEFB04**

The constructed variables "pdvEFB92x, RpdvEFB98x, RpdvEFB04x" indicate the sum of present discounted values of expected benefits from DB plans from last and previous pension jobs in 1992, 1998, and 2004, respectively. Pension values are all in 1992 dollars.

How Constructed:

These constructed variables are described in detail in Chapter 9.

Present Value of Remaining Benefits-Last and Previous Jobs
pdvRBremain92x, RpdvRBremain98x, RpdvRBremain04x

The constructed variables “pdvRBremain92x, RpdvRBremain98x, RpdvRBremain04x” indicate the sum of present values of remaining benefits from DB/combination plans as of Wave 1, Wave 4, and Wave 7. These benefits are derived from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004. These values are calculated for respondents who reported their DB/combination plan is in pay status. Pension values are all in 1992 dollars.

How Constructed:

These constructed variables are described in detail in Chapter 9.

Present Value of Cash Settlements-Last and Previous Jobs
pdvCASH92x, RpdvCASH98x, RpdvCASH04x

The constructed variables “pdvCASH92x, RpdvCASH98x, RpdvCASH04x” indicate the sum of present values of cash settlements from DB/ combination plans as of Wave 1, Wave 4, and Wave 7. These benefits are derived from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004. These values are calculated for respondents who reported they received cash settlements from their DB combination plan. Pension values are all in 1992 dollars.

How Constructed:

Respondents who reported a DB (type A) or combination (type AB/Both) plan from their last or previous pension jobs are asked about the disposition of that plan. If their response is

“Received cash settlement” they are asked: how much did that amount to. For constructing the present value of those benefits, first we have adjusted the present value of the cash settlements by 5.8 percent for each of the years between the time when those jobs ended and the base year of their cohort, 1992, 1998, or 2004. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information. Pension values are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Received Cash Settlement in Each Wave:

In Wave 1, the constructed variable pdvCASH92 is the sum of cash settlements from last and previous pension jobs in that Wave. Those are “pdvCASH92_g1x, pdvCASH92_ha1x, pdvCASH92_hb1x, pdvCASH92_hc1x” indicating the present value of cash settlements as of 1992 from DB/combo plans, where “g” indicates the G section, “ha” the first pension job, “hb” second pension job, and “hc” the third pension job in the H section of Wave 1.

The constructed variables “RpdvCASH98_gg4x, RpdvCASH98_ha4x, RpdvCASH98_hb4x, RpdvCASH98_hc4x” indicate the present value of cash settlements as of 1998 from DB/combo plans from last and previous pension jobs in Wave 4. “gg” indicates the GG section, “ha” the first pension job, “hb” the second pension job, and “hc” the third pension job in the GH section of Wave 4. The constructed variables “RpdvCASH04_K17x, RpdvCASH04_K27x, RpdvCASH04_K37x, RpdvCASH04_K47x” indicate the present value of cash settlements as of 2004 from DB/combo plans from last

job in Wave 7. Variables “RpdvCASH04_L17x, RpdvCASH04_L27x, RpdvCASH04_L37x, RpdvCASH04_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “RpdvCASH04_L57x” from second previous pension job, and “RpdvCASH04_L67x” from respondents’ third previous pension job in Wave 7.

Cross Wave Differences:

From Wave 7 forward, brackets follow “Don’t Know” and “Refuse” responses for the amount of cash settlement question.

Variables Used:

Wave 1:

V3403, V3607, V3705, V3805, V3505, V3515, V3625, V3635, V3712, V3722, V3812, V3822

Wave 4:

F3644, F3645, F3646, F3904_1, F3904_2, F3682m1, F3682m2, F3690, F3846, F3855, F3864m1, F3864m2, F3872, F3908_1, F3908_2, F3917001, F3917007, F3925_1, F3925_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW021a1, JKW021b1, JKW021c1, JKW021a2, JKW021b2, JKW021c2, JKW030a, JKW030b, JKW030c, JK123a, JK123b, JK123c, JK124a, JK124b, JK124c, JLW021a1, JLW021b1, JLW021c1, JLW021d1, JLW021a2, JLW021b2, JLW021c2, JLW021d2, JLW030a, JLW030b, JLW030c, JLW030d, JL123a, JL123b, JL123c, JL123d, JL124a, JL124b, JL124c, JL124d, JLW021e1, JLW021e2, JLW030e, JL123e, JL124e, JLW021f1, JLW021f2, JLW030f, JL123f, JL124f

Present Value of IRA Accounts from DB/Combination Plans-Last and Previous Jobs pdvIRAA92x⁴⁶, RpdvIRAA98x, RpdvIRAA04x

There are two sets of constructed variables for IRA accounts; one for DB/combination plans the other for DC/combination accounts. The IRA accounts here are the distributed benefits from respondents’ DB/combination plan.

⁴⁶ There is another set of IRA roll over constructed variables from DC/combination accounts. They are denoted by IRAB.

The constructed variables “pdvIRA92x, RpdvIRAA98x, RpdvIRAA04x” indicate the sum of present values of IRA Accounts from DB/Combination Plans as of Wave 1, Wave 4, and Wave 7. These benefits are derived from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004. These values are calculated for respondents who reported they rolled over their DB (type A)/combination (type AB/Both) plans into an IRA account.

How Constructed:

Respondents who reported a DB (type A)/combination (type AB/Both) plan from their last or previous pension jobs are asked about the disposition of that plan. If their response is “Rolled Over Into IRA” they are asked how much did that amount to. For constructing the present value of those benefits, first we have adjusted the present value of the amount rolled over by 5.8 percent for each of the years between the time when those jobs ended and the base year of their cohort, 1992, 1998, or 2004. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information. IRA values are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Rolled Over Into An IRA in Each Wave:

The constructed variables “pdvIRA_g1x, pdvIRA_ha1x, pdvIRA_hb1x, pdvIRA_hc1x” indicate the present value of the amount of benefits rolled over into an IRA account when they left their last and/or previous pension jobs in Wave 1. “g” indicates the G section, “ha” the first pension job, “hb” second pension job, and “hc” the third pension job in the H section of Wave 1.

The constructed variables “pdvIRAA_gg4x, pdvIRAA_ha4x, pdvIRAA_hb4x, pdvIRAA_hc4x” indicate the present value of the amount of benefits rolled over into an IRA account from last and previous pension jobs in Wave 4. “gg” indicates the GG section, “ha” the first pension job, “hb” the second pension job, and “hc” the third pension job in the GH section of Wave 4. Values are in 1992 dollars.

The constructed variables “RpdvIRAA_K17x, RpdvIRAA_K27x, RpdvIRAA_K37x, RpdvIRAA_L37x, RpdvIRAA_L47x” indicate the present value of the amount of benefits rolled over into an IRA account from last job in Wave 7. Variables “RpdvIRAA_L17x, RpdvIRAA_L27x, RpdvIRAA_L37x, RpdvIRAA_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “RpdvIRAA_L57x” from second previous pension job, and “RpdvIRAA_L67x” from respondents’ third previous pension job in Wave 7.

Cross Wave Differences:

In Waves 1 to 4, respondents were asked about only one pension plan from their last and previous pension jobs. In Wave 5, they were asked about up to three plans and in later waves about up to four plans.

Variables used:

Wave 1:

V3403, V3607, V3705, V3805, V3506, V3517, V3626, V3637, V3713, V3724, V3813, V3825

Wave 4:

F3644, F3645, F3646, F3904_1, F3904_2, F3682m1, F3682m2, F3692, F3864m1, F3864m2, F3874, F3917001, F3917007, F3927_1, F3927_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW021a1, JKW021b1, JKW021c1, JKW021a2, JKW021b2, JKW021c2, JKW033a, JKW033b, JKW033c,

JLW021a1, JLW021b1, JLW021c1, JLW021d1, JLW021a2, JLW021b2, JLW021c2, JLW021d2, JLW033a, JLW033b, JLW033c, JLW033d, JLW021e1, JLW021e2, JLW033e, JLW021f1, JLW021f2, JLW033f

**Present Value of DC Accounts-Last and Previous Jobs
pdvACCTin92x, RpdvACCT98x, RpdvACCT04x**

The constructed variables “pdvACCTin92x, RpdvACCT98x, RpdvACCT04x” indicate the sum of present values of account balances from DC (type B) and Combination (type AB/Both) plans as of 1992, 1998, or 2004, respectively. Those account balances are from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004.

How Constructed:

The construction of those values is slightly different depending on the plan type, DC or Combination, and the Wave.

- 1- DC (type B) plans: In all Waves, respondents who reported DC plans are asked about that plan’s account balances when the job ended, the disposition of that account, and current account balances. Those current balances are included in here.
- 2- Combination (type AB/Both) plans:
 - a. In Wave 1, respondents with a combination plan from their last and previous pension jobs were asked how much money was in the account when they left that employer. They were not asked about the disposition of that account. It is not clear if the balance was withdrawn, rolled over into an IRA, left to accumulate, etc. In the absence of that information we have assumed the plan was left to accumulate. We have calculated the present value of that account in 1992. The present value of that plan’s balances is adjusted by 5.8 percent

for each of the years between the time when those jobs ended and the base year, 1992.

- b. In Wave 3 and later waves, respondents who reported a combination plan are asked about what they did with the account part of their plan. If they reported they left the account to accumulate, they are asked about the current account balance of that plan. That current account balance is included in here.

We have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of the account balances to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed account balances to earnings ratio is multiplied by earnings to calculate the missing amount in the accounts. Where necessary, earnings are imputed for respondents with missing earnings information. Account balances are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of DC Accounts:

The constructed variable `pdvACCT92x` indicating the present value of DC accounts from respondents' last and/or previous pension jobs in Wave 1 includes variables “`pdvACCT_g1x`, `pdvACCT_ha1x`, `pdvACCT_hb1x`, `pdvACCT_hc1x`”. “g” indicates the G section, “ha” the first pension job, “hb” second pension job, and “hc” the third pension job in the H section of Wave 1.

The constructed variable `pdvACCT98x` indicates the present value of DC/combination account balances. It includes variables “`pdvACCT_gg4x`, `pdvACCT_ha4x`, `pdvACCT_hb4x`, `pdvACCT_hc4x`”, from last and previous pension jobs in Wave 4. The “gg” in the variable name indicates the GG section, “ha” the first pension job, “hb” the second pension job, and “hc” the third pension job in the GH section of Wave 4. Values are in 1992 dollars. The DC accounts are

either from type AB/Both or type B/DC plan. Values are in 1992 dollars. Values include imputations.

The constructed variable pdvACCT04x indicates the present value of DC/combination account balances. It includes variables “RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K37x” from respondents’ last job in Wave 7. Variables “RpdvACCT_L17x, RpdvACCT_L27x, RpdvACCT_L37x, RpdvACCT_L47x” are the account balances , plans 1 to 4, from respondents’ first previous pension job, “RpdvACCT_L57x” from second previous pension job, and “RpdvACCT_L67x” from respondents’ third previous pension job in Wave 7. The DC accounts are from type AB/Both and/or type B/DC plan. Values are in 1992 dollars. Values include imputations.

Cross Wave Differences:

1. In Waves 1 to 4, respondents were asked about only one pension plan from their last and previous pension jobs. In Wave 5, they were asked about up to three plans and in later waves about up to four plans.
2. In Waves 1 and 2, respondents are not questioned about the disposition of the account part of their combination (type AB/Both) plan. Respondents are only asked about how much was in the account when they left that job.
3. In Waves 3 to 5, there are two separate questions for the disposition of pensions for DC (type B) and combination (type AB/Both) plans. The disposition questions and their follow-ups for the last job (GG section) are the same for both DC and combination plans. But for the previous jobs (GH section), “Transferred to New Employer” is included in the list of options a respondent with a DC plan could choose

when responding to the disposition question. This option is not listed for type combination (type AB/B) plan.

4. From Wave 6 forward, the disposition questions for DC and combination plans are combined.

Variables used:

Wave 1:

V3502, V3524, V3525, V3622, V3644, V3645, V3709, V3731, V3732, V3809, V3831, V3832

Wave 4:

F3676, F3677, F3702, F3703, F3857, F3858, F3884, F3885, F3910_1, F3911_1, F3910_2, F3911_2, F3937_1, F3938_1, F3937_2, F3938_2f3938_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW002a, JKW002b, JKW002c, JKW002d, JKW003a, JKW003b, JKW003c, JKW003d, JKW004a, JKW004b, JKW004c, JKW004d, JKW006a1, JKW006b1, JKW006c1, JKW006a2, JKW006b2, JKW006c2, JKW009a, JKW009b, JKW009c, JKW009d, JKW009a, JKW009b, JKW009c, JKW009d, JKW010a, JKW010b, JKW010c, JKW010d, JKW010a, JKW010b, JKW010c, JKW010d, JKW011a, JKW011b JKW011c, JKW011d, JLW002a, JLW002b, JLW002c, JLW002d, JLW003a, JLW003b, JLW003c, JLW003d, JLW003e, JLW003f, JLW004a, JLW004b, JLW004c, JLW004d, JLW004e, JLW004f, JLW006a1, JLW006b1, JLW006c1, JLW006d1, JLW006a2, JLW006b2, JLW006c2, JLW006d2, JLW006e1, JLW006e2, JLW006f1, JLW006f2, JLW009a, JLW009b, JLW009c, JLW009d, JLW009e, JLW009f, JLW010a, JLW010b, JLW010c, JLW010d, JLW010e, JLW010f, JLW010a, JLW010b, JLW010c, JLW010d, JLW010e, JLW010f, JLW011a, JLW011b, JLW011c, JLW011d, JLW010e, JLW011f

Present Value of IRA Accounts from DC/Combination Plans- Last and Previous Jobs pdvIRABin92x, pdvIRAB98x, pdvIRAB04x

There are two sets of constructed variables for IRA accounts; one rolled over from DC/combination plans, the other from DB/combination plans. The IRA accounts here are the distributed benefits from respondents' DC/combination plans. They are denoted by IRABB.

The constructed variables “pdvIRAB92x, RpdvIRAB98x, RpdvIRAB04x” indicate the sum of present values of IRA Accounts from DC/Combination Plans as of Wave 1, Wave 4, and Wave 7. These benefits are derived from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004. These values are calculated for respondents who reported they rolled over their DC/Combination account into an IRA account.

How Constructed:

The construction of present values of IRA accounts is slightly different depending on the plan type and the Wave.

1. DC (type B) plans:

In all Waves, respondents who reported DC plan are asked about that plan’s account balances when the job ended and the disposition of that account. If the response was rolled over into an IRA account, they are asked how much is in your account now. Those current balances are included as the present value of IRA accounts from DC plans.

2. Combination (type AB/Both) plans:

a. In Waves 1 and 2, respondents with a combination plan from their last and previous pension jobs were asked how much money was in the account when they left that job.

They were not asked about the disposition of the account part of that plan. It is not clear if the balance was withdrawn, rolled over into an IRA, left to accumulate, etc. In the absence of that information we have assumed the plan was left to accumulate.

b. In Wave 3 and later Waves, respondents who reported a combination plan are asked about what they did with the account part of their plan. If they reported they rolled over that account into an IRA account, they are asked how much is in the account now. Those

current balances are included as the present value of IRA accounts from combination plans.

We have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of the account balances to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed account balances to earnings ratio is multiplied by earnings to calculate the missing amount in the accounts. Where necessary, earnings are imputed for respondents with missing earnings information. Account balances are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of IRA accounts:

The constructed variable pdvIRAB92x includes variables “pdvIRABin92_g1x, pdvIRABin92_ha1x, pdvIRABin92_hb1x, pdvIRABin92_hc1x” indicating the present value of IRA accounts from respondents’ last and/or previous pension jobs that were rolled over into IRA accounts in Wave 1. “g” indicates the G section, “ha” the first pension job, “hb” second pension job, and “hc” the third pension job in the H section of Wave 1.

The constructed variable pdvIRAB98x includes variables “pdvIRAB_gg4x, pdvIRAB_ha4x, pdvIRAB_hb4x, pdvIRAB_hc4x” which indicate the present value of IRA accounts from respondents’ last and/or previous pension jobs in Wave 4. “gg” indicates plan the GG section, “ha” the first pension job, “hb” the second pension job, and “hc” the third pension job in the GH section of Wave 4.

The constructed variable pdvIRAB04x includes variables “RpdvIRAB_K17x, RpdvIRAB_K27x, RpdvIRAB_K37x, RpdvIRAB_K37x” which indicate the present value of IRA accounts from respondents’ last and/or previous pension jobs in Wave 7. Variables

“RpdvIRAB_L17x, RpdvIRAB_L27x, RpdvIRAB_L37x, RpdvIRAB_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “RpdvIRAB_L57x” from second previous pension job, and “RpdvIRAB_L67x” from respondents’ third previous pension job in Wave 7.

Cross Wave Differences:

1. In Waves 1 to 4, respondents were asked about only one pension plan from their last and previous pension jobs. In Wave 5, they were asked about up to three plans and in later waves about up to four plans.
2. In Waves 1 and 2, respondents were not asked a question about the disposition of the account part of their combination (type AB/Both) plan. Respondents are only asked about how much was in the account when you left that job.
3. In Waves 3 to 5, there are two separate questions for the disposition of pensions for DC and combination plans. The disposition questions and their follow-ups for the last job (GG section) are the same for both DC and combination plans. But for the previous jobs (GH section), “Transferred to New Employer” is included in the list of options a respondent with a DC plan could choose when responding to the disposition question. This option is not listed for type combination (type AB/B) plan.
4. From Wave 6 forward, those two questions are combined.

Variables used:

Wave 1:

V3403, V3607, V3705, V3805, V3523, V3524, V3525, V3644, V3645, V3731, V3732, V3831, V3832

Wave 4:

F3644, F3645, F3846, F3904_1, F3904_2, F3676, F3677, F3702, F3703, F3857, F3858, F3884, F3885, F3910_1, F3911_1, F3910_2, F3911_2, F3936_1, F3937_1, F3938_1, F3936_2, F3937_2, F3938_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW006a1, JKW006b1, JKW006c1, JKW006d1, JKW006a2, JKW006b2, JKW006c2, JKW006d2, JLW006a1, JLW006b1, JLW006c1, JLW006d1, JLW006e1, JLW006f1, JLW006a2, JLW006b2, JLW006c2, JLW006d2, JLW006e2, JLW006f2, JKW018a, JKW018b, JKW018c, JKW018d, JLW018a, JLW018b, JLW018c, JLW018d, JLW018e, JLW018f

**Present Value of remaining Annuities: DC Plans- Last and Previous Jobs
pdvANNRemain92x, RpdvANNRemain98x, RpdvANNRemain04x**

The constructed variables “pdvANNRemain92x, RpdvANNRemain98x, RpdvANNRemain04x” are the sums of the present values of the amounts of remaining annuities as of Wave 1, Wave 4, and Wave 7. These benefits are derived from respondents’ last and previous pension jobs in the survey years 1992, 1998, and 2004.

How Constructed:

Respondents who reported they converted their DC account to an annuity, when they were asked about the disposition of their account, were asked about when they started that annuity and how much are the benefits per month or year. To construct the present value of the annuity, first the amount per year is calculated for every one. Then we calculated the present value of the remaining annuities. The present value of that annuity is adjusted by 5.8 percent for each of the years between the age of the respondent (in 1992, 1998, and 2004) and age 120 assuming probability that s/he would live each year to age 120 conditional on the probability of being alive in each wave. The calculated present values are what remains from those annuities as of the respondent’s age in each wave. They are not total values of those annuities from the start of receiving annuities. If values were missing, imputed values were included. The imputation

involves two steps. First, the ratio of the account balances to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed account balances to earnings ratio is multiplied by earnings to calculate the missing amount in the accounts. Where necessary, earnings are imputed for respondents with missing earnings information. Account balances are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Annuities in Each Wave:

The remaining annuities from DC or combination plans are calculated for each plan, each pension, each job, and each Wave separately. In 1992, they include “pdvANNRemain92_g1x, pdvANNRemain92_ha1x, and pdvANNRemain92_hb1x” indicate the present value of the remaining annuities as of 1992 from in Wave 1. “g” indicates the G section, “ha” the first pension job and “hb” the second pension job⁴⁷ in the H section of Wave 1. Values are in 1992 dollars. Respondents with missing values have imputed values.

In 1998, the constructed variable RpdvANNRemain98 is the sum of “RpdvANNRemain98_gg4x, RpdvANNRemain98_ha4x, RpdvANNRemain98_hb4x, RpdvANNRemain98_hc4x”. It indicates the present value of the remaining annuities as of 1998 in Wave 4. “gg” indicates the annuities from a plan in the GG section, “ha” from the first pension job, “hb” from the second pension job, and “hc” from the third pension job in the GH section of Wave 4. Respondents with missing values have imputed values.

In 2004, the constructed variable RpdvANNRemain04x is the sum of “RpdvANNRemain04_K17x, RpdvANNRemain04_K27x, RpdvANNRemain04_K37x, RpdvANNRemain04_K37x, RpdvANNRemain04_K47x, RpdvANNRemain04_L17x,

⁴⁷ There is no report of annuities in the third pension job of Wave 1.

RpdvANNRemain04_L27x, RpdvANNRemain04_L37x, RpdvANNRemain04_L47x, RpdvANNRemain04_L57x, RpdvANNRemain04_L67x”. It indicates the present value of the remaining annuities as of 2004 in Wave 7. Variables “RpdvANNRemain04_K17x, RpdvANNRemain04_K27x, RpdvANNRemain04_K37x, RpdvANNRemain04_K47x” are the pension values, plans 1 to 4, from respondents’ last job in 2004. Variables “RpdvANNRemain04_L17x, RpdvANNRemain04_L27x, RpdvANNRemain04_L37x, RpdvANNRemain04_L47x” are the pension values, plans 1 to 4, from respondents’ first previous pension job, “RpdvANNRemain04_L57x” from second previous pension job, and “RpdvANNRemain04_L67x” from respondents’ third previous pension job in Wave 7. Values are in 1992 dollars. Respondents with missing values have imputed values.

Cross Wave Differences:

The construction of those values is slightly different depending on the plan type, DC or Combination plan, and the Wave.

1- DC (type B) plans: In all Waves, respondents who reported DC (type B) plan from their last and previous pension jobs are asked about the disposition of that plan.

“Convert to Annuity” is one of the possible responses.

2- Combination (type AB/Both) plans:

a. In Wave 1, respondents with a combination plan from their last and previous pension jobs were asked how much money was in the account when they left that employer. They were not asked about the disposition of that account. It is not clear if the balance was withdrawn, rolled over into an IRA, left to accumulate, or converted to an annuity. In the absence of that information we

have assumed the plan was left to accumulate and its value is included as a DC account and NOT an annuity.

- b. In Wave 3 and later Waves, respondents who reported a combination plan are asked about what they did with the account part of their plan. If they reported “Converted to Annuity”, they are asked about the amount of annuities per month or year. The present value of those annuities are calculated and included in here.

Variables used:

Wave 1:

V3403, V3607, V3705, V805, V3527, V3528, V3647, V3648, V3734, V3735, V3834, V3835

Wave 4:

F3644, F3645, F3846, F3904_1, F3904_2, F3679, F3705, F3860, F3887, F3913_1, F3940_1, F3913_2, F3940_2, F3680, F3706, F3861, F3888, F3914_1, F3941_1, F3914_2, F3941_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW015a, JKW015b, JKW015c, JKW015d, JLW015a, JLW015b, JLW015c, JLW015d, JLW015e, JLW015f, JKW016a, JKW016b, JKW016c, JKW016d, JLW016a, JLW016b, JLW016c, JLW016d, JLW016e, JLW016f

**Present Value of Transferred DC Accounts: DC Plans- Previous Jobs
pdvTransf92x, RpdvTransf98x, RpdvTransf04x**

The constructed variables “pdvTransf92x, RpdvTransf98x, RpdvTransf04x” are the sum of the present value of the amount of DC accounts that were transferred to a new employer from respondents’ (up to three) previous pension jobs in 1992, 1998, and 2004, respectively. This variable does not apply to last jobs.

How Constructed:

The construction of those values is slightly different depending on the plan type and the Wave.

1- DC (type B) plans:

In all Waves, respondents who reported DC plan from their previous pension jobs are asked about the disposition of that plan. “Transfer to New Employer” is one of the possible responses. However, the calculations of present values of transfers are slightly different depending on the wave.

- a. In Waves 1 to 4, they are not asked how much did you transfer. But since they had only one response to their disposition question, we consider the amount in their account balances when left the job is the amount that was transferred. The present value of that amount in 1992 and 1998 is adjusted by 5.8 percent for each year from the year job ended to the base year 1992 or 1998.
- b. In Wave 5, similarly they are not asked how much did you transfer. But they are allowed to make more than one response to the disposition of their DC question. i.e. have converted to an annuity some of their account and transferred some to a new employer. Since they are not asked about how much did you convert or rolled over into an IRA, transferred to new employer, etc., we won't be able to calculate the present value for each of those choices. However, this is not a big issue. None of the respondents⁴⁸ who went through the GH section reported “Transferred to New Employer” in Wave 5.
- c. From Wave 6 forward, there was more than one response allowed to the disposition of DC question. Those who reported transferred their account to new employer they are asked how much did you transfer. This question is

⁴⁸ In Wave 5, only new spouses are the new interviewees who go through GG and GH sections.

asked only if the respondent who selected “Transferred to New Employer” had made some other choices about disposing of his/her DC accounts, such as rolled over a portion of that DC account into IRA, etc.. If the response was only “Transferred to New Employer” they are not asked that question. As a result, the amount of the transfer is the amount of the initial balances when respondent left that job.

In those Waves, the present value of the amount that was transferred to new employer, either from the question how much did you transfer or from the initial account balances, is adjusted by 5.8 percent for each year from the year job ended to the base year, 2004.

2- Combination (type AB/Both) plans:

- a. In Wave 1 and Wave 2, respondents with a combination plan from their previous pension jobs were not asked about the disposition of the account part of that plan. It is not clear if the balance was withdrawn, rolled over into an IRA, left to accumulate, transferred to new employer, or converted to an annuity. In the absence of that information we have assumed the plan was left to accumulate and its value is included as a DC account. Therefore, the present value of the transferred account for this group is not included if s/he had any.
- b. In Wave 3 to Wave 5, respondents who reported a combination plan are asked about what they did with the account part of their plan. But “Transferred to New Employer” was not one of the options. Therefore, there is no record of

the possible transferred amount. And the present value of the transferred account for this group is not included if s/he had any.

- c. From Wave 6 forward, “Transferred to New Employer” was one of the possible multiple responses in the disposition of combination plans. They are asked how much did you transfer if “Transferred to New Employer” was one of the possible responses. If the response was only “Transferred to New Employer” they are not asked that question. As a result, the amount of the transfer is the amount of the initial balances. For this group, the present value of the amount transferred to new employer, either from the question how much did you transfer or from the initial account balances, is adjusted by 5.8 percent for each year from the year job ended to the base year, 2004.

If the values were missing imputed values are included. The imputation involves two steps. First, the ratio of the transferred amounts to earnings is calculated and imputed through hot decking where necessary for respondents with missing transferred amounts. Then the imputed transferred amounts to earnings ratio is multiplied by earnings to calculate the missing amount transferred. Where necessary, earnings are imputed for respondents with missing earnings information. The transferred amounts are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Transferred Amounts in Each Wave:

The transferred amounts from DC or combination plans are calculated for each pension, each previous job, and each Wave separately. In 1992, the pdvTransf92x include “pdvTransf92_ha1x, and pdvTransf92_hb1x, pdvTransf92_hc1x”. They indicate the present value of transferred accounts as of 1992 from in Wave 1, where “ha” indicates the first pension

job, “hb” the second pension job, and “hc” the third pension job in the H section of Wave 1. Values are in 1992 dollars.

In 1998, the constructed variable RpdvTransf98 is the sum of “RpdvTransf98_gg4x, RpdvTransf98_ha4x, RpdvTransf98_hb4x, and/or RpdvTransf98_hc4x”. It indicates the present value of the amount of transferred as of 1998 in Wave 4, where “gg” indicates the present value of the amount of money transferred from the GG section, “ha” from the first pension job, “hb” from the second pension job, and “hc” from the third pension job in the GH section of Wave 4. Respondents with missing values have those values imputed.

In 2004, the constructed variable RpdvTransf04x is the sum of “RpdvTransf04_L17x, RpdvTransf04_L27x, RpdvTransf04_L37x, RpdvTransf04_L47x, RpdvTransf04_L57x, and/or RpdvTransf04_L67x”. It indicates the present value of the amount of money transferred as of 2004 in Wave 7. Variables “RpdvTransf04_L17x, RpdvTransf04_L27x, RpdvTransf04_L37x, RpdvTransf04_L47x” are the present value of the amount of money transferred, plans 1 to 4, from respondents’ first previous pension job, “RpdvTransf04_L57x” from second previous pension job, and “RpdvTransf04_L67x” from respondents’ third previous pension job in Wave 7. Values are in 1992 dollars. Respondents with missing values have those values imputed.

Cross Wave Differences:

1. In Waves 1 and 2, there is a variable for each of the disposition choices. Respondents could have multiple responses.
2. In Wave 3, there is one variable identifying respondent’s possible choices for disposing his/her pensions. i.e., only one response was allowed. This is not a big issue. Only new spouses are the new interviewees go through GG and GH sections in that wave.

3. In Wave 4, only one variable for the question of DC plan's disposition is recorded in the data⁴⁹. The interviewer instruction states: Do not probe, but if more than one response given, enter 7- other, and record all.
4. In Wave 5 and later Waves, more than one response for the question of DC plan's disposition is allowed.

Variables Used:

Wave 1:

V3607, V3705, V3805, V3643, V3644, V3730, V3731, V3830, V3831

Wave 4:

F3846, F3901_1, F3901_2, F3883, F3884, F3936_1, F3936_2, F3937_1, F3937_2,

Wave 7:

JL019, JL035a, JL035b, JLW002a, JLW002b, JLW002c, JLW002d, JLW002e, JLW002f, JLW006a1, JLW006b1, JLW006c1, JLW006d1, JLW006e1, JLW006f1, JLW006a2, JLW006b2, JLW006c2, JLW006d2, JLW006e2, JLW006f2, JLW019a, JLW019b, JLW019c, JLW019d, JLW019e, JLW019f

**Present Value of Withdrawn DC Accounts: DC/Comb. Plans- Last and Previous Jobs
pdvWitdr92x, RpdvWitdr98x, RpdvWitdr04x**

The constructed variables “pdvWitdr92x, RpdvWitdr98x, RpdvWitdr04x” are the sum of the present value of the amount of DC/combo accounts that were withdrawn from respondents' last and up to three previous pension jobs in 1992, 1998, and 2004, respectively.

How Constructed:

⁴⁹ In Wave 7 where two responses to the disposition question (in the L section) are reported, only 18 respondents indicated a second response for disposing their DC plan. This is out of 565 respondents who reported a DC/combo/DK plan type from their first pension job.

The construction of those values is slightly different depending on the plan type and the Wave.

1. DC (type B) plan: In all Waves, respondents who reported DC plan from their previous pension jobs are asked about the disposition of that plan. “Withdrew the Money” is one of the possible responses. There are several issues regarding this response cross waves. Those are:
 - a. In Waves 1 and 4, they are not asked how much money they withdrew. But since they had only one response to their disposition question in those waves, we consider the amount in their account balances when left the job as the amount that was withdrawn if they reported withdrew the money⁵⁰. The present value of that amount in 1992 and 1998 is adjusted by 5.8 percent for each year from the year job ended to the base year 1992 or 1998, respectively.
 - b. In Waves 5 and 6, there were multiple responses allowed to the disposition of DC question. Those who reported “withdrew the money” are not asked how much did you withdraw.
 - c. From Wave 7 forward, there were multiple responses allowed to the disposition of DC question. Those who reported “withdrew the money” were asked how much did you withdraw? This question was asked only if in addition to the “Withdrew the Money” respondents had made some other choices, such as rolled over a portion of that DC account into IRA, etc.. If the response was only “Withdrew the Money” they were not asked that question.

⁵⁰ In Wave 1, the option “Other” is comment coded. The code values 51, 52, and 53 indicate received cash settlement that was spent, saved/invested, or paid other debts. Respondents who made these choices are included in the “withdrew the money” category.

As a result, the amount of money withdrawn is the amount of the initial balances when respondent left that job.

In those Waves, the present value of the amount that was withdrawn, either from the question how much did you withdraw or from the initial account balances, is adjusted by 5.8 percent for each year from the year job ended to the base year, 2004 for Wave 7.

2. Combination/both (type AB) plans:

- a. In Wave 1 and Wave 2, respondents with a combination plan from their last and previous pension jobs were not asked about the disposition of the account part of that plan. It is not clear if the balance was withdrawn, rolled over into an IRA, left to accumulate, withdrew the money, or converted to an annuity. In the absence of that information we have assumed the plan was left to accumulate and its value is included as a DC account. Therefore, the present value of the money withdrawn account for this group is not included if they had any.
- b. In Waves 3 and 4, respondents who reported a combination plan are asked about what they did with the account part of their plan. “Withdrew the Money” was one of the options. But they were not asked how much money they withdrew. But since they had only one response to their disposition question in those waves, we consider the amount in their account balances when they left the job as the amount that was withdrawn if they reported withdrew the money. The present value of that amount in 1998 is adjusted by

5.8 percent for each year from the year job ended to the base year, 1998 for Wave 4.

- c. In Waves 5 and 6, respondents who reported a combination plan were asked about what they did with the account part of their plan. The “Withdrew the Money” was one of the options. But they were not asked how much money they withdrew.
- d. From Wave 7 forward, “Withdrew the Money” was one of the possible multiple responses in the disposition of combination plans. They are asked how much did you withdraw, if “Withdrew the Money” was one of the possible responses. If the response was only “Withdrew the Money” they are not asked that question. For this group, the amount withdrawn is the amount of the DC balances when job ended. As a result, the present value of the amount withdrawn, either from the question how much did you withdraw or from the initial account balances, is adjusted by 5.8 percent for each year from the year job ended to the base year, 2004.

If the values were missing imputed values are included. The imputation involves two steps. First, the ratio of the withdrawn amounts to earnings is calculated and imputed through hot decking where necessary for respondents with missing withdrawn amounts. Then the imputed withdrawn amount to earnings ratio is multiplied by earnings to calculate the missing amount withdrawn. Where necessary, earnings are imputed for respondents with missing earnings information. The withdrawn amounts are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Withdrawn Amounts in Each Wave:

The withdrawn amounts from DC or combination plans are calculated for each pension, each previous job, and each Wave separately. In 1992, the pdvWitdr92x is the sum of “pdvWitdr92_g1x, pdvWitdr92_ha1x, pdvWitdr92_hb1x, pdvWitdr92_hc1x”. They indicate the present value of withdrawn amount as of 1992 from in Wave 1, where “g” indicates pension from the G section, “ha” indicates the first pension job, “hb” the second pension job, and “hc” the third pension job in the H section of Wave 1. Values are in 1992 dollars.

In 1998, the constructed variable RpdvWitdr98 is the sum of “RpdvWitdr98_gg4x, RpdvWitdr98_ha4x, RpdvWitdr98_hb4x, and/or RpdvWitdr98_hc4x”. It indicates the present value of the amount of money withdrawn as of 1998 in Wave 4, where “gg” indicates the amount of money withdrawn from the GG section, “ha” from the first pension job, “hb” from the second pension job, and “hc” from the third pension job in the GH section of Wave 4. Respondents with missing values have imputed values.

In 2004, the constructed variable RpdvWitdr04x is the sum of “RpdvWitdr04_K17x, RpdvWitdr04_K27x, RpdvWitdr04_K37x, RpdvWitdr04_K47x, RpdvWitdr04_L17x, RpdvWitdr04_L27x, RpdvWitdr04_L37x, RpdvWitdr04_L47x, RpdvWitdr04_L57x, and/or RpdvWitdr04_L67x”. It indicates the present value of the amount withdrawn from last and previous pension jobs as of 2004 in Wave 7. Variables “RpdvWitdr04_K17x, RpdvWitdr04_K27x, RpdvWitdr04_K37x, RpdvWitdr04_K47x” are the withdrawn values, plans 1 to 4, from respondents’ last job in 2004. Variables “RpdvWitdr04_L17x, RpdvWitdr04_L27x, RpdvWitdr04_L37x, RpdvWitdr04_L47x” are the withdrawn values, plans 1 to 4, from respondents’ first previous pension job, “RpdvWitdr04_L57x” from second previous pension job, and “RpdvWitdr04_L67x” from

respondents' third previous pension job in Wave 7. Values are in 1992 dollars. Respondents with missing values have imputed values.

Cross Wave Differences:

1. In Waves 1 and 2, there is one variable for all DC plans' disposition choices.
Withdrew the money is one of the choices in the G section (last job). This choice (withdrew the money) is not listed as one of the possible choices in the H section (previous pension jobs).
2. In Waves 1 and 2, respondents with combination (type AB/Both) are not asked about the disposition of the account part of their plan.
3. In Wave 3, there is one variable identifying respondents' possible choices for disposing DC and combination plans. i.e., only one response was allowed. This is not a big issue. Only new spouses⁵¹ are the new interviewees going through GG and GH sections in that wave.
4. In Wave 4, only one variable for the disposition question of DC/combination plan is allowed⁵². The interviewer instruction states: [IWER: Do not probe, but if more than one response given, enter 7- other, and record all].
5. In Wave 5 and later Waves, more than one response for the disposition question of DC plan is allowed.

Variables Used:

Wave 1:

⁵¹ There were 17 cases with at least one previous pension job in GH section and 10 cases with pension from GG section in Wave 3.

⁵² In Wave 7 where two responses to the disposition question (in the L section) are reported, only 18 respondents indicated a second response for disposing their DC plan. This is out of 565 respondents who reported a DC/Combination/DK plan type from their first pension job in the L section.

V3403, V3607, V3705, V3805, V3523, V3524

Wave 4:

F644, F3645, F3846, F3901_1, F3901_2, F3675, F3676, F3856, F3857, F3909_1, F3909_2, F3910_1, F3910_2

Wave 7:

JK004, JL019, JL035a, JL035b, JKW002a, JKW002b, JKW002c, JKW002d, JKW003a, JKW003b, JKW003c, JKW003d, JKW004a, JKW004b, JKW004c, JKW004d, JKW006a1, JKW006b1, JKW006c1, JKW006d1, JKW006a2, JKW006b2, JKW006c2, JKW006d2, JKW056a, JKW056b, JKW056c, JKW056d, JLW002a, JLW002b, JLW002c, JLW002d, JLW002e, JLW002f, JLW003a, JLW003b, JLW003c, JLW003d, JLW003e, JLW003f, JLW004a, JLW004b, JLW004c, JLW004d, JLW004e, JLW004f, JLW006a1, JLW006b1, JLW006c1, JLW006d1, JLW006e1, JLW006f1, JLW006a2, JLW006b2, JLW006c2, JLW006d2, JLW006e2, JLW006f2, JLW056a, JLW056b, JLW056c, JLW056d, JLW056e, JLW056f

Disposition of Pensions from Jobs Held in Previous Waves

Data on the disposition and value of pensions left during the course of the survey are collected in the wave following the termination of employment from a pension-covered job. The details of those pensions are asked at the beginning of the employment section in each wave. They start with FA10 (FA section), FB6 (FB section), and FC7 and FC19 (FC section) in Wave 2⁵³, G30 in Waves 3, 4, 5, 6, and 7, and J084 in Wave 8.

In this section, we have included the pension values separately for each of the choices respondents made when they disposed of their pensions upon leaving their previous interview employment. For respondents with two or more terminated jobs, we have summed up the value of the choices they made. For example, for a respondent who reported two different jobs after

⁵³ In Wave 2 there are three separate sections, FA, FB, and FC. Section FA is designed for employees. In this section, there are two sets of previous pension questions. The first set starting with FA10 is designed for respondents who reported being self-employed in Wave 1 and an employee in Wave 2. Only three respondents reported pension coverage in that sequence. They are not included in the calculations. A second set of questions starting with FA30 is designed for employees who have changed their Wave 1 job. They were an employee in both jobs. Section FB is designed for self-employed respondents. Questions in the previous pension sequence start with FB6. Section FC is designed for re-interviewee respondents whose Wave 1 job was terminated before Wave 2. There are two sets of previous pension questions in this section also. The first set is designed for those who were self-employed in Wave 1. Only 6 respondents reported pension coverage. The second set is designed for those who were an employee in Wave 1. The first set of questions starts with FC7 and the second set with FC19.

his/her first interview and reported two different IRA rollovers upon leaving those two jobs, the value of those IRA accounts are summed up. We describe each of the various modes of disposition for each of the plan types and list the associated conventions governing variable names. Since the various pension plan types have similar options at termination and descriptions of those modes of disposition are also similar, we describe the construction and list the components for the “Expecting Future Benefits (alleFBsi)” option in detail. But for the remaining variables in this section the descriptions are in less detail.

Data on the disposition and value of pensions left during the course of the survey are collected in the wave following the termination of employment from a pension-covered job. The details of those pensions are asked at the beginning of the employment section in each wave. They start with FA10 (FA section), FB6 (FB section), and FC7 and FC19 (FC section) in Wave 2, G30 in Waves 3, 4, 5, 6, and 7, and J084 in Wave 8.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. In Wave 2, respondents who reported a combination (type AB/Both) plan are not asked about the disposition of that plan’s account part.
4. In Waves 3 forward, respondents who reported a combination (type AB/Both) plan are asked about the disposition of its account part.
5. From Wave 6 forward, the disposition question for DC (type B) and combination (type AB/Both) plans are combined. There is one set of question for both DC and combination plans. In Waves 3 to 5, there is one set of question for each plan.

6. Rolled Over into an IRA is one of the options for disposing a DB/Combination plan. This option has been in the list of responses in all waves. However, in Waves 1 to 6, this option was not stated in the wording of the question. From Wave 7 forward, it is added to the question. The wording of the question in Waves 1 to 6:

“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement when you left, did you lose your benefits, or what?”

The wording of the question in Wave 7: *“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement when you left, did you lose your benefits, did you roll over into an IRA, or what?”*

In Wave 8, it is revised again by adding “lump-sum” to the question. It asks:

“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement or a lump sum payment when you left, did you lose your benefits, did you roll it over into an IRA, or what?”

Expecting Future Benefits- from All Previous Jobs after Initial Interview alleFBsi

The constructed variable “alleFBsi” indicates the sum of present values of expected benefits from all jobs that were terminated after respondents’ first interview as of Wave i , where $i=1, 4$, and 7 .

The alleFBs1 includes RpdvEFB_f2x, RpdvEFB_g3x, RpdvEFB_g4x, RpdvEFB_g5x, RpdvEFB_J6x, RpdvEFB_J7x, and/or RpdvEFB_J8x. Those are present discounted values of expected future benefits from a terminated job reported in Wave 2, Wave 3, ... or Wave 8. This variable is constructed for respondents (from the original HRS cohort) who may have left their 1992 employment in a later wave. For example, consider a respondent who left his/her Wave 1

employment before Wave 2 and in Wave 2 s/he reported expecting future benefits from a DB/combination (type AB/Both) plan from that job. The alleFBs1 for this respondent equals present discount value of future benefits reported in Wave 2 (RpdvEFB_f2x). If s/he reported in Wave 3 that her/his Wave 1 job was terminated and s/he also reported expecting future benefits from a DB/Combination plan from that job, then her/his alleFBs1 equals the present discounted value of expected future benefits reported in Wave 3 (RpdvEFB_g3x).

It is possible⁵⁴ that a respondent in this cohort might expect future benefits from more than one such job. For example, consider a respondent who reported that his/her Wave 1 job was terminated before Wave 2 and s/he expected some future benefits from that job's pension. This respondent also reported having a new employment in Wave 2. If in a later interview wave (e.g., Wave 7) s/he reported his/her Wave 2 job was terminated and expecting some future benefits from that job's pension, this respondent would be expecting some future benefits from two separate employments; reported in Wave 2 and Wave 7. His/her alleFBs1 = RpdvEFB_f2x + RpdvEFB_j7x.

The constructed variable "alleFBs4" includes RpdvEFB_g5x, RpdvEFB_J6x, RpdvEFB_J7x, and/or RpdvEFB_J8x. This variable is constructed for the War baby cohort where they were first interviewed in Wave 4. Those who reported having a current employment in Wave 4 and then in Wave 5 reported that that job was terminated, are asked about the detail of pension from that job. The RpdvEFB_g5x indicates the present discounted values of expected future benefits for those respondents who reported having a DB or combination plan and expected some future benefits from that job. Similarly, The RpdvEFB_J6x is the constructed variable for respondents who reported in Wave 6 that their Wave 5 employment was terminated and they were expecting some future benefits from that job. The RpdvEFB_J7x is the

⁵⁴ This respondent is unlikely to have another employment with a vested DB plan terminated before 2006.

constructed variable for those who reported in Wave 7 that their previous interview employment had ended and that they expect some future benefits from that job's pension. Similarly, the RpdvEFB_J8x is the constructed variable for those who reported in Wave 8 that their previous interview employment had ended. The R part of the constructed variable names indicates that the values are in 1992 dollars.

The constructed variable "allEFBs7" includes RpdvEFB_J8x. This variable is constructed for the Early boomer cohort, where first were interviewed in Wave 7. This variable includes the present discounted values for respondents who reported in Wave 8 that their Wave 7 job was terminated and were expecting some future benefits from that job's pension.

How Constructed:

Present discounted values of expected future benefits (pdvEFB) are constructed for respondents who reported a DB (type A) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. If their response was "Expecting Future Benefits" they are asked at what age do you expect to start receiving benefits and how much. The response to the amount of expected benefits may be in the form of "percent of earnings", an "amount per month/year" or just a "lump sum". For constructing the present value of the future benefits, first we have constructed an expected amount of benefits per year for those who reported the benefits in the form of percent of earnings or an amount per month.

Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits.

Where necessary, expected age of receiving benefits and earnings are imputed for respondents with missing expected age and earnings information.

Third, we have adjusted the amount of expected benefits per year and the lump sum amount using 5.8 percent for every year between the expected age of receiving benefits and age 120. We also have used the 5.8 percent to discount back the present values of expected benefits to respondent's age in 1992, 1998, or 2004, respectively. This value is also adjusted by survival probability of living each year condition on probability of being alive in 1992, 1998, or 2004. Present values of expected benefits are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Expected Future Benefits- from Previous Jobs After Initial Interview:

The alleFBs1 includes RpdvEFB_f2x, RpdvEFB_g3x, RpdvEFB_g4x, RpdvEFB_g5x, RpdvEFB_J6x, RpdvEFB_J7x, and/or RpdvEFB_J8x. The R part of the variable name "RpdvEFB_f2x" indicates the value is in 1992 dollars. The pdvEFB is the present discounted value of expected future benefits. The "f2" is the indication that the benefit is from the FA, FB, or FC section of Wave 2. The present values of expected future benefits in each section are calculated and imputed separately. Then they are combined and presented by "f". The "g" and "j" in the remaining constructed variables indicate sections G and J. Values 3, 4, 5, 6, 7, and 8 in the names indicate the wave that the expected future benefits⁵⁵ are reported in. The "x" at the end indicates that imputations are included for respondents with missing values.

The "alleFBs4" includes RpdvEFB_g5x, RpdvEFB_J6x, RpdvEFB_J7x, and/or RpdvEFB_J8x. Those who reported having a current employment in Wave 4 and then in Wave 5 reported that that job was terminated are asked about the pension from that job. RpdvEFB_g5x indicates the present discounted values of expected future benefits for those respondents if they

⁵⁵ The present value of expected future benefits in a wave would be equal to zero if none was expected.

reported having a DB/combination (type AB/Both) plan and expecting some future benefits from that job. Similarly, RpdvEFB_J6x is the constructed variable for respondents who reported in Wave 6 that their Wave 5 employment was terminated and were expecting some future benefits from that job. RpdvEFB_J7x and/or RpdvEFB_J8x are the constructed variables for those who reported in Wave 7 or 8 that their previous interview employment had ended. The “R” part of the constructed variable names indicates that the values are in 1992 dollars.

The constructed variable “alleFBs7” includes RpdvEFB_J8x. This variable includes the present discounted values for respondents who reported in Wave 8 that their Wave 7 job was terminated and were expecting some future benefits from that job’s pension.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. In Waves 2 to 5, the code values for “Per” unit are 1, 2, 3, 4, and 6. In Wave 5, one respondent reported “3. Biweekly”. The rest reported per month or year.
4. From Wave 6 forward, the “Per” units are 4. Month and 6. Year.
5. From Wave 6 forward, bracket questions follow Don’t Know and Refuse responses for the amount of expected future benefits.

Variables Used:

Wave 2:

W3574, W3575, W3595, W3596, W3597, W3598, W3599, W3600, W4275, W4276, W4300, W4301, W4302, W4303, W4304, W4305, W4863, W4884, W4886, W4887, W4888, W4889, W4968, W4971, W4989, W4990, W4991, W4992, W4993, W4994

Wave 3:

E2690M1, E2690M2, E2690M3, E2703, E2704, E2709, E2710, E2711, E2713

Wave 4:

F3212M1, F3212M2, F3212M3, F3225, F3226, F3226, F3231, F3232, F3233, F3235

Wave 5:

G3463001, G3463002, G346303, G3463007, G3463008, G3463013, G3475_1 - G3475_4, G3476_1 - G3476_4, G3477_1 - G3477_4, G3478_1 - G3478_4, G3475_1 - G3479_4, G3481_1 - G3481_4

Wave 6:

HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HJ129_1 – HJ129_4, HJ130_1 – HJ130_4, HJ131_1 – HJ131_4, HJ132_1 – HJ132_4, HJ133_1 – HJ133_4, HJ134_1 – HJ134_4, HJ136_1 – HJ136_4, HJ137_1 – HJ137_4

Wave 7:

JJW021a1 - JJW021a4, JJW021b1 - JJW021b4, JJW021c1 - JJW021c4, JJW021d1 - JJW021d4, JJW021a1 - JJW021a4, JJW035a, JJW035b, JJW035c, JJW035d, JJW036a, JJW036b, JJW036c, JJW036d, JJW037a, JJW037b, JJW037c, JJW037d, JJW038a, JJW038b, JJW038c, JJW038d, JJW039a, JJW039b, JJW039c, JJW039d, JJ133a, JJ133b, JJ133c, JJ133d, JJ134a, JJ134b, JJ134c, JJ134d

Wave 8:

KJW021a1 - KJW021a4, KJW021b1 - KJW021b4, KJW021c1 - KJW021c4, KJW021d1 - KJW021d4, KJW021a1 - KJW021a4, KJW035a, KJW035b, KJW035c, KJW035d, KJW036a, KJW036b, KJW036c, KJW036d, KJW037a, KJW037b, KJW037c, KJW037d, KJW038a, KJW038b, KJW038c, KJW038d, KJW039a, KJW039b, KJW039c, KJW039d, KJ133a, KJ133b, KJ133c, KJ133d, KJ134a, KJ134b, KJ134c, KJ134d

Receiving Benefits- from All Previous Jobs after Initial Interview

allRBsi

The constructed variables “allRBsi” indicate the sum of present values of remaining benefits for respondents who reported their benefit is in pay status from all jobs that were terminated after respondents first interview as of Wave i, where i=1, 4, and 7.

The allRBs1 includes RpdvRBremain94_f2x, RpdvRBremain96_g3x, RpdvRBremain98_g4x, RpdvRBremain00_g5x, RpdvRBremain02_J6x, RpdvRBremain04_J7x,

and/or RpdvRBremain06_J8x. Those are present values of remaining benefits from a terminated job reported in Wave 2, Wave 3... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable “allRBs4” includes RpdvRBremain00_g5x, RpdvRBremain02_J6x, RpdvRBremain04_J7x, and/or RpdvRBremain06_J8x. This variable is constructed for the War baby cohort where they were first interviewed in Wave 4. Those who reported having a current employment in Wave 4 and then in Wave 5 or later waves reported that that job was terminated, are asked about the details of the pension from that job.

The constructed variable “allRBs7” includes RpdvRBremain06_J8x. This variable is constructed for the Early boomer cohort, where first were interviewed in Wave 7. This variable includes the present value of remaining benefits as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and were receiving benefits from that job’s pension.

How Constructed:

Present values of remaining benefits (pdvRBremain) are constructed for respondents who reported a DB (type A) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. If their response was “Receiving Benefits Now” they are asked in what month and year did you start receiving benefits and how much. The response to the amount of benefits may be an amount per month/ or year. For constructing the present value of benefits, first we have constructed the amount of benefits per year for those who reported an amount per month. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for

respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information. Third, we have adjusted the amount of remaining benefits per year using 5.8 percent for every year between the respondent's age in the corresponding Wave and age 120. This value is also adjusted by survival probability of living each year. Present values of remaining benefits are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Remaining benefits- from Previous Jobs After Initial Interview:

The allRBs1 includes RpdvRBremain94_f2x, RpdvRBremain96_g3x, RpdvRBremain98_g4x, RpdvRBremain00_g5x, RpdvRBremain02_J6x, RpdvRBremain04_J7x, and/or RpdvRBremain06_J8x.

The "allRBs4" includes RpdvRBremain00_g5x, RpdvRBremain02_J6x, RpdvRBremain04_J7x, and/or RpdvRBremain06_J8x. Those who reported having a current employment in Wave 4 and then in Wave 5 reported that that job was terminated are asked about the pension from that job.

The constructed variable "allRBs7" includes RpdvRBremain06_J8x. This variable includes the present values of remaining benefits for respondents who reported in Wave 8 that their Wave 7 job was terminated and were receiving benefits from that job's pension.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.

3. In Waves 2 to 5, the code values for “Per” unit are 1. Hour, 2. Week, 3. Biweekly, 4. Month, and 6. Year⁵⁶.
4. From Wave 6 forward, the code values for “Per” unit are 4. Month and 6. Year.
5. From Wave 6 forward, bracket questions follow Don’t Know and Refuse responses for the amount of receiving benefits.

Variables Used:

Wave 2:

W3574, W3575, W3582, W3583, W4276, W4285, W4286, W4863, W4871, W4872, W4968, W4971, W4976, W4977

Wave 3:

E2690M1, E2690M2, E2690M3, E2694, E2695

Wave 4:

F3212M1, F3212M2, F3212M3, F3216, F3217

Wave 5:

G3463001, G3463002, G346303, G3463007, G3463008, G3463013, G3467_1, G3467_2, G3467_3, G3467_4, G3468_1, G3468_2, G3468_3, G3468_4

Wave 6:

HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HJ115_1 – HJ115_4, HJ116_1 – HJ116_4, HJ117_1 – HJ117_4, HJ119_1 – HJ119_4

Wave 7:

JJW021a1 - JJW021a4, JJW021b1 - JJW021b4, JJW021c1 - JJW021c4, JJW021d1 - JJW021d4, JJW021a1 - JJW021a4, JJW025a, JJW025b, JJW025c, JJW025d, JJW026a, JJW026b, JJW026c, JJW026d, JJ116a, JJ116b, JJ116c, JJ116d, JJ117a, JJ117b, JJ117c, JJ117d

Wave 8:

KJW021a1 - KJW021a4, KJW021b1 - KJW021b4, KJW021c1 - KJW021c4, KJW021d1 - KJW021d4, KJW021a1 - KJW021a4, KJW025a, KJW025b, KJW025c, KJW025d, KJW026a, KJW026b, KJW026c, KJW026d, KJ116a, KJ116b, KJ116c, KJ116d, KJ117a, KJ117b, KJ117c, KJ117d

⁵⁶ In Wave 3, one respondent reported per “2. Week”. Another respondent reported “3. Biweekly”. The rest reported per month or year. In Wave 5, four respondents reported “3. Biweekly”. The rest reported per month or year.

All Cash Settlements from Previous Job(s) after Initial Interview allCASHsi

The constructed variables “allCASHsi” includes the present values of cash settlements for respondents who reported they received cash settlements from all jobs that were terminated after respondents’ first interview as of Wave i, where i=1, 4, and 7.

The allCASHs1 includes RpdvCASH94_f2x, RpdvCASH96_g3x, RpdvCASH98_g4x, RpdvCASH00_g5x, RpdvCASH02_J6x, RpdvCASH04_J7x, and/or RpdvCASH06_J8x. Those are present values of cash settlements from a terminated job reported in Wave 2, Wave 3... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable “allCASHs4” includes RpdvCASH00_g5x, RpdvCASH02_J6x, RpdvCASH04_J7x, and/or RpdvCASH06_J8x. This variable is constructed for the War Baby cohort as of their first interview in Wave 4.

The constructed variable “allCASHs7” includes RpdvCASH06_J8x. This variable is constructed for the Early boomer cohort as of their first interview in Wave 7. This variable includes the present value of cash settlements as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and received a cash settlement from that job’s pension.

How Constructed:

Present values of cash settlements (pdvCASH) are constructed for respondents who reported a DB (type A) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. If their response was “Received Cash Settlement” they are asked how much did that amount to. For constructing the present value of benefits, first we have adjusted the present value of the cash settlements by 5.8 percent for each of the years between the time when those jobs ended and the base year of the

interview year they were reported. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information. Present values of cash settlements are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Cash settlements- from Previous Jobs After Initial Interview:

The allCASHs1 includes RpdvCASH94_f2x, RpdvCASH96_g3x, RpdvCASH98_g4x, RpdvCASH00_g5x, RpdvCASH02_J6x, RpdvCASH04_J7x, and/or RpdvCASH06_J8x. The R part of the variable name “RpdvCASH94_f2x” indicates the value is in 1992 dollars.

The “allCASHs4” includes RpdvCASH00_g5x, RpdvCASH02_J6x, RpdvCASH04_J7x, and/or RpdvCASH06_J8x. Those who reported having current employment in Wave 4 and then in Wave 5 reported that that job was terminated are asked about the pension from that job.

The constructed variable “allCASHs7” includes RpdvCASH06_J8x. This variable includes the present values of cash settlements for respondents who reported in Wave 8 that their Wave 7 job was terminated and they received cash settlements from that job’s pension.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.

3. From Wave 6 forward, bracket questions follow Don't Know and Refuse responses for the amount of received cash settlements.

Variables Used:

Wave 2:

W3504, W4201, W4801, W4898,
W3574, W3575, W3586, W4275, W4276, W4289, W4863, W4875, W4968, W4971, W4980

Wave 3:

E2631, E2668, E2690M1, E2690M2, E2690M3, E2699

Wave 4:

F3135, F3189, F3212M1, F3212M2, F3212M3, F3221

Wave 5:

G3371, G3438, G3463001, G3463002, G346303, G3463007, G3463008, G3463013, G3471_1-
G3471_4

Wave 6:

HJ024, HJ064, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a,
HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HJ122_1- HJ122_4, HJ123_1-
HJ123_4, HJ124_1- HJ124_4

Wave 7:

JJ024, JJ064, JJW021a1 - JJW021a4, JJW021b1 - JJW021b4, JJW021c1 - JJW021c4, JJW021d1
- JJW021d4, JJW021a1 - JJW021a4, JJW030a, JJW030b, JJW030c, JJW030d, JJ123a, JJ123b,
JJ123c, JJ123d, JJ124a, JJ124b, JJ124c, JJ124d

Wave 8:

KJ024, KJ064, KJW021a1 - KJW021a4, KJW021b1 - KJW021b4, KJW021c1 - KJW021c4,
KJW021d1 - KJW021d4, KJW021a1 - KJW021a4, KJW030a, KJW030b, KJW030c, KJW030d,
KJ123a, KJ123b, KJ123c, KJ123d, KJ124a, KJ124b, KJ124c, KJ124d

**IRA Accounts from DB/Combination Plans: Previous Job(s) after Initial Interview
allIRAAsi**

The constructed variables “allIRAAs_i”⁵⁷ includes the present values of IRA accounts for respondents who reported they rolled over their DB/combination plan into an IRA account from all jobs that were terminated after respondents’ first interview as of Wave i, where i=1, 4, and 7.

The allIRAAs₁ includes RpdvIRAA94_f2x, RpdvIRAA96_g3x, RpdvIRAA98_g4x, RpdvIRAA00_g5x, RpdvIRAA02_J6x, RpdvIRAA04_J7x, and/or RpdvIRAA06_J8x. Those are present values of IRA accounts from a terminated job reported in Wave 2, Wave 3,... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable “allIRAAs₄” includes RpdvIRAA00_g5x, RpdvIRAA02_J6x, RpdvIRAA04_J7x, and/or RpdvIRAA06_J8x. This variable is constructed for the War Baby cohort from when they were first interviewed in Wave 4. Those who reported having a current employment in Wave 4 and then in Wave 5 or later waves reported that that job was terminated, are asked about the detail of pension from that job.

The constructed variable “allIRAAs₇” includes RpdvIRAA06_J8x. This variable is constructed for the Early Boomer cohort, from when they were first interviewed in Wave 7. This variable includes the present value of IRA accounts as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had rolled over their benefits into an IRA account from that job’s pension.

How Constructed:

Present values of IRA accounts (pdvIRAA) are constructed for respondents who reported a DB (type A) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. If their response was “Rolled over

⁵⁷ These IRA accounts are rolled over benefits from DB/combination plans. There is another set of constructed IRA account variables. Those are from DC plans. IRA accounts rolled over from DB/combination plans are identified by IRAA and from DC plans by IRAB.

into IRA” they are asked how much did that amount to. For constructing the present value of the benefit, first we have adjusted the present value of the IRA accounts by 5.8 percent for each of the years between the time when those jobs ended and the base year of the interview year they were reported. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of benefits to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing amount of benefits. Where necessary, earnings are imputed for respondents with missing earnings information. Present values of IRA accounts are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of IRA accounts- from Previous Jobs After Initial Interview:

The allIRAA_{s1} includes RpdvIRAA94_f2x, RpdvIRAA96_g3x, RpdvIRAA98_g4x, RpdvIRAA00_g5x, RpdvIRAA02_J6x, RpdvIRAA04_J7x, and/or RpdvIRAA06_J8x. The “R” part of the name “RpdvIRAA94_f2x” indicates the value is in 1992 dollars. The pdvIRAA is the present value of IRA accounts rolled over from a DB/combination plan.

The “allIRAA_{s4}” includes RpdvIRAA00_g5x, RpdvIRAA02_J6x, RpdvIRAA04_J7x, and/or RpdvIRAA06_J8x. Those who reported being currently employed in Wave 4 and then in Wave 5 reported that their Wave 4 job was terminated are asked about the pension from that job.

The constructed variable “allIRAA_{s7}” includes RpdvIRAA06_J8x. This variable includes the present values of IRA accounts for respondents who reported in Wave 8 that their Wave 7 job was terminated and they had their benefits from that job rolled over into an IRA account.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. Rolled Over into an IRA is one of the options for disposing of a DB/Combination plan.

This option has been included in the list of responses in all waves. However, in Waves 1 to 6, this option was not stated in the wording of the question. From Wave 7 forward, it is added to the question. The wording of the question in Waves 1 to 6:

“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement when you left, did you lose your benefits, or what?”

The wording of the question in Wave 7: *“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement when you left, did you lose your benefits, did you roll over into an IRA, or what?”*

In Wave 8, it is revised again by adding “lump-sum” into the question. It asks:

“Do you expect to receive benefits from this plan in the future, are you receiving benefits now, did you get a cash settlement or a lump sum payment when you left, did you lose your benefits, did you roll it over into an IRA, or what?”

Variables Used:

Wave 2:

W3504, W4201, W4801, W4898,
W3574, W3575, W3593, W4275, W4276, W4298,
W4863, W4882, W4968, W4971, W4987

Wave 3:

E2631, E2668, E2690M1, E2690M2, E2690M3, E2701

Wave 4:

F3135, F3189, F3212M1, F3212M2, F3212M3, F3223

Wave 5:

G3371, G3438, G3463001, G3463002, G346303, G3463007, G3463008, G3463013, G3473_1-G3473_4

Wave 6:

HJ024, HJ064, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HJ127_1-HJ127_4

Wave 7:

JJ024, JJ064, JJW021a1 - JJW021a4, JJW021b1 - JJW021b4, JJW021c1 - JJW021c4, JJW021d1 - JJW021d4, JJW021a1 - JJW021a4, JJW033a, JJW033b, JJW033c, JJW033d

Wave 8:

KJ024, KJ064, KJW021a1 - KJW021a4, KJW021b1 - KJW021b4, KJW021c1 - KJW021c4, KJW021d1 - KJW021d4, KJW021a1 - KJW021a4, KJW033a, KJW033b, KJW033c, KJW033d

**All DC Accounts from DC/Combination Plans: Previous Job(s) after Initial Interview
allACCTsi**

The constructed variables “allACCTsi” includes the present values of DC/combination (type AB/Both) accounts for respondents who reported they left their accounts to accumulate.⁵⁸ That includes accounts from all jobs that were terminated after respondents’ first interview as of Wave i, where i=1, 4, and 7.

The allACCTs1 includes RpdvACCT94_f2x, RpdvACCT96_g3x, RpdvACCT98_g4x, RpdvACCT00_g5x, RpdvACCT02_J6x, RpdvACCT04_J7x, and/or RpdvACCT06_J8x. Those are present values of DC accounts from a terminated job reported in Wave 2, Wave 3,... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

⁵⁸ In Wave 2, respondents with a combination/both (type AB) plan were not asked about the disposition of the account part of the pension. We have assumed the account was left to accumulate.

The constructed variable “allACCTs4” includes RpdvACCT00_g5x, RpdvACCT02_J6x, RpdvACCT04_J7x, and/or RpdvACCT06_J8x. This variable is constructed for respondents in the War Baby cohort where they were first interviewed in Wave 4.

The constructed variable “allACCTs7” includes RpdvACCT06_J8x. This variable is constructed for the Early Boomer cohort, where they first were interviewed in Wave 7. This variable includes the present value of DC/combo accounts as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and had left their DC/combo accounts from that job’s pension to accumulate.

How Constructed:

Present values of DC accounts are constructed for respondents who reported a DC or combination/both plan when their previous interview job was terminated. They are asked about the disposition of that plan. If their response was “Left the Account to Accumulate” they are asked how much was in the account when you left. They are also asked how much is in your account now. In Wave 2, respondents with a combination plan were asked about account balances when left and not current account balances. For constructing the present value of the benefit, first we have used current account balances for DC and combination plans for all waves except for combination plans in Wave 2. In Wave 2, we have adjusted the present value of the account part of the combination plan at the time the employment had terminated by 5.8 percent for each of the years between the time when that job ended and 1994. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of accounts to earnings is calculated and imputed through hot decking where necessary for respondents with missing benefit amounts. Then the imputed benefit to earnings ratio is multiplied by earnings to calculate the missing account balances. Where necessary, earnings are

imputed for respondents with missing earnings information. Present values of DC accounts are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of DC Accounts- from Previous Jobs After Initial Interview:

The allACCTs1 includes RpdvACCT94_f2x, RpdvACCT96_g3x, RpdvACCT98_g4x, RpdvACCT00_g5x, RpdvACCT02_J6x, RpdvACCT04_J7x, and/or RpdvACCT06_J8x. The “R” part of the name “RpdvACCT94_f2x” indicates the value is in 1992 dollars. The pdvACCT is the present value of DC account balances from DC/combo plans. The “allACCTs4” includes RpdvACCT00_g5x, RpdvACCT02_J6x, RpdvACCT04_J7x, and/or RpdvACCT06_J8x.

The constructed variable “allACCTs7” includes RpdvACCT06_J8x. This variable includes the present values of DC accounts for respondents who reported in Wave 8 that their Wave 7 job was terminated and had their accounts from that job left to accumulate.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. In Wave 2, respondents with a combination plan are not asked about the disposition of the account part of that plan. We have assumed it has been left to accumulate.
4. From Wave 6 forward, the disposition question and its follow-up for the account part of the combination plan is combined with the disposition questions for DC plans. In previous waves there were two sets of questions.

5. From Wave 6 forward, bracket questions are asked of respondents with Don't Know and Refuse responses to current account balances.

Variables Used:

Wave 2:

W3504, W4201, W4801, W4898,
W3573, W3602, W3603, W4274, W4307, W4308,
W4862, W4891, W4892, W4967, W4996, W4997

Wave 3:

E2683, E2686, E2715, E2716

Wave 4:

F3205, F3206, F3237, F3238

Wave 5:

G3457_1 – G3457_4, G3458_1 – G3458_4, G3487_1 – G3487_4, G3488_1 – G3488_4

Wave 6:

HJ095_1a, HJ095_1b, HJ095_1c, HJ095_2a, HJ095_2b, HJ095_2c, HJ095_3a, HJ095_3b,
HJ095_3c, HJ095_4a, HJ095_4b, HJ095_4c, HJ097_1-HJ097_4, HJ098_1-HJ098_4, HJ099_1-
HJ099_4

Wave 7:

JJW006a1 - JJW006a4, JJW006b1 - JJW006b4, JJW006c1 - JJW006c4, JJW006d1 - JJW006d4,
JJW009a, JJW009b, JJW009c, JJW009d, JJW010a, JJW010b, JJW010c, JJW010d, JJW011a,
JJW011b, JJW011c, JJW011d

Wave 8:

KJW006a1 - KJW006a4, KJW006b1 - KJW006b4, KJW006c1 - KJW006c4, KJW006d1 -
KJW006d4, KJW009a, KJW009b, KJW009c, KJW009d, KJW010a, KJW010b, KJW010c,
KJW010d, KJW011a, KJW011b, KJW011c, KJW011d

**IRA Accounts from DC/Combination Plans: Previous Job(s) after Initial Interview
allIRABsi**

The constructed variables “allIRABsi” includes the present values of IRA accounts for respondents who reported they rolled over their DC/combination plan into an IRA account from

all jobs that were terminated after the respondents' first interview as of Wave *i*, where *i*=1, 4, and 7.⁵⁹

The allIRABs1 includes RpdvIRAB94_f2x, RpdvIRAB96_g3x, RpdvIRAB98_g4x, RpdvIRAB00_g5x, RpdvIRAB02_J6x, RpdvIRAB04_J7x, and/or RpdvIRAB06_J8x. Those are present values of IRA accounts from a terminated job reported in Wave 2, Wave 3,... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable "allIRABs4" includes RpdvIRAB00_g5x, RpdvIRAB02_J6x, RpdvIRAB04_J7x, and/or RpdvIRAB06_J8x. This variable is constructed for the War Baby cohort where they were first interviewed in Wave 4.

The constructed variable "allIRABs7" includes RpdvIRAB06_J8x. This variable is constructed for the Early Boomer cohort, when they first were interviewed in Wave 7. This variable includes the present value of IRA accounts as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they rolled over their benefits into IRA accounts from that job's pension.

How Constructed:

Present values of IRA accounts (pdvIRAB) are constructed for respondents who reported a DC (type B) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. From Wave 2 to Wave 5, one response was allowed to the disposition question of DC and combination plans.⁶⁰ Any respondent who reported s/he rolled over her /his account into an IRA was asked how much is in

⁵⁹ These IRA accounts are rolled over benefits from DC/combination plans. There is another set of constructed IRA account variables. Those are from DB plans. IRA accounts rolled over from DB/combination plans are identified by IRAA and from DC plans by IRAB. The IRAA variables are described earlier in the text.

⁶⁰ In Wave 2, there was no disposition question for the DC part of combination plans.

that account now. From Wave 6 forward, multiple responses were allowed. As a result, respondents who reported they had rolled over some of their account into an IRA and for the rest they had made another choice were asked about the amount they rolled in. Otherwise, the amount that was rolled into an IRA would be the amount of their DC account when the job was terminated.

For constructing the present value of IRA accounts, we have used IRA's current account balances for Waves 2 to 5. For Wave 6 forward, we have adjusted the present value of the IRA accounts by 5.8 percent for each of the years between the time when those jobs ended and the base year of the interview year they were reported. In the next step, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of the present value of IRA accounts to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed value to earnings ratio is multiplied by earnings to calculate the missing amount of accounts. Where necessary, earnings are imputed for respondents with missing earnings information. Present values of IRA accounts are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of IRA Accounts- from Previous Jobs after Initial Interview:

The allIRABs1 includes RpdvIRAB94_f2x, RpdvIRAB96_g3x, RpdvIRAB98_g4x, RpdvIRAB00_g5x, RpdvIRAB02_J6x, RpdvIRAB04_J7x, and/or RpdvIRAB06_J8x. The "allIRABs4" includes RpdvIRAB00_g5x, RpdvIRAB02_J6x, RpdvIRAB04_J7x, and/or RpdvIRAB06_J8x. Those who reported being currently employed in Wave 4 and then in Wave 5 reported that that job was terminated are asked about the pension from that job.

The constructed variable “allIRABs7” includes RpdvIRAB06_J8x. This variable includes the present values of IRA accounts for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had their benefits from that job rolled over into an IRA account.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. In Wave 2, respondents with a combination plan were not asked about the disposition of the account part of that plan. We assumed the account balance was left to accumulate.
4. From Wave 6 forward, the disposition question and its follow-up for the account part of the combination plan is combined with the disposition questions for DC plans. In previous waves there were two sets of questions.
5. From Wave 2⁶¹ to Wave 5, one response was allowed for the disposition question of DC and combination plans. Any respondent who reported s/he rolled over her/his account into an IRA was asked about current account balances.
6. From Wave 6 forward, multiple responses were allowed. If respondents had more than one response, they were asked how much the rollover amounted to. Otherwise they were not asked this question. Either respondents had one response or multiple responses. They were not asked about current IRA account balances.

Variables Used:

Wave 2:

W3504, W4201, W4801, W4898,
W3574, W3575, W3593, W4275, W4276, W4298,

⁶¹ In Wave 2, there was no disposition question for the account part of combination plans.

W4863, W4882, W4968, W4971, W4987

Wave 3:

E2631, E2668, E2690M1, E2690M2, E2690M3, E2701

Wave 4:

F3135, F3189, F3212M1, F3212M2, F3212M3, F3223

Wave 5:

G3371, G3438, G3463001, G3463002, G346303, G3463007, G3463008, G3463013, G3473_1-G3473_4

Wave 6:

HJ024, HJ064, HJ107_1a, HJ107_1b, HJ107_1c, HJ107_2a, HJ107_2b, HJ107_2c, HJ107_3a, HJ107_3b, HJ107_3c, HJ107_4a, HJ107_4b, HJ107_4c, HJ127_1-HJ127_4

Wave 7:

JJ024, JJ064, JJW021a1 - JJW021a4, JJW021b1 - JJW021b4, JJW021c1 - JJW021c4, JJW021d1 - JJW021d4, JJW021a1 - JJW021a4, JJW033a, JJW033b, JJW033c, JJW033d

Wave 8:

KJ024, KJ064, KJW021a1 - KJW021a4, KJW021b1 - KJW021b4, KJW021c1 - KJW021c4, KJW021d1 - KJW021d4, KJW021a1 - KJW021a4, KJW033a, KJW033b, KJW033c, KJW033d

**Remaining Annuities from DC/Combination Plans: Previous Job(s) after Initial Interview
allANNsi**

The constructed variables “allANNsi” includes the present values of remaining annuities for respondents who reported they converted their DC account to an annuity from all jobs that were terminated after respondents’ first interview as of Wave i, where i=1, 4, and 7.

The allANNs1 includes RpdvANNremain94_f2x, RpdvANNremain96_g3x, RpdvANNremain98_g4x, RpdvANNremain00_g5x, RpdvANNremain02_J6x, RpdvANNremain04_J7x, and/or RpdvANNremain06_J8x. Those are present values of Remaining annuities from a terminated job reported in Wave 2, Wave 3,... or Wave 8. This

variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable “allANNs4” includes RpdvANNremain00_g5x, RpdvANNremain02_J6x, RpdvANNremain04_J7x, and/or RpdvANNremain06_J8x. This variable is constructed for the War Baby cohort in Wave 4 when they were first interviewed. Those who reported having current employment in Wave 4, and then in Wave 5 or later waves reported that that job was terminated, are asked about the detail of the pension from that job.

The constructed variable “allANNs7” includes rpdvANNremain06_J8x. This variable is constructed for the Early Boomer cohort, as of when they were first interviewed in Wave 7. This variable includes the present value of remaining annuities as of 2006 for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had converted their benefits into an annuity from that job’s pension.

How Constructed:

Present values of remaining annuities (pdvANN) are constructed for respondents who reported a DC (type B) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. From Wave 2⁶² to Wave 5, one response was allowed to the disposition question of DC and combination plans. Any respondent who reported s/he converted her /his DC\combination account into an annuity was asked: how old were you when that annuity started and how much are the benefits per month or year? From Wave 6 forward, multiple responses were allowed. As a result, respondents who reported they had converted some of their account into an annuity and for the rest they had made another choice, were asked about the amount they converted. Otherwise, the amount that was converted would be the amount of their DC account when the job was terminated.

⁶² In Wave 2, there was no disposition question for the account part of combination plans.

For constructing the present value of remaining annuities, first we have converted the amount per month to amount per year for those who reported an amount per month. Second, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of present value of the amount of annuities per year to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed value to earnings ratio is multiplied by earnings to calculate the missing amount of annuities. Where necessary, earnings are imputed for respondents with missing earnings information. Third, we have calculated the present value of the remaining annuities by using 5.8 percent for each of the years between the age of the respondent in wave i and 120 years of age. This value is also adjusted by the survival probability of living each year conditional on being alive in 1992, 1998, or 2004. Present values of expected benefits are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of Remaining Annuities- from Previous Jobs after Initial Interview:

The allANNs1 includes RpdvANNremain94_f2x, RpdvANNremain96_g3x, RpdvANNremain98_g4x, RpdvANNremain00_g5x, RpdvANNremain02_J6x, RpdvANNremain04_J7x, and/or RpdvANNremain06_J8x. The “allANNs4” includes RpdvANNremain00_g5x, RpdvANNremain02_J6x, RpdvANNremain04_J7x, and/or RpdvANNremain06_J8x

The constructed variable “allANNs7” includes RpdvANNremain06_J8x. This variable includes the present values of remaining annuities for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had their benefits from that job converted into an annuity.

Cross Wave Differences:

1. In Waves 2, 3, and 4, respondents are asked about only one pension plan from their previous interview employment.
2. From Wave 5 forward, respondents are asked about up to four plans.
3. In Wave 2, respondents with a combination plan were not asked about the disposition of the account part of that plan. We assumed the account balance was left to accumulate.
4. From Wave 6 forward, the disposition question and its follow-up for the account part of the combination plan is combined with the disposition questions for DC plans. In previous waves there were two sets of questions.
5. From Wave 2⁶³ to Wave 5, one response was allowed for the disposition question of DC and combination plans. Any respondent who reported s/he converted her/his account into an annuity was asked about the amount of that annuity per month or year.
6. From Wave 6 forward, multiple responses were allowed. If respondents had more than one response, including converting to an annuity, they were asked how much they converted to that annuity. Otherwise, they were not asked this question. Either respondents had one response or multiple responses; they were asked about the amount of their annuity per month or year.
7. In Waves 2 to 5, the code values for the “Per” unit of annuities are 1. Hour, 2. Week, 3. Bi-weekly, 4. Month, and 6. Year. From Wave 6 forward, code values are 4. Month and 6. Year.

Variables Used:

Wave 2:

⁶³ In Wave 2, there was no disposition question for the account part of combination plans.

W3605, W4310, W4894, W4999, W3606, W4311, W4895, W5000

Wave 3:

E2686, E2718, E2687, E2719,

Wave 4:

F3208, F3240, F3209, F3241

Wave 5:

G3460_1-G3460_4, G3490_1-G3490_4, G3461_1-G3461_4, G3491_1-G3491_4

Wave 6:

HJ103_1-HJ103_4, HJ104_1-HJ104_4

Wave 7:

JJW015a, JJW015b, JJW015c, JJW015d, JJW016a, JJW016b, JJW016c, JJW016d

Wave 8:

KJW015a, KJW015b, KJW015c, KJW015d, KJW016a, KJW016b, KJW016c, KJW016d

**Transfers from DC/Combination Plans: Previous Job(s) after Initial Interview
allTRANSFsi**

The constructed variables “allTRANSFsi” includes the present values of transferred amounts for respondents who reported they transferred their DC (type B) or combination (type AB/Both) plan to the new employer from all jobs after Wave 4 that were terminated after respondents’ first interview as of Wave *i*, where *i*=1, 4, and 7. In Waves 2 to 4, the “Transferred to New Employer” was not included in the list of responses in the disposition question for DC/combination plan.

The allTRANSFs1 includes Rpdvtransf_g5x, Rpdvtransf_J6x, Rpdvtransf_J7x, and/or Rpdvtransf_J8x. Those are present values of transferred amounts from a terminated job reported in Wave 5, Wave 6, Wave 7, or Wave 8. This variable is constructed for respondents

from the original HRS cohort who may have left their 1992 employment in a later wave after Wave 4.

The constructed variable “allTRANSFs4” includes RpdvTRANSF_g5x, RpdvTRANSF_J6x, RpdvTRANSF_J7x, and/or RpdvTRANSF_J8x. This variable is constructed for the War Baby cohort as of when they were first interviewed in Wave 4. Those who reported having a current employment in Wave 4 and then in Wave 5 or later waves reported that that job was terminated, are asked about the details of the pension from that job.

The constructed variable “allTRANSFs7” includes RpdvTRANSF_j8x. This variable is constructed for the Early Boomer cohort, as of when they were first interviewed in Wave 7. This variable includes the present value of the transferred amount for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had transferred their benefits to the new employer.

How Constructed:

Present values of the transferred amount (pdvTRANSF) are constructed for respondents who reported a DC (type B) or combination (type AB/Both) plan after their previous interview employment was terminated. They are asked about the disposition of that plan. In Wave 5, one response was allowed to the disposition question of DC and combination plans. Any respondent who reported s/he transferred her /his account to the new employer was not asked how much was transferred. The amount that was transferred to the new employer would be the amount of their DC account when the job was terminated. From Wave 6 forward, multiple responses were allowed. As a result, respondents who reported they had transferred some of their account to the new employer and for the rest they had made another choice, were asked about the amount they

transferred. Otherwise, the amount that was transferred to the new employer would be the amount of their DC account when the job was terminated.

For constructing the present value of the transferred amount, we have adjusted the present value of the transferred amount by 5.8 percent for each of the years between the time when those job ended and the base year of the interview year. In the next step, we have imputed for respondents who had missing values. The imputation involves two steps. First, the ratio of present value of the transferred amount to earnings is calculated and imputed through hot decking where necessary for respondents with missing accounts. Then the imputed value to earnings ratio is multiplied by earnings to calculate the missing amount of the accounts. Where necessary, earnings are imputed for respondents with missing earnings information. Present values of the transferred amount are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of the Transferred Amount- from Previous Jobs After Initial Interview:

The allTRANSFs1 includes RpdvTRANSF_g5x, RpdvTRANSF_j6x, RpdvTRANSF_j7x, and/or RpdvTRANSF_j8x.⁶⁴ The “R” part of the name “RpdvTRANSF_f2x” indicates the value is in 1992 dollars. The “allTRANSFs4” includes RpdvTRANSF_g5x, RpdvTRANSF_J6x, RpdvTRANSF_J7x, and/or RpdvTRANSF_J8x. The constructed variable “allTRANSFs7” includes RpdvTRANSF_j8x. This variable includes the present values of the transferred amount for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had their benefits from that job transferred to the new employer.

Cross Wave Differences:

⁶⁴ In Waves 2 to 4, “Transferred to New Employer” was not included in the list of responses in the disposition question for DC/combo plan. Therefore, there would not be any indication of the transferred amount from Waves 2, 3, or 4.

1. In Waves 2, 3, and 4, respondents are asked about only one plan. Plan values represent the values from only one pension plan.
2. From Wave 5 forward, respondents are asked about up to four plans. Plan values represent the sum of all plans (up to four) from each payout option.
3. In Waves 2, 3, and 4, “Transferred to New Employer” was not included in the list of possible responses to the disposition question for DC/combination plans.
4. From Wave 6 forward, the disposition question and its follow-up for the account part of the combination plan is combined with the disposition questions for DC plans. In previous waves there were two sets of questions.
5. In Wave 5, one response was allowed for the disposition question of DC and combination plans. Any respondent who reported s/he transferred her/his account to the new employer was not asked about the amount transferred.
6. From Wave 6 forward, multiple responses were allowed. If respondents had more than one response, they were asked how much they had transferred. Otherwise, they were not asked this question.

Variables Used:

Wave 5:

G3371, G3438, G3456_1-G3456_4, G3457_1-G3457_4, 3486_1-G3486_4, G3487_1- G3487_4

Wave 6:

HJ024, HJ064, HJ091_1 – HJ091_4, HJ092_1 – HJ092_4, HJ093_1 – HJ093_4, HJ095_1a, HJ095_1b, HJ095_1c, HJ095_2a, HJ095_2b, HJ095_2c, HJ095_3a, HJ095_3b, HJ095_3c, HJ095_4a, HJ095_4b, HJ095_4c, HJ106_1-HJ106_4

Wave 7:

JJ024, JJ064, JJW002_1 – JJW002_4, JJW006a1 - JJW006a4, JJW006b1 - JJW006b4, JJW006a1, JJW006b1, JJW006c1, JJW006d1, JJW006a2, JJW006b2, JJW006c2, JJW006d2, JJW002a, JJW002b, JJW002c, JJW002d

Wave 8:

KJ024, KJ064, KJW006a1, KJW006b1, KJW006c1, KJW006d1, KJW006a2, KJW006b2, KJW006c2, KJW006d2, KJW002a, KJW002b, KJW002c, KJW002d

**Withdrawals from DC/Combination Plans: Previous Job(s) after Initial Interview
allWITDRsi**

The constructed variables “allWITDRsi” includes the present values of withdrawn amounts for respondents who reported they withdrew their DC/combination from all jobs that were terminated after respondents’ first interview as of Wave i, where i=1, 4, and 7.

The allWITDRs1 includes RpdvWITDR_f2x, RpdvWITDR_g3x, RpdvWITDR_g4x, RpdvWITDR_g5x, RpdvWITDR_J6x, RpdvWITDR_J7x, and/or RpdvWITDR_J8x. Those are present values of the withdrawn amount from a terminated job reported in Wave 2, Wave 3,... or Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment in a later wave.

The constructed variable “allWITDRs4” includes RpdvWITDR_g5x, RpdvWITDR_J6x, RpdvWITDR_J7x, and/or RpdvWITDR_J8x. This variable is constructed for the War baby cohort when it was first interviewed in Wave 4. The constructed variable “allWITDRs7” includes RpdvWITDR_J8x. This variable is constructed for the Early Boomer cohort, first interviewed in Wave 7. This variable includes the present value of the withdrawn amounts for respondents who reported in Wave 8 that their Wave 7 job was terminated and that they had withdrawn the money from that job’s DC/combination plan.

How Constructed:

Present values of the withdrawn amount (pdvWITDR) is constructed for respondents who reported a DC (type B) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. From Waves 2 to 5, respondents who reported having withdrawn their account were not asked how much money was withdrawn. Since only one response to the disposition question was allowed, the amount withdrawn would be equal to the DC/combination balance at the job termination. In Wave 6, there were multiple responses allowed in answer to the disposition question. But respondents who reported ‘Withdrew the Money’ were not asked: how much money did you withdraw? Since all respondents (except one) who reported “withdrew the money” had not made another choice besides withdrawing the account, we used the account balance at termination for the amount withdrawn. From Wave 7 forward, multiple responses were allowed. Respondents were asked about the amount of money withdrawn if they had made another choice. That is, respondents who reported they had withdrawn some of their account, and for the rest they had made another choice, were asked about the amount they withdrew.

In constructing the present value of the withdrawn amounts, we discount the present value of the withdrawn amount by 5.8 percent for each of the years between the time the job ended and the base interview year for the cohort. Next we impute for respondents who had missing values. The imputation involves two steps. First, the ratio of present value of the amount withdrawn to earnings is calculated. It is imputed through hot decking where necessary for respondents with missing accounts. Then the imputed value to earnings ratio is multiplied by earnings to calculate the missing amount of withdrawn. Where necessary, earnings are imputed for respondents with missing earnings information. Present values of the withdrawn amounts are

all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of the withdrawn amount- from Previous Jobs After Initial Interview:

The allWITDRs1 includes RpdvWITDR_f2x, RpdvWITDR_g3x, RpdvWITDR_g4x, RpdvWITDR_g5x, RpdvWITDR_J6x, RpdvWITDR04_J7x, and/or RpdvWITDR_J8x. The “R” part of the name “RpdvWITDR_f2x” indicates the value is in 1992 dollars. The “allWITDRs4” includes RpdvWITDR_g5x, RpdvWITDR_J6x, RpdvWITDR_J7x, and/or RpdvWITDR_J8x. The constructed variable “allWITDRs7” includes RpdvWITDR_J8x. This variable includes the present values of the withdrawn amount for respondents who reported in Wave 8 that their Wave 7 job was terminated and had they withdrew their benefits from that job.

Cross Wave Differences:

1. In Waves 2 to 4, respondents are asked about only one plan. Plan Values represent the values from only one pension plan.
2. From Wave 5 forward, respondents are asked about up to four plans. Plan values represent the sum of all plans (up to four) from each payout option.
3. In Waves 2 to 6, respondents were not asked about the amount of money they withdrew.
4. From Wave 6 forward, the disposition question for the account part of the combination plan is combined with the disposition questions for DC plans. In previous waves there were two sets of questions.
5. In Wave 6, multiple responses were allowed for the disposition question. But respondents were not asked about the amount of money they withdrew⁶⁵.

⁶⁵ There were two respondents who had more than one choice beside withdrawing the money. One respondent (hhidpn=023831010) had rolled over some of his account into an IRA and had withdrawn some. The amount

6. From Wave 7 forward, multiple responses were allowed. If respondents had more than one response, they were asked how much did they withdraw. Otherwise, they were not asked this question.

Variables Used:

Wave 2:

W3504, W4201, W4801, W4898,
W3601, W3602, W4306, W4307, W4890, W4891,
W4995, W4996

Wave 3:

E2631, E2668, E2682, E2683, E2714, E2715

Wave 4:

F3135, F3189, F3204, F3205, F3236, F3237

Wave 5:

G3371, G3438, G3456_1 - G3456_4, G3457_1 - G3457_4, G3482_1-G3482_4, G3487_1-
G3487_4

Wave 6:

HJ024, HJ064, HJ091_1-HJ091_4, HJ095_1a, HJ095_2a, HJ095_3a, HJ095_4a, HJ095_1b,
HJ095_2b, HJ095_3b, HJ095_4b

Wave 7:

JJ024, JJ064, JJW002a, JJW002b, JJW002c, JJW002d, JJW006a1, JJW006b1, JJW006c1,
JJW006d1, JJW006a2, JJW006b2, JJW006c2, JJW006d2, JJW056a, JJW056b, JJW056c,
JJW056d

Wave 8:

KJ024, KJ064, KJW002a, KJW002b, KJW002c, KJW002d, KJW006a1, KJW006b1,
KJW006c1, KJW006d1, KJW006a2, KJW006b2, KJW006c2, KJW006d2, KJW056a, KJW056b,
KJW056c, KJW056d

**Receiving/Received Installments from DC/Comb. Plans: Prev. Jobs after Initial Interview
allINSTALLSi**

withdrawn is the difference between his account balance at the time of leaving employment and the amount rolled over into an IRA. The other respondent (hhidpn=058869010) had "Other" as her second choice. Since it is not known how much was allocated for the other choice, we included that in her withdrawn amount.

For the first time in 2006, respondents were asked about whether their DC (type B) or combination (type AB/Both) account was distributed in the form of installments. That means only respondents who reported their job was terminated just before Wave 8's interview and had a DC/combination plan from that job had a chance to report received/receiving installments.

The constructed variables "allINSTALLsi" includes the present values of installment amounts for respondents in Wave 8 who reported receiving installments from their DC/combination from a previous job that was terminated after the respondents' first interview as of Wave i, where i=1, 4, and 7.

The allINSTALLs1 includes RpdvINSTALL_j8x. That is the present value of the amount of benefits that was received or is being received as installments from a terminated job reported in Wave 8. This variable is constructed for respondents from the original HRS cohort who may have left their 1992 employment just before Wave 8.

The constructed variable "allINSTALLs4" includes RpdvINSTALL_j8x. This variable is constructed for the War Baby cohort first interviewed in Wave 4. Those who reported having current employment in Wave 4 and then in Wave 8 or later waves reported that that job was terminated, are asked about the details of pensions from that job.

The constructed variable "allINSTALLs7" includes RpdvINSTALL_j8x. This variable is constructed for the Early Boomer cohort, first interviewed in Wave 7. It is the present value of the amount of benefits that were received or were being received as installments from a terminated job reported in Wave 8.

How Constructed:

The present value of the installments (RpdvINSTALL_j8x) is constructed for respondents who reported a DC (type B) or combination (type AB/Both) plan when their previous interview job was terminated. They are asked about the disposition of that plan. For the first time in Wave

8, respondents who reported that their previous interview employment was terminated had a chance to report receiving or having received installments from their DC/combo plan. Respondents who reported received/receiving installments are asked how much in total did they receive in installments.

For constructing the present value of the installments, we have adjusted the reported amount of installments by 5.8 percent for each of the years between the time when Wave's 7 job was ended and the base year, 2006. In the next step, we have imputed for respondents who had missing values. Present values of the installments are all in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Cross Wave Differences:

In Waves 2 to 7, "Received or Receiving Installments" was not included as one of the possible responses to the disposition question for DC/combo plans. This response was included for the first time, in Wave 8.

Variables Used:

Wave 8:

KJ024, KJ064, KJW006a1, KJW006b1, KJW006c1, KJW006d1, KJW006a2, KJW006b2, KJW006c2, KJW006d2, KJW063a, KJW063b, KJW063c, KJW063d

Number of Actual Pension Plans: Household Level HHPlansi

This variable "HHPlansi" indicates the number of pension plans that households are receiving benefits from in Wave i, where $i=1, 2, \dots, 8$. This information is reported by the financial respondent (FINR) in the Assets and Income section of each Wave.

How Constructed:

The number of pension plans from which the respondent is currently receiving income is reported by financial respondents for themselves and their spouses, if married. In each wave except Wave 1 financial respondents are asked about the number of plans. In Wave 1, they (financial respondents) are not asked about the number of plans. They are asked if they or/and their spouse receive a retirement pension. If either the financial respondent or his/her spouse reported receiving pension income, we assigned one pension plan to the household. If both members of the household were receiving pension income, the number assigned is two.

From Wave 2 forward, if the financial respondent reports s/he is currently receiving pension income, the respondent is asked both about his/her number of pension plans and about his/her spouse's number of plans, assuming the spouse was reported as receiving pension income also.

Cross wave Difference:

1. In Wave 1, financial respondents are asked if they received any income from retirement pensions, or annuities, or both last year. In other waves, they are asked if they currently are receiving any income from a pension.
2. In Wave 1, “receiving income from annuities” is included in the wording of the question. If the answer is yes, then they are asked to identify the income source as “retirement pension”, “annuities” or “both”. In other waves, questions about annuities are entirely separate from pension income questions.

Variables Used:

Wave 1:

V5716x, V5725x

Wave 2:

W6072, W6073, W6074, W6093, W6094

Wave 3:

E4210, E4211, E4212, E4234, E4235

Wave 4:

F4970, F4971, F4992, F4994, F4995

Wave 5:

G5425, G5426, G5427, G5449, G5450

Wave 6:

HQ216, HQ217, HQ218, HQ243, HQ244

Wave 7:

JQ216, JQ217, JQ218, JQ243, JQ244

Wave 8:

KQ216, KQ217, KQ218, KQ243, KQ244

Actual Pension Income: Household Level
HHPenInci

This variable “HHPenInci” is the sum of pension income received by the respondent and his/her spouse, if married, for each household in Wave i , where $i = 1, 2, \dots, 8$. This information is reported by the financial respondent ($\text{finr}=1$) in the Assets and Income⁶⁶ section of each wave.

How Constructed:

Financial respondents are asked about the amount of pension income they received last month, for up to two pension plans, in each wave. In Wave 1, they were asked how much did you receive in 1991. In other waves, they were asked how much they received last month. For constructing the household pension income, we have used imputed monthly pension income. For Waves 1 to 7, the imputations were done by HRS staffs and they are available on the HRS website. For Wave 8, the imputations are from Rand. We have summed up the financial

⁶⁶ Pension income questions in this section are designed to extract current monthly income information from DB plans. However, from Wave 4 forward, several questions were added after the amount of pension income question. Those new questions were meant to help users determine the type of pension plan. Those questions ask; if the respondent could choose to receive a larger or smaller amount; if they could withdraw some or all of the money; and how much is in this pension account? We have not identified plan types from pension incomes or accounts here.

respondents income and his/her spouse's income if married. Values are in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Cross wave Difference:

1. In Wave 1, financial respondents are asked about income from only one pension plan. From Wave 2 forward, they are asked about up to three pension incomes. In those waves, the pension income in each wave is the sum of all pension incomes.
2. In Wave 1, the wording of the stem question is somewhat different from other waves. In Wave 1, the question asks if the respondent received any pension income last year. But in other waves the question asks if the respondent is currently receiving pension income.
3. In Wave 1, "receiving income from annuities" is included in the wording of the question. If the answer is yes, then they are asked to identify the income source as "retirement pension", "annuities" or "both". In other waves, questions about annuities are entirely separate from pension income questions.
4. From Wave 2 forward, there are follow-up questions about automatic adjustments for changes in the cost of living, if federal taxes withheld, and if the benefit is for life.
5. From Wave 3 forward, bracket questions are added for Don't Know and Refusals for the amount of pension income.
6. From Wave 4 forward, there are several new questions pointing to the type of pension, and in particular attempting to determine whether it is a DC plan. Those questions are; if the covered individual could choose to receive larger or smaller amounts, if s/he could withdraw some or all of the money, and how much is in this pension account.

Variables Used:

Wave 1:

V5716x, V5725x

Wave 2:

W6075x, W6083x, W6091x, W6095x, W6103x, W6111x

Wave 3:

E4214_1x, E4214_2x, E4232x, E4237_1x, E4237_2x, E4258x

Wave 4:

F4974_1x, F4974_2x, F4992x, F4997_1x, F4997_2x, F5018

Wave 5:

G5429_1x, G5429_2x, G5447x, G5452_1x, G5452_2x, G5473X,

Wave 6:

HQ220_1x, HQ220_2x, HQ238x, HQ246_1x, HQ246_2x

Wave 7:

JQ220_1x, JQ220_2x, JQ238x, JQ246_1x, JQ246_2x

Wave 8:

R8Mpen1, R8Mpen2, R8Mpen3, S8Mpen1, S8Mpen2, S8Mpen3

Chapter 12

The Changing Role of Pensions in Total Wealth

A next natural step is to consider pensions in the context of the total wealth accumulated by the retirement age population. Analogous to the treatment of defined benefit plans, the annual flow of Social Security benefits can be discounted and summed to form Social Security wealth, which turns out on average to be the most valuable of all retirement assets. Among others, additional assets include home equity, financial wealth, business and real estate wealth, and individual retirement accounts. This chapter measures how pensions vary as a share of total wealth over the course of the Health and Retirement Study. Following is the list of constructed variables used in constructing the tables in this chapter.

Social Security Wealth SSWbenHH_Wi

The constructed variable “SSWbenHH_Wi” is the Social Security wealth for households in Wave i , where $i=1, 4, 7$. The Social Security wealth variables were constructed for individuals by the HRS. The wealth includes the expected present value of all benefits; including own, spouse, survivor benefits. Social Security benefits are based on the “if claim now” scenario for each member of the household. We have used version 3 of the data prepared by the HRS staff.

How Constructed:

The Social Security wealth is measured as if the respondent quits now and claims at the earliest possible date. It equals the sum of own, spouse, and any survivor benefits for both members of any qualifying two person households or divorced households. For those who are

already receiving benefits, the actual amount of the benefit is included. The data is constructed for each respondent and for the household.

$$\text{SSWbenHH_W1} = \text{R1SSWRCA} + \text{R1SSWSCACA} + \text{R1SSWWCACA} + \text{S1SSWRCA} + \text{S1SSWSCACA} + \text{S1SSWWCACA} + \text{R1SSWRBC} + \text{R1SSWSBC} + \text{R1SSWWBC} + \text{S1SSWRBC} + \text{S1SSWSBC} + \text{S1SSWWBC}$$
$$\text{SSWBENHH_W4} = \text{R4SSWRCA} + \text{R4SSWSCACA} + \text{R4SSWWCACA} + \text{S4SSWRCA} + \text{S4SSWSCACA} + \text{S4SSWWCACA} + \text{R4SSWRBC} + \text{R4SSWSBC} + \text{R4SSWWBC} + \text{S4SSWRBC} + \text{S4SSWSBC} + \text{S4SSWWBC}$$
$$\text{SSWBENHH_W7} = \text{R7SSWRCA} + \text{R7SSWSCACA} + \text{R7SSWWCACA} + \text{S7SSWRCA} + \text{S7SSWSCACA} + \text{S7SSWWCACA} + \text{R7SSWRBC} + \text{R7SSWSBC} + \text{R7SSWWBC} + \text{S7SSWRBC} + \text{S7SSWSBC} + \text{S7SSWWBC}$$

**House Value, Real Estate, Business Assets, IRA Assets, Financial Assets,
Net Value of Vehicles**

These variables are taken from RandHRSi 2009 data.

Variables Used

Wave 1:

HOUSE Value: H1ATOTH, H1ANETHB
REALESTATE1: H1ARLES
BUSINESS1: H1ABSNS
FINANCE1: H1ATOTF
IRAS1: H1AIRA
Vehicle1: H1ATRAN

Wave 4:

HOUSE4: H4ATOTH, H4ANETHB
REALESTATE4: H4ARLES
BUSINESS4: H4ABSNS
FINANCE4: H4ATOTF
IRAS4: H4AIRA
Vehicle4: H4ATRAN

Wave 7:

HOUSE7: H7ATOTH H7ANETHB
REALESTATE7: H7ARLES
BUSINESS7: H7ABSNS

FINANCE7: H7ATOTF
IRAS7: H7AIRA
Vehicle7: H7ATRAN

Household Total Pension Values **HHtotpeni**

The constructed variable “HHtotpeni” indicates total pension values for households. The pension values are from all jobs held by the respondent and his/her spouse and are calculated as of Wave i ($i=1, 4,$ and 7). The present value of DB and DC plans are from the self-reported data.

How Constructed:

This variable is described in detail in Chapter 9.

Chapter 13

Conclusion

In this book, we have taken advantage of the scope and depth of the pension data reported by the Health and Retirement Study to paint a rich and detailed picture of the pensions held by the retirement age population. The period from 1992 through 2006 has witnessed significant changes in pensions, and these are reflected in the HRS data. Using complementary information from the HRS, it also has been possible to relate our findings about the pensions held by the HRS population to their other sources of retirement wealth.

Major findings have been summarized at the end of each chapter. By way of final discussion, we provide an overview of the wide range of pension outcomes analyzed in this book and then turn to a few major areas of policy concern. We indicate the relevance of our findings to those policy topics. Following that is a preliminary analysis of the vulnerability of the HRS population to the financial downturn of 2008–2009. We conclude with a word to researchers who would use the HRS pension data.

The variables used in this concluding discussion are as follows:

House Value, Real Estate, Business Assets, Financial Assets, Net Value of Vehicles, Direct Stock Holdings

These variables are taken from RandHRS, version I, 2009 data.

Variables Used

Wave 8:

HOUSE8: H8ATOTH, H8ANETHB

REALESTATE8: H8ARLES

BUSINESS8: H8ABSNS

FINANCE8: H8ATOTF

Vehicle8: H8ATRAN
Stocks: H8ASTCK

IRA Accounts and Share of IRA accounts in Stocks totIRAx, IRA_stck8

The constructed variable “totIRAx” indicates the sum of the money that is in households’ IRA accounts. This information is collected in the Assets and Income⁶⁷ section of the survey.

The constructed variable “IRA_stck8” indicates the share of IRA accounts that is in stocks. This information is collected in the Assets and Income section of the survey.

How Constructed:

The data in the Assets and Income section of the survey is reported at the household level. In each household, the respondent who is identified as the financial respondent answers the questions for himself or herself and his/her spouse if married/partnered.

The financial respondents are asked if they have any money or assets held in an IRA or Keogh account. If the response is affirmative, they are asked about the number of such accounts and the amount in those accounts. The “totIRAx” is constructed based on the responses to those questions. Households with missing values have their values imputed⁶⁸.

Financial respondents are also asked if the account is invested in stocks and what percentages. For constructing this variable (IRA_stck8) we have used responses to the percentage of the IRA accounts that are in stocks question. We multiplied the percentage of the IRA assets invested in the stocks by the amount of the account for each IRA account, up to three

⁶⁷ The information about IRA assets in Chapter 12 is from the RANDHRS data file. But since we need the information about the amount of IRA invested in stocks and that information is not provided by RANDHRS, we impute both the amount of IRA accounts and their shares held in the stocks.

⁶⁸ Covariates include the financial respondents’ gender, marital status, if IRA accounts have been imputed by Rand, and the IRA account balances.

accounts. Then the values of IRA accounts invested in stocks are summed up. Imputed values are used for households with missing values.

Variables Used:

Wave 8:

KQ514_1, KQ514_2, KQ514_3

**Social Security Wealth
SSWHHIN06X**

The Social Security wealth variable is the household Social Security wealth in 2006 (Wave 8). The source of the data is the Social Security wealth data provided by the HRS.

How Constructed:

The HRS has provided the Social Security wealth data for respondents in Waves 1, 4, and 7. The Social Security wealth in 2006 is constructed by using the wealth values in 2004⁶⁹ and adjusted it upward by 5.8% for 2 years. If the 2004 values were missing we substituted the 1998 or 1992 values if available. The 1998 and 1992 values are adjusted by 5.8 percent for each year accordingly. Households with missing values have their values imputed.

Variables Used:

SSWBENHH_W1, SSWBENHH_W4, SSWBENHH_W7

**Pension Value
HHallpens_w8**

⁶⁹ In Chapter 12 we describe how the 2004 Social Security wealth is constructed.

The constructed variable “HHallpens_w8” indicates the household’s pension wealth from all DB, DC, and combination/both plans from current, last, and previous jobs as of Wave 8 (2006).

How Constructed:

Households’ total pension wealth is calculated by first constructing total pension wealth for each respondent. This process is described in Chapter 9 for the constructed variable “SRtotpeni”. The construction of pension wealth for each individual is similar to the wealth construction in Wave 7 (2004). There are three differences. a) Instead of using the wealth from current job in Wave 7, we use the wealth from current job in Wave 8. b) We add in pension values for DB, DC, and combination/both pension plans from jobs terminated between 2004 and 2006. c) We adjust pension values from each previous job by 5.8 percent for each year from a job’s termination date to 2006.

For constructing a households’ wealth, the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the pension wealth. Then households’ total pension wealth is constructed by summing the primary respondent’s and his/her spouse’s pension wealth. The pension value includes the imputed values. All values are adjusted to 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Components of the Wealth:

Wealth includes the pension value from all DB, DC, and combination/both plans from respondents’ current, last, and all previous jobs.

Current Job: The wealth from current job includes the prorated present value of expected future benefits from the most important DB or combination plan (prsrDBben_xp8x) and the sum of all DC account balances (CurDCs_w8x) reported in Wave 8 (2006).

Last Job: The wealth from last job includes DB, DC, and combination/both wealth from last job reported in the K section of Wave 7, GG section of Wave 4, and G section of Wave 1. For plans that were reported in sections K, GG, and G, the DB wealth includes the present value of expected benefits for those expecting benefits in the future, and the present value of the remaining benefits in 2006 if in pay status. The DC wealth includes the sum of all DC account balances reported in sections K, GG, and G. Pension values are adjusted by 5.8 percent for each year from the year the job ended to 2006.

Previous Jobs: The wealth from previous jobs includes DB and DC wealth from respondents' previous pension jobs reported in respondents' first interview. Those are reported in sections L in Wave 7, GH in Wave 4, and H in Wave 1. In addition, the DB and DC wealth from jobs that were terminated after the respondent's first interview are included. Those pensions are reported in the FA/FB/FC section of Wave 2, G section of Waves 3 to 5, and the J section in later waves. Pension values are adjusted by 5.8 percent for each year from the year the job ended to 2006.

Constructed Variables Used:

From Current Job in Wave 8:

RprsrDBben_xp8x, RCurDCs_w8x

Previous job left after 2004 interview and before 2006

RPdvefb_J18x, RPdvefb_J28x, RPdvefb_J38x, RPdvefb_J48x,
RpdvRBremain06_J18x, RpdvRBremain06_J28x, RpdvRBremain06_J38x,
RpdvRBremain06_J48x, RKJW009ax, RKJW009bx, RKJW009cx, RKJW009dx

From Section L in Wave 7- from the new cohort:

Rpdvefb_L17x, Rpdvefb_L27x, Rpdvefb_L37x, Rpdvefb_L47x, Rpdvefb_L57x,
Rpdvefb_L67x, RpdvRBremain06_L17x, RpdvRBremain06_L27x, RpdvRBremain06_L37x,

RpdvRBremain06_L47x, RpdvRBremain06_L57x, RpdvRBremain06_L67x, RpdvACCT_L17x, RpdvACCT_L27x, RpdvACCT_L37x, RpdvACCT_L47x, RpdvACCT_L57x, RpdvACCT_L67x

From Section K in Wave 7- from the new cohort:

Rpdvefb_K17x, Rpdvefb_K27x, Rpdvefb_K37x, Rpdvefb_K47x, RpdvRBremain06_K17x, RpdvRBremain06_K27x, RpdvRBremain06_K37x, RpdvRBremain06_K47x, RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K47x

From Section J in Wave 7- from jobs terminated between 2002 and 2006 interviews:

Rpdvefb_J17x, Rpdvefb_J27x, Rpdvefb_J37x, Rpdvefb_J47x, RpdvRBremain06_J17x, RpdvRBremain06_J27x, RpdvRBremain06_J37x, RpdvRBremain06_J47x, RpdvAcct_J17x, RpdvAcct_J27x, RpdvAcct_J37x, RpdvAcct_J47x

From Section J in Wave 6- from jobs terminated between 2000 and 2002 interviews:

Rpdvefb_J16x, Rpdvefb_J26x, Rpdvefb_J36x, Rpdvefb_J46x, RpdvRBremain06_J16x, RpdvRBremain06_J26x, RpdvRBremain06_J36x, RpdvRBremain06_J46x, RpdvAcct_J16x, RpdvAcct_J26x, RpdvAcct_J36x, RpdvAcct_J46x,

From Section G in Wave 5- from jobs terminated between 1998 and 2000 interviews:

Rpdvefb_g15x, Rpdvefb_g25x, Rpdvefb_g35x, Rpdvefb_g45x, RpdvRBremain06_g15x, RpdvRBremain06_g25x, RpdvRBremain06_g35x, RpdvRBremain06_g45x, RpdvAcct_gab15x, RpdvAcct_gab25x, RpdvAcct_gab35x, RpdvAcct_gab45x, RpdvAcct_gb15x, RpdvAcct_gb25x, RpdvAcct_gb35x, RpdvAcct_gb45x

From Section G in Wave 4- from jobs terminated between 1996 and 1998 interviews:

pdvEFB_g4x, pdvRBremain06_g4x, pdvACCT_g4x

From Section GH in Wave 4- from younger spouses of WBs cohort:

RpdvEFB_ha4x, RpdvEFB_hb4x, RpdvEFB_hc4x, RpdvRBremain06_ha4x, RpdvRBremain06_hb4x, RpdvRBremain06_hc4x, RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

From Section GG in Wave 4- from younger spouses of WBs cohort:

Rpdvefb_GG4x, RpdvRBremain06_GG4x, RpdvACCT_ggb4x, RpdvACCT_ggab4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:

RpdvEFB_g3x, RpdvRBremain06_g3x, RpdvACCT_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:

RpdvEFBin06_f2x, RpdvRBremain06_f2x, Rpdvacctin06_f2x

From Section H in Wave 1: younger spouse of HRS cohort:

Rpdvefbin06_ha1x, Rpdvefbin06_hb1x, Rpdvefbin06_hc1x, RpdvRBremain06_ha1x, RpdvRBremain06_hb1x, RpdvRBremain06_hc1x, RpdvACCTin06_ha1x, RpdvACCTin06_hb1x, RpdvACCTin06_hc1x, Rv3622in06x, Rv3709in06x, Rv3809in06x

From Section G in Wave 1: younger spouse of HRS cohort:

Rpdvefbn06_g1x RpdvRBremain06_g1x, RpdvACCTin06_g1x, Rpdv3502in06x

Household Total DB Values- Wave 8

HHDBs8

The constructed variable “HHDBs8” indicates the household’s pension values from all DB plans from current, last, and previous jobs as of Wave 8 (2006). The DB values include present value of DB benefits at expected age for respondents who are not in pay status. For those who are in pay status, we include the present value of remaining DB benefits as of Wave i.

How Constructed:

For constructing total household DB values, first total DB values are calculated by summing all DB values for each respondent with a DB and/or combination/both plan(s) who reported expecting some future benefit or already receiving benefits from that plan. The DB wealth includes the present value of all DB plans that are dormant or in pay status from current, last, and previous jobs. Then the respondent who is the financial respondent “finr=1” is identified as the primary respondent in the household. The other member of the household is identified as his/her spouse in that household. The data is revised to include the primary respondent and his/her spouse’s benefits in the same record. Households’ total DB values are calculated by summing up respondents’ and their spouses’ total DB values. DB values are in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Constructed Variables Used:

From Current Job in Wave 8:

RprsrDBben_xp8x

Previous job left after 2004 interview and before 2006

RPdvefb_J18x, RPdvefb_J28x, RPdvefb_J38x, RPdvefb_J48x,

RpdvRBremain06_J18x, RpdvRBremain06_J28x, RpdvRBremain06_J38x,
RpdvRBremain06_J48x

From Section L in Wave 7- from the new cohort:

Rpdvefb_L17x, Rpdvefb_L27x, Rpdvefb_L37x, Rpdvefb_L47x, Rpdvefb_L57x,
Rpdvefb_L67x, RpdvRBremain06_L17x, RpdvRBremain06_L27x, RpdvRBremain06_L37x,
RpdvRBremain06_L47x, RpdvRBremain06_L57x, RpdvRBremain06_L67x

From Section K in Wave 7- from the new cohort:

Rpdvefb_K17x, Rpdvefb_K27x, Rpdvefb_K37x, Rpdvefb_K47x, RpdvRBremain06_K17x,
RpdvRBremain06_K27x, RpdvRBremain06_K37x, RpdvRBremain06_K47x

From Section J in Wave 7- from jobs terminated between 2002 and 2006 interviews:

Rpdvefb_J17x, Rpdvefb_J27x, Rpdvefb_J37x, Rpdvefb_J47x, RpdvRBremain06_J17x,
RpdvRBremain06_J27x, RpdvRBremain06_J37x, RpdvRBremain06_J47x

From Section J in Wave 6- from jobs terminated between 2000 and 2002 interviews:

Rpdvefb_J16x, Rpdvefb_J26x, Rpdvefb_J36x, Rpdvefb_J46x, RpdvRBremain06_J16x,
RpdvRBremain06_J26x, RpdvRBremain06_J36x, RpdvRBremain06_J46x

From Section G in Wave 5- from jobs terminated between 1998 and 2000 interviews:

Rpdvefb_g15x, Rpdvefb_g25x, Rpdvefb_g35x, Rpdvefb_g45x, RpdvRBremain06_g15x,
RpdvRBremain06_g25x, RpdvRBremain06_g35x, RpdvRBremain06_g45x

From Section G in Wave 4- from jobs terminated between 1996 and 1998 interviews:

pdvEFB_g4x, pdvRBremain06_g4x

From Section GH in Wave 4- from younger spouses of WBs cohort:

RpdvEFB_ha4x, RpdvEFB_hb4x, RpdvEFB_hc4x, RpdvRBremain06_ha4x,
RpdvRBremain06_hb4x, RpdvRBremain06_hc4x

From Section GG in Wave 4- from younger spouses of WBs cohort:

Rpdvefb_GG4x, RpdvRBremain06_GG4xggab4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:

RpdvEFB_g3x, RpdvRBremain06_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:

RpdvEFBin06_f2x, RpdvRBremain06_f2x

From Section H in Wave 1: younger spouse of HRS cohort:

Rpdvefbin06_ha1x, Rpdvefbin06_hb1x, Rpdvefbin06_hc1x, RpdvRBremain06_ha1x,
RpdvRBremain06_hb1x, RpdvRBremain06_hc1x

From Section G in Wave 1: younger spouse of HRS cohort:

Rpdvefbin06_g1x RpdvRBremain06_g1x

Household Total DC Values- Wave 8 HHDCs8

The constructed variable “HHDCs8” indicates pension values from all DC plans from current, last, and previous jobs for households as of Wave 8 (2006). The values are from self-reported data. The DC values include present values of all DC account balances from current, last, and previous jobs as of Wave 8.

How Constructed:

For constructing total household DC balances, first total DC values are calculated by summing all DC account balances for each respondent with DC accounts. Then the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is all DC account balances. Households’ total DC values are calculated by summing the respondent’s total DC values and his/her spouse’s DC account balances. DC values are in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Constructed Variables Used:

From Current Job in Wave 8:

RCurDCs_w8x

Previous job left after 2004 interview and before 2006

RKJW009ax, RKJW009bx, RKJW009cx, RKJW009dx

From Section L in Wave 7- from the new cohort:

RpdvACCT_L17x, RpdvACCT_L27x, RpdvACCT_L37x, RpdvACCT_L47x,
RpdvACCT_L57x, RpdvACCT_L67x

From Section K in Wave 7- from the new cohort:

RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K47x

From Section J in Wave 7- from jobs terminated between 2002 and 2006 interviews:

RpdvAcct_J17x, RpdvAcct_J27x, RpdvAcct_J37x, RpdvAcct_J47x

From Section J in Wave 6- from jobs terminated between 2000 and 2002 interviews:
RpdvAcct_J16x, RpdvAcct_J26x, RpdvAcct_J36x, RpdvAcct_J46x,

From Section G in Wave 5- from jobs terminated between 1998 and 2000 interviews:
RpdvAcct_gab15x, RpdvAcct_gab25x, RpdvAcct_gab35x, RpdvAcct_gab45x,
RpdvAcct_gb15x, RpdvAcct_gb25x, RpdvAcct_gb35x, RpdvAcct_gb45x

From Section G in Wave 4- from jobs terminated between 1996 and 1998 interviews:
pdvACCT_g4x

From Section GH in Wave 4- from younger spouses of WBs cohort:
RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

From Section GG in Wave 4- from younger spouses of WBs cohort:
RpdvACCT_ggab4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:
RpdvACCT_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:
Rpdvacctin06_f2x

From Section H in Wave 1: younger spouse of HRS cohort:
RpdvACCTin06_ha1x, RpdvACCTin06_hb1x, RpdvACCTin06_hc1x, Rv3622in06x,
Rv3709in06x, Rv3809in06x

From Section G in Wave 1: younger spouse of HRS cohort:
RpdvACCTin06_g1x, Rpdv3502in06x

Household Current DC Values HHcurDCs8x

The constructed variable “HHcurDCs8” indicates households’ DC account balances from respondents’ current jobs in Wave 8 (2006). The DC value is from self-reported data. It includes imputations.

How Constructed:

For constructing current household DC balances, first current DC values are calculated by summing all DC account balances for each respondent with DC accounts. Then the household

data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is all DC account balances. Households' current DC values are calculated by summing the respondent's current DC values and his/her spouse's DC account balances. DC values from current job are in 1992 dollars. The discount rate is 5.8 percent within each cohort and 2.8 percent between cohorts.

Constructed Variables Used:

Account Balances from Current Job in Wave 8:

KJ273ax, KJ273bx, KJ273cx, KJ273dx, KJ307ax, KJ307bx, KJ307cx, KJ307dx,
KJ339ax, KJ339bx, KJ339cx, KJ339dx, KJ413ax, KJ413bx, KJ413cx, KJ413dx,
KJ431x,

DC Shares in Stocks- Current Job HHcurDCshares8

The constructed variable "HHcurDCshares8" indicates the percent of DC balances that are in stocks. It is the sum of DC shares from respondents' current job that was invested in stocks.

How Constructed:

The DC account balances' shares in stocks are calculated first for each respondent with at least one DC or combination/both plan from his/her current job. This share is calculated for up to four DC or combination/both plans from the same or new pension sequences. Then the shares are summed up for each household to construct the households' shares of DC balances invested in stocks.

DC Shares for Individual Respondent:

Respondents who reported having a DC plan from their current job are asked about the percent of that DC account balance which is invested in stocks. For constructing the DC share of

stocks, we have taken their response to this question. Those with a missing response have imputed values. Respondents with a combination/both plan are not asked that question. We have used an imputed value using respondents with DC plans as donors.

DC Shares for Households:

The household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the share of current DC values in stocks. Households' share of DC balances in stocks is calculated by summing the respondent's share of his/her DC values in stocks and that of her/his spouse's share in stocks.

Variables Used:

Account Balances from Current Job in Wave 8:

KJ273ax, KJ273bx, KJ273cx, KJ273dx, KJ307ax, KJ307bx, KJ307cx, KJ307dx, KJ339ax, KJ339bx, KJ339cx, KJ339dx, KJ413ax, KJ413bx, KJ413cx, KJ413dx

Shares in Stocks:

KJ742ax, KJ742bx, KJ742cx, KJ742dx, KJ812ax, KJ812bx, KJ812cx, KJ812dx,

DC Shares in Stocks- All Jobs HHDCshares8

The constructed variable "HHDCshares8" indicates the percent of DC balances that are in stocks. It is the sum of DC balances from all jobs including current, last, and previous jobs that are invested in stocks.

How Constructed:

The DC account balances' shares in stocks are calculated first for each respondent with at least one DC or combination plan from his/her current job, last, and previous jobs. Then the shares are summed up for each household to construct the households' share of DC balances in stocks.

DC Shares for Individual Respondent:

Current Job- The share of DC balances that are invested in stocks is taken from respondents' report. Respondents with a combination/both plan have an imputed value with respondents with a DC plan as donors. The process is described earlier for "HHcurDCshares8".

Last and Previous Jobs- The information about the percent of a DC plan that is invested in "mostly in stocks", "mostly in interest bearing assets", or "split" and the percent that is invested in stocks are not collected from respondents reporting details about their previous pension jobs. The share of DC balances in stocks from those jobs require imputations. For imputing those shares we used respondents with a DC or combination/both plan from their current job (in 2006) as donors. We applied the percentage of DC balance that is in stocks from that plan to their previous DC balances. For respondents with more than one DC or combination plan from their current job we used the maximum percentage of stocks among respondents' DC plans. We used an imputed value for those who did not report any DC or combination plan from their current job.

DC Shares for Households:

First the household data is constructed as described earlier in p.79. In this data file, the pension related variable of interest is the share of all DC values in stocks. Households' share of DC balances in stocks is calculated by summing the respondent's share of his/her DC values in stocks and that of her/his spouse's share in stocks.

Variables Used:

Account Balances from Current Job in Wave 8:

KJ273ax, KJ273bx, KJ273cx, KJ273dx, KJ307ax, KJ307bx, KJ307cx, KJ307dx, KJ339ax, KJ339bx, KJ339cx, KJ339dx, KJ413ax, KJ413bx, KJ413cx, KJ413dx

Account Balances from Last and Previous Jobs as of Wave 8:

Previous job left after 2004 interview and before 2006

RKJW009ax, RKJW009bx, RKJW009cx, RKJW009dx

From Section L in Wave 7- from the new cohort:

RpdvACCT_L17x, RpdvACCT_L27x, RpdvACCT_L37x, RpdvACCT_L47x,
RpdvACCT_L57x, RpdvACCT_L67x

From Section K in Wave 7- from the new cohort:

RpdvACCT_K17x, RpdvACCT_K27x, RpdvACCT_K37x, RpdvACCT_K47x

From Section J in Wave 7- from jobs terminated between 2002 and 2006 interviews:

RpdvAcct_J17x, RpdvAcct_J27x, RpdvAcct_J37x, RpdvAcct_J47x

From Section J in Wave 6- from jobs terminated between 2000 and 2002 interviews:

RpdvAcct_J16x, RpdvAcct_J26x, RpdvAcct_J36x, RpdvAcct_J46x,

From Section G in Wave 5- from jobs terminated between 1998 and 2000 interviews:

RpdvAcct_gab15x, RpdvAcct_gab25x, RpdvAcct_gab35x, RpdvAcct_gab45x,
RpdvAcct_gb15x, RpdvAcct_gb25x, RpdvAcct_gb35x, RpdvAcct_gb45x

From Section G in Wave 4- from jobs terminated between 1996 and 1998 interviews:

pdvACCT_g4x

From Section GH in Wave 4- from younger spouses of WBs cohort:

RpdvACCT_ha4x, RpdvACCT_hb4x, RpdvACCT_hc4x

From Section GG in Wave 4- from younger spouses of WBs cohort:

RpdvACCT_ggab4x

From Section G in Wave 3- from jobs terminated between 1994 and 1996 interviews:

RpdvACCT_g3x

From Section FA/FB/FC in Wave 2- from jobs terminated between 1992 and 1994 interviews:

Rpdvacctin06_f2x

From Section H in Wave 1: younger spouse of HRS cohort:

RpdvACCTin06_ha1x, RpdvACCTin06_hb1x, RpdvACCTin06_hc1x, Rv3622in06x,
Rv3709in06x, Rv3809in06x

From Section G in Wave 1: younger spouse of HRS cohort:

RpdvACCTin06_g1x, Rpdv3502in06x

Shares in Stocks:

KJ742ax, KJ742bx, KJ742cx, KJ742dx, KJ812ax, KJ812bx, KJ812cx, KJ812dx, and imputed percentage of DC balances in stocks from combination plans in the same and new pension sequences.

Appendix

Data Files Underlying the Tables in *Pensions in the Health and Retirement Study*, a Book Published by Harvard University Press, 2010, by Alan L. Gustman, Thomas L. Steinmeier and Nahid Tabatabai

We have made the data files underlying the tables in *Pensions in the Health and Retirement Study* available to interested parties. They are posted on the HRS website in the Researcher Contribution section. With these data files, we hope to encourage the use of the HRS pension data in a wide variety of future studies. Our goal is make it easier for researchers to use the HRS pension data and to facilitate their use by policy makers, pension experts and financial advisors.

The data files are organized by chapter. Eight waves of pension data from the Health and Retirement Study, covering fourteen years and three distinct cohorts, are analyzed in *Pensions in the Health and Retirement Study*. The data files include all constructed and original variables from the HRS used in the tables of each chapter. A short label identifies each variable. To distinguish whether a data file is a respondent or a household level file, HH is added to the name of household level files. Administrative data are matched to respondents and are considered to be restricted data. Pension plan type, early and normal retirement ages, benefits at those ages, benefits at the expected age of retirement, and incentives are derived from employer pension plan descriptions and are included in separate files. Social security wealth data are also restricted and are included in the administrative pension data files. To identify restricted data files, “rstrct” is included in the file name. Files that include restricted data are encrypted. Users must obtain permission from the HRS to access these files.

A. List of Public Data Files

- 1- Chapter 1:
 - Respondent level: dataR_tableschap1

- 2- Chapter 3:
 - Respondent level: dataR_tableschap3

- 3- Chapter 4:
 - Respondent level: dataR_tableschap4

- 4- Chapter 5:
 - Respondent level: dataR_tableschap5
 - Household level: dataHH_tableschap5_92
 - Household level: dataHH_tableschap5_98
 - Household level: dataHH_tableschap5_04

- 5- Chapter 6:
 - Respondent level: dataR_tableschap6

- 6- Chapter 7:
 - Respondent level: dataR_tableschap7

- 7- Chapter 8:
 - Respondent level: dataR_tableschap8

- 8- Chapter 9:
 - Respondent level: dataR_tableschap9
 - Household level: dataHH_tableschap9_92
 - Household level: dataHH_tableschap9_98
 - Household level: dataHH_tableschap9_04

- 9- Chapter 10:
 - Respondent level: dataR_tableschap10

- 10- Chapter 11:
 - Respondent level: dataR_tableschap11
 - Household level: dataHH_tableschap11_92
 - Household level: dataHH_tableschap11_94
 - Household level: dataHH_tableschap11_96
 - Household level: dataHH_tableschap11_98
 - Household level: dataHH_tableschap11_00
 - Household level: dataHH_tableschap11_02
 - Household level: dataHH_tableschap11_04
 - Household level: dataHH_tableschap11_06

- 11- Chapter 12:
 - Household level: dataHH_tableschap12_92
 - Household level: dataHH_tableschap12_98
 - Household level: dataHH_tableschap12_04

- 12- Chapter 13:
 - Household level: dataHH_tableschap13

B. List of Restricted Data Files:

- 1- Chapter 4:
 - Restricted file: dataR_RstrctTableschap4

- 2- Chapter 7:
 - Respondent level: dataR_RstrctTableschap7

- 3- Chapter 8:
 - Respondent level: dataR_RstrctTableschap8

- 4- Chapter 9:
 - Respondent level: dataR_RstrctTableschap9
 - Household level: dataHH_RstrctTableschap9_92
 - Household level: dataHH_RstrctTableschap9_98

- 5- Chapter 10:
 - Respondent level: dataR_RstrctTableschap10

- 6- Chapter 12:
 - Household level: dataHH_RstrctTableschap12_92
 - Household level: dataHH_RstrctTableschap12_98
 - Household level: dataHH_RstrctTableschap12_04

- 7- Chapter 13:
 - Household level: dataHH_RstrctTableschap13

References

Gustman, Alan L., Thomas Steinmeier, Nahid Tabatabai. 2010. "Pensions in the Health and Retirement Study". Harvard University Press.

Honggao Cao. 2001. "IMPUTE: A SAS Application System for Missing Value Imputations-- With Special Reference to HRS Income/Assets". See also "The Missing Data Imputation Process".

<http://hrsonline.isr.umich.edu/index.php?p=imputes> .

Health and Retirement Study. June 2005. "Imputations for Pension-Related Variables" Final, Version 1.0.

<http://hrsonline.isr.umich.edu/modules/meta/xyear/ip/desc/ImpPenDD.pdf>

Health and Retirement Study. September 2006. "Labor Section Carry Forward Variables" Final, Version 2.0.

<https://ssl.isr.umich.edu/hrs/files2.php?versid=61>

Pension Wealth Data Files: 1992 to 2006

(Without Updates)

Alan L. Gustman

Thomas L. Steinmeier

And

Nahid Tabatabai

September, 2012

We gratefully acknowledge support from the National Institute on Aging and from the Social Security Administration for this project. All views are our own and are not the views of either the National Institute on Aging, the Social Security Administration or the National Bureau of Economic Research. Support was provided through an administrative supplement to NIA grant 5 R01 AG030854-04, "Integrating Models of Health and Retirement."

Pension Wealth Data Files

This part of the project includes pension wealth data files constructed for each wave from Wave 1 to Wave 8. They include separately DB wealth, DC wealth, and total pension wealth, as the sum of the two. Pension wealth levels included in this package are not updated. That is, information from updated pension sequences based on the preload for old dormant pensions is not used in preparing these data files. The corresponding values in Part II are updated using questions keyed by the pension preload in each wave.

The values are based only on the information respondents reported when they were asked about pensions from their current job, last job and/or previous job(s), and from information provided in response to questions asked when respondents reported their previous interview wave employment had been terminated. Respondents with missing values, don't know, or refuse responses have imputed values. There are eight data files, one for each of the eight survey years covered, Wave 1 to Wave 8. They are as follows:

1. **PenWlth_w1:**

This data file reports separately DB wealth and DC wealth from respondent's current job and their total, and similarly from last and/previous jobs, and their total as reported in Wave 1.

Constructed variables include:

Cur_DBwlth1: DB wealth from current job includes the prorated present discounted value of expected future benefits from the respondent's most important DB plan on their current job.

Cur_DCwlth1: DC wealth from current job includes the sum of all DC account balances from respondent's current job.

Prv_DBwlth1: DB wealth from respondents' last and previous jobs includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 1 for plans in pay status.

Prv_DCwlth1: DC wealth from respondents' last and/or previous job includes the sum of current account balances from those jobs.

Penwlth1: This constructed variable is the sum of current and previous DB and DC values in Wave 1.

2. PenWlth_w2:

This data file includes DB and DC wealth from respondent's current job in Wave 2, from last and/or previous jobs, and total pension wealth in Wave 2. Constructed variables include:

Cur_DBwlth2: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 2.

Cur_DCwlth2: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 2.

Prv_DBwlth2: DB wealth from respondent's last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2. The reported value includes the present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 2 for plans in pay status.

Prv_DCwlth2: DC wealth from respondents' last and/or previous jobs includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2.

Penwlth2: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 2.

3. PenWlth_w3:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave3. Constructed variables include:

Cur_DBwlth3: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 3.

Cur_DCwlth3: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 3.

Prv_DBwlth3: DB wealth from respondent's last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2 and between Wave 2 and Wave 3. It includes the present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 3 for plans in pay status from those jobs.

Prv_DCwlth3: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2 and between Wave 2 and Wave 3.

Penwlth3: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 3.

4. PenWlth_w4:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 4. Constructed variables include:

Cur_DBwlth4: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 4.

Cur_DCwlth4: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 4.

Prv_DBwlth4: DB wealth from respondent's last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after their initial interview. It includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 4 for plans in pay status from those jobs.

Prv_DCwlth4: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated between Wave 1 and Wave 2, Wave 2 and Wave 3, and Wave 3 and Wave 4.

Penwlth4: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 4.

5. PenWlth_w5:

This data file includes DB and DC wealth from respondent's current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 5. Constructed variables include:

Cur_DBwlth5: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 5.

Cur_DCwlth5: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 5.

Prv_DBwlth5: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' initial interview. It includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 5 for plans in pay status from those jobs.

Prv_DCwlth5: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' first interview.

Penwlth5: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 5.

6. PenWlth_w6:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 6. Constructed variables include:

Cur_DBwlth6: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 6.

Cur_DCwlth6: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 6.

Prv_DBwlth6: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' initial interview. It includes the present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 6 for plans in pay status from those jobs.

Prv_DCwlth6: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' first interview.

Penwlth6: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 6.

7. PenWlth_w7:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 7. Constructed variables include:

Cur_DBwlth7: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 7.

Cur_DCwlth7: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 7.

Prv_DBwlth7: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' initial interview. It includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 7 for plans in pay status from those jobs.

Prv_DCwlth7: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' first interview.

Penwlth7: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 7.

8. PenWlth_w8:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 8. Constructed variables include:

Cur_DBwlth8: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 8.

Cur_DCwlth8: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 8.

Prv_DBwlth8: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort), in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' initial interview. It includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 8 for plans in pay status from those jobs.

Prv_DCwlth8: DC wealth from respondent's last and/or previous job includes the sum of account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' first interview.

Penwlth8: Pension wealth variable is the sum of pension wealth from plans on current jobs and previous DB and DC values in Wave 8.

Updated Pension Wealth Data Files in the HRS Panel:

1992 to 2006

Alan L. Gustman

Thomas L. Steinmeier

And

Nahid Tabatabai

September, 2012

We gratefully acknowledge support from the National Institute on Aging and from the Social Security Administration for this project. All views are our own and are not the views of either the National Institute on Aging, the Social Security Administration or the National Bureau of Economic Research. Support was provided through an administrative supplement to NIA grant 5 R01 AG030854-04, "Integrating Models of Health and Retirement."

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Introduction

This document reports on the second part of a project designed to create and document pension data originating from respondent reports to the Health and Retirement Study (HRS). Our activities are meant to facilitate research that uses the complex pension data collected by the HRS. The project was supported by an Administrative Supplement to a related grant from the National Institute on Aging, and was jointly funded by the NIA and Social Security Administration.¹

The first part of the project posted pension outcomes for members of the Health and Retirement Study (HRS), using the micro data underlying tables in our book, *Pensions in the Health and Retirement Study*. That project also created a user manual for the pension data. In our report, we calculated pension wealth for members of the original HRS cohort, War Babies and Early Boomers. Data were provided only for the years these cohorts were first included in the HRS, 1992, 1998 and 2004. We also included pension wealth data for the 2006 survey year.

In this second part of the project, we calculate pension values for the eight biannual waves of the HRS from 1992 to 2006. Moreover, pension values in Part 1 of the project were constructed based on respondent reports during the first wave they were included in the survey and later waves if their previous wave's current job was terminated. Part 2 of the project updates those values using the information from follow-up questions that asked about the fate of respondents' dormant plans. In addition, for each survey year, we include the present value of the amounts received as cash settlements, rollovers into IRAs, converted to an annuity, transferred to a new employer, or withdrawn, received or receiving as installments.

¹ The original project is entitled "Integrating Models of Health and Retirement", NIA project 5 R01 AG030854-04.

Below we describe the basic procedures for updating the values of pension wealth for dormant pension plans, plans held by respondents from jobs they held previously that are not yet in pay status. These updated values are added to the values of plans on current jobs and pensions in pay status.

In Part 1 of this project, pension wealth was constructed based on respondents' initial reports of their pension values. That is, in the first wave they were in the HRS, respondents were asked about any pension plans from their current, last and previous jobs. They were also asked about pension plans from a previous wave's job if it was terminated. The pension wealth values were constructed based on the information from those interviews. They did not include any updated information from interviews after the individual reported leaving the job. In this version, we use the information from the Updated Pension Sequence² to revise those pension values. The updated pension sequence includes a set of follow-up questions asked of respondents about the fate of their dormant DB and/or DC plan(s). The information about changes in older pension plans and the date of those changes is used to update the value of pension plans that were dormant at the time of a previous survey.

Constructed variables in the pension wealth data files include the updated present values of DB plans and account balances from various jobs for the 1992 to 2006 survey years of the Health and Retirement Study. There are eight data files, one for each of the eight survey years. The wealth values are comprised of updated present discounted values of defined benefit plans from last and/or any previous jobs, including jobs the individual may have left after that person's initial wave in the survey, prorated present discounted values of expected future benefits from

² In Waves 3 and 4, the Updated Pension Sequence was located in the Assets and Income section. That sequence starts with question J192 designed for dormant DB plans, and with question J197, designed for dormant DC plans. These questions were moved to the Employment section in later waves. They start with J434 asking about dormant DB plans and J450 about dormant DC plans.

current jobs, and updated current DC account balances from any previous, last, and/or current jobs.

Sources of Information

Construction of pension wealth data is based on the data from the Employment section of the HRS respondent survey and where necessary from the Assets and Income section of the survey. In the employment section of the HRS, five sets of pension questions are conditioned on whether the pension is from a current job, a last/previous job, if it is the respondent's first interview or if it is a returning interviewee, and if it is a follow-up on an old pension. Preload data files including information about respondents' dormant pensions play an important role in this project. Following is a brief description of the pension information:

- A) Respondents working on a current job who report a DB or combination plan are asked about their expected future benefits and the age they expect to receive them. Those reporting a DC plan are asked in each wave about their current account balances. This information is used to construct respondents' pension wealth from their current jobs.
- B) When first interviewed, respondents are also asked about up to three previous pension jobs, so long as they worked on those jobs for at least five years. They are asked about the type of plans they had and the form of disposition of those pensions. Questions about the disposition of pension plans include detailed questions about what the respondent did with the plan; if withdrew the money, rolled it over into an IRA, left it to accumulate in the old plan, converted it to an annuity, is expecting future benefits, receiving benefits, transferred to the new employer, received a cash settlement, or lost the benefit. There are follow-up questions asking about the amount of the benefits and the dates of the reported action the respondent has taken. Respondents who were not working at their first

interview were asked about their last job and the pension from that job. Pension questions for this group of respondents are very similar to the pension sequence detailed for respondents' previous job. During Wave 1 to Wave 4 interviews, respondents were asked about the details of only one pension plan from any previous or last job. In Wave 5, this number was increased to up to three plans and in Waves 6 to 8 to up to four plans.

Based on the information obtained from those jobs we have constructed the present value of DB plans and DC account balances. In *Pensions in the Health and Retirement Study* we used those values to construct pension wealth for the 1992, 1998, 2004, and 2006 survey years. Those wealth values are posted on the HRS website. The present project has updated those wealth values to cover every even year from 1992 through 2006.

- C) Re-interviewee respondents are asked a set of pension questions about their previous job if they reported leaving a pension job held in the last interview. They are asked a similar set of questions to those noted in item B above. Pension values from those jobs are also included in constructed pension wealth as noted above in item B.
- D) Updated Pension Sequence: In Wave 3, for the first time survey respondents were asked about the status of “dormant” pension plans from jobs terminated before the current wave. Dormant plans are pensions from last/previous jobs³ reported prior to the survey year. Respondents had previously reported they were expecting some future benefits from these plans and not receiving benefits now, or that the DC account was left to accumulate.

³ Previous jobs include jobs classified as ‘previous pension jobs’ in the first interview wave as well as jobs that were held in the first or subsequent waves, but were left after that.

More specifically, in the Wave 3 round up, respondents were asked if they are still expecting future benefits, if the account is still accumulating, or if they are receiving benefits now, had previously received a cash settlement, rolled the pension over into an IRA, converted to an annuity, withdrew the money, or lost the benefit. Respondents were also asked about the amount of the benefits and the dates of the reported action the respondent had taken. We call this pension sequence the “Updated Pension Sequence”. Those who reported in Wave 3 they are still expecting future benefits (and not receiving benefits now) or their account is still accumulating, were asked again about the status of those plans in Wave 4, Wave 6, Wave 7, and again in Wave 8. The round up in later waves also covered pension jobs left since the last round up. As long as the reports show that a respondent’s claim on a plan continues to be active, or in other word, s/he is expecting some benefits in the future and not receiving benefits at the time of the survey, the respondent is asked about the status of that plan. We then refer to that pension as a “dormant pension”.

In this project, we use the information from those sequences to update pension wealth values noted above in items B and C.

- E) Finally, the pension preload data is used to identify dormant pensions and their corresponding jobs that have updated information in the updated pension sequence. Each record in the preload data file identifies respondents who have one or more dormant plan(s). The preload indicates each dormant pension’s plan type, the start and end date of the job that plan belongs to, and the interview date when the dormant plan was initially reported. Each respondent may have records for up to four dormant plans.

The preload data files were prepared for the first time for Wave 3 interviews, and then for subsequent waves, except Wave 5. The Wave 3 preload includes dormant plans from last and previous pension jobs, as reported in Sections G and H of Waves 1 and 2. The preload data file for Wave 4 includes updated Wave 3 preloads⁴ and any new dormant plans from Sections GG and/or GH of Wave 3. The Wave 6 preload data file includes updated preloads from Wave 4, and new dormant plans reported in the GG and GH sections of Waves 4 and 5. It also includes dormant plans from terminated jobs reported in Waves 2, 3, 4, and 5. Preload data files from Waves 7 and 8 include updated preloads from Waves 6 and 7 and any new dormant plans reported in Waves 6 and 7, respectively.

Limitation of the preload data files:

- 1- The preload data for Wave 3 does not include dormant plans from terminated⁵ jobs reported in Wave 2.
- 2- The preload data for Wave 4 does not include dormant plans from terminated jobs reported in Wave 2 and Wave 3.
- 3- In Wave 5, the preload data file was not available.
- 4- In Wave 6, about half of the preload data was transferred to the field for the interview. That is, about half of the respondents with dormant plans were asked the questions in the updated pension sequence in Wave 6.

In summary, within each wave, respondents may be covered by one or more current pension plans and have one or more previous pension plans from former employers that have remained dormant. In some waves, there are explicit follow-up questions about these pensions.

⁴ Updated Wave 3 preloads exclude dormant plans that were cashed out in Wave 3.

⁵ Terminated jobs are those jobs that were current in the respondent's previous interview, but were terminated before the current interview date.

In waves where no questions are asked about old pensions from previous employers that were last reported as dormant, the pension information from the last wave is brought forward, or it is updated based on subsequent data where in some future wave there is a retrospective report as to when the old pension transitioned into pay status, rolled over into an IRA, converted to an annuity, or cashed out.

Procedure

Updating pension wealth values in each wave involves several steps. We start by identifying dormant DB and/or DC plans reported in each interview wave. We calculate annual expected future benefits for dormant DB plans. We impute for missing, don't know, or refused responses for annual expected benefits and for DC account balances. We construct the present discounted value of DB plans with an expected future benefit in each wave. We then use the information collected in the updated pension sequences in subsequent waves to update the values of those dormant plans. This step involves matching the information from updated pension sequences with dormant plans from previously held jobs⁶. We use the start and end dates of respondents' previous jobs and match them with the start and end dates in the preload data files. Upon matching the dates we take the information from the updated pension sequence to revise the values of the corresponding dormant plan. The updated values in each wave depend on the action respondents have taken since their initial report of a dormant plan. If respondents report they are still expecting future benefits or receiving benefits now, their DB value gets updated. If they report received cash settlements, rolled over into an IRA, lost the plan, record inaccurate, did not know or refused to respond; their DB value gets updated with a zero value in the wave

⁶ In this step it is critical to update the correct dormant plan from the information provided by the updated pension sequence. For example, if a respondent has more than one dormant DB or DC plan, and one of them is reported as still dormant, but the other is cashed out, we must make sure that each DB plan receives the correct adjustment.

the change in plan status was reported and in later waves. When respondents with a dormant DC plan report they still have the account, its value gets updated. When respondents reported they withdrew their account, converted their account to an annuity, rolled it over into an IRA, transferred it to new employer, lost the account, record inaccurate, don't know, or refused to respond, their DC balance is set to zero in the wave the change was reported and in subsequent waves.

The present values of DB plans and DC accounts in some of the earlier waves may also be affected by those actions, depending on the date the action took place. There are two situations where a report of an action in a wave may affect the updated values of a dormant plan in an earlier wave.

- a) When the date that an action took place is available and it does not contradict a respondent's earlier report, we update the value of the dormant pension accordingly. For example, if a respondent reported a dormant DC in Wave 1 and then in Wave 4 s/he reported cashing out that account in 1994, we update (convert it to zero) that dormant DC account in Wave 2 and later waves.
- b) When the date the action was taken contradicts the respondent's initial report, i.e., if it is before the date that a dormant plan was reported, we keep the initial report intact in the wave that it was reported. But we update the plan's value in the following waves. For example, consider a respondent who reported a dormant DC plan in Wave 1, but then in Wave 3 s/he reported that s/he converted that account to an annuity on a date prior to the date Wave 1 was administered. In such a case we do not update the reported DC account balance in Wave 1. But we update the value to zero in Wave 2 and later waves.

The third situation is when the dates are not available. In such cases the updates are made as of the wave the updates were reported. The update does not affect earlier waves. For example, suppose a respondent had reported a dormant DB plan in Wave 1. But in Wave 3 when s/he was asked about the fate of that DB plan in the updated pension sequence, s/he reported s/he received a cash settlement. If the respondent did not know or was unwilling to report the date s/he received the cash settlement, we update the value of that dormant DB plan in Wave 3 and later waves. The DB values in Waves 1 and 2 is not changed.

How Updated?

DB Plans: In the updated pension sequences in Waves 3, 4, 6, 7, and 8, respondents with a dormant DB plan are asked a set of follow-up questions⁷ asking about the fate of that plan since they last reported about or updated the information. A respondent may report either still expecting future benefits, receiving benefits now, received a cash settlement, lost benefits, record inaccurate, did not know or refused to report if or how his/her DB plan is disposed of. The updating scheme for the dormant DB plan varies depending on the action a respondent has taken in each wave. If a respondent reported in Wave 3 that s/he is still expecting future benefits, her/his DB value gets an updated value in Waves 2 and 3. The respondent will again be asked about the fate of the pension in a later interview wave. If the report indicates that the plan has gone into pay status, its present value gets updated⁸ accordingly. If the respondent reports having cashed out the plan, lost the benefit, doesn't know or refuses in any of the updated pension

⁷ The wording of the question in wave 4:
J192-[FIRST/SECOND] PENSION.

Our records show that as of 4 years ago, in [1994, 1995]), you were expecting future benefits from a job (at *PREVIOUS WAVE EMPLOYER FOR [FIRST/SECOND] PENSION*) where you worked from approximately *JOB START YEAR* until *JOB END YEAR*.

Are you still expecting future benefits, are you receiving benefits now, did you receive a cash settlement, have you lost your benefits, or what?

⁸ It is assumed that the benefit is a life-time benefit. Consequently, the respondent would not be asked about that plan in later waves.

sequences, the value of that plan is updated with a zero in the wave that the action was reported and also in later waves. If the respondent was not preloaded as having a dormant DB plan in Wave 3 even though there was one, the status and the value of that DB plan depends on the information acquired through the updated pension sequences in Waves 4, 6, 7, or 8. If the information indicates the plan is still dormant (still expecting future benefits), its value gets updated in that wave and the respondent will again be asked about the fate of that plan in later interviews.

In brief a respondent with a dormant DB plan is asked about the fate of that plan as long as it stays dormant (still expecting future benefits). Its present value is adjusted in each wave using a 5.8% discount rate. Once the respondent reports the plan has gone into pay status, the plan value is updated by the present value of that reported benefit. If and when a report is received that the plan was cashed out, from the relevant date reported and into the future, plan value is taken to be zero. When respondents have dormant plans, but updated information is not collected in a particular wave because the appropriate data was not preloaded for the updated pension sequence, or the respondent was not interviewed in that wave, information from an updated pension sequences in later waves is used.

DC Plans: Respondents with a dormant DC plan are asked a set of follow-up questions⁹ about the fate of that plan in the updated pension sequences in Waves 3, 4, 6, 7, and 8. A respondent may report still having the account, having rolled it over into IRA, withdrew the

⁹ Question J197 in Wave 4 states: Our records show that as of 4 years ago, in (1994/1995), you had a pension account from a job where you worked from approximately “date” until “date”. Do you still have that pension account, did you withdraw the money, roll it over into an IRA, convert the account to an annuity, or what?

STILL HAVE ACCOUNT
ROLL OVER INTO IRA
WITHDREW MONEY
CONVERT TO ANNUITY
OTHER (SPECIFY)
DK/RF

money, converted it to an annuity, other, or answers don't know or unwilling to respond whether or how his/her DC plan has been disposed of when he/she is asked. From Wave 6 forward, two other possible responses "Transferred to new employer" and "Records inaccurate" are added to the list of responses regarding disposition of dormant DC plans (in J450). From Wave 6 and going forward, with the exception of "lost benefits and record inaccurate", there are follow-up questions about the date that the dormant DC account's status changed. DC values are updated according to the reported dates that an action has taken place.

For respondents who have dormant DC accounts, but in a particular wave did not have a preload for the updated pension sequence, or were not interviewed, we use the information from an updated pension sequence reported in a later wave to update DC balances.

Pension Wealth in Wave 1

Pension wealth in Wave 1 includes pension values from current job and any dormant DB and DC plans from last or previous jobs reported by respondents in their initial interview. These values are not updated. For the observations in Wave 1 we ignore any contradiction of dates. For example if a respondent reported a dormant DB plan in Wave 1, but then in a subsequent wave reported having cashed out the plan before 1992, the contradiction in dates would be ignored. It is assumed that respondents have more accurate information about their previous pensions at a time closer to when the previous job was terminated. Thus for Wave 1 we ignore the updated information from subsequent waves.

Pension Wealth in Wave 2

Pension wealth in Wave 2 is updated using the information from updated pension sequences in later waves. Below is a description of how DB and DC plans are updated.

DB Wealth in Wave 2

Consider how the information from the updated pension sequence in Wave 3 is used to update the present value of DB plans in Wave 2.

1. Still expecting future benefits

If the information in response to the Wave 3 preload indicates that a respondent is still expecting future benefits, the present value of his/her DB plan in Wave 2 is adjusted from the value reported in Wave 1¹⁰ by 5.8% per year between Wave 1 to Wave 2, in this case over the two year gap.

2. Receiving benefits now

For respondents who reported receiving benefits now in Wave 3, the updated DB present values include the present value of the remaining benefits as of Wave 2. Those Wave 3 respondents who reported “Receiving benefits now” in the updated pension sequence of that wave are not asked about the amount of the benefits received or when they started receiving that benefit. But they are asked “Did you tell me about these pension benefits earlier?” This question allows us to use the pension income data reported in the Assets and Income section for updating the DB values. The updating process for a dormant DB’s present value in Wave 2 depends on the response as to whether the respondent had previously mentioned this plan or not within the Wave 3 sequence.

- a. For those who responded “yes” when asked about having mentioned this plan before during the Wave 3 sequence, we assume the pension income reported in the Assets and Income section of Wave 3 is the annual amount of benefits from the pension in Wave 2. However, to update the pension income value for Wave 2, the start date

¹⁰ Respondents who report still expecting future benefits in an updated pension sequence are not asked about the amount of their expected benefits.

reported for receiving the pension income must be on or before the interview date of Wave 2. If the start date for receiving the pension income is after Wave 2, that pension income would not be considered as the income from dormant plans that went into pay status in time to be counted for Wave 2. When we update DB values in Wave 3, the condition is that the start date for receiving the pension income as reported in the Assets and Income section in Wave 3 should be on or before Wave 3.

- b. For respondents who answered in response to the updated pension sequence questions keyed by the preload of Wave 3 that they had not mentioned that pension earlier in the survey, we assume they have a missing value for the amount of their benefit received even though they may have reported a pension income when they were asked about their income from retirement. We assume that the reported retirement income is from another plan. We impute an annual amount of benefits using as donors respondents who responded “yes” to the question about having mentioned the pension earlier in Wave 3, and reported a positive value for the amount of pension income. We then construct a present value of the pension income and use that constructed value for updating the present value of the corresponding DB plans in Wave 2.

3. Received Cash Settlements

If respondents reported in response to the updated pension sequence questions keyed by the preload in Wave 3 that they had received a cash settlement, they were asked when they received the settlement. If the reported date was on or before the interview date in Wave 2, DB wealth is updated, inserting a zero value in Wave 2 and later waves. Otherwise, the plan is

assumed to have been dormant in Wave 2 and its value in Wave 2 is the present value of the DB plan as constructed for a plan that is still dormant as of Wave 2.

4. Lost Benefits

Those who responded to the Wave 3's updated pension sequence questions keyed by the preload that they lost their benefits are not asked when they lost them. Therefore, their DB plan gets an updated value of zero in the wave they reported it and later waves. That is, the information from Wave 3 is not applied to Wave 2. It is assumed the plan was still dormant in Wave 2 and its value is given as the present value of the DB plan as constructed for a still dormant plan in Wave 2.

5. Record Inaccurate

Respondents who report the record is inaccurate are credited with a DB value of zero in the wave they reported it. The update is not applied to any of the earlier waves. The procedure is similar to the procedure used when respondents reported they lost benefits. Thus a respondent who reported the record is inaccurate in response to the pension preload of Wave 3 will be credited with a zero value for the DB pension from Wave 3 forward, while the value in Wave 2 will still assume there is a DB pension value for the dormant plan.

6. Don't Know or Refuse

Respondents who did not know about the fate of their dormant plan or were unwilling to report it are treated the same as those who reported in response to the Wave 3's updated pension sequence questions that the record was inaccurate, or that they lost their benefits. They are assigned a value of zero in the wave they gave the don't know or refuse response to the updated pension question, in this case Wave 3. Their earlier waves' values are not affected by this report.

DC Wealth in Wave 2

The information from the updated pension sequence questions keyed by the old pension preload in Wave 3 is also used to update respondents' current DC balances in Wave 2. The updating process depends on the responses to the questions in that sequence. Respondents who reported they still have their account are asked about that account's current balance¹¹ in any wave that respondents reported still have the account. The dormant DC account balance is updated with the current account balance reported in response to the wave's updated pension sequence. Unfortunately, however, 50% to 75% of the respondents with a dormant DC plan who were asked to update the information about that plan did not know its balance as of that wave's interview date or refused to report it. Since such a high rate of missing, don't know, and refuse responses would not yield meaningful imputation results, we do not impute for those cases. Instead, in such cases those account balances are updated by adjusting their previous wave's balances by 5.8% growth over the two intervening years.

1. Still Have the Account

In the updated pension sequence of Wave 3, respondents who report they still have the account are asked about its current account balance. We use that information and the information from account balances reported in Wave 1¹² to update dormant account balances in Wave 2. We calculate a rate of growth (or loss) for the account between 1992 and 1996 and update Wave's 2 account balances based on that growth (or loss) rate.

¹¹ Note that this situation is different from that for DB plans. When a DB plan is reported as still dormant in response to the pension preload, the respondent is not asked about the expected benefit. When a DC plan is reported as still dormant, the respondent is asked for the account balance.

¹² DC balances from dormant DC plans from last and/or previous jobs reported in Wave 1.

For respondents who reported they still have the account, but did not report its current account balance, we update their DC balances by adjusting their Wave 1's balances by 5.8% between 1992 and 1994.

2. Withdrew the Account

Wave 3 respondents with dormant DC plans who reported they withdrew their DC balances are not asked about the date that they withdrew their balances. We assume that the action took place after Wave 2 so that the update due to withdrawals does not affect the Wave 2 balances. We update their DC balances by adjusting their Wave 1 balances by 5.8% between 1992 and 1994.

3. Rolled Over Into IRA

Respondents who reported in the updated pension sequence of Waves 3 that they rolled over their DC balances into an IRA are not asked about the date they made that choice. The updating procedure for these respondents is similar to those who reported they withdrew the account.

4. Converted to Annuity

Respondents who reported they converted their account to an annuity are asked about the date they converted that account. The updating procedure for these respondents depends on the date reported. For respondents who reported they converted the account before Wave 2's interview date, their DC balances are updated to a zero value in Wave 2 and later waves. However if the reported date is after Wave 2, or the date was not available, we update their Wave 2 DC balances by adjusting their Wave 1 balances by 5.8% per year between 1992 and 1994.

5. Other, Don't Know, and Refuse

Respondents who reported “other” or did not know or refused to respond to the question are treated the same as those who reported they withdrew the account.

Respondents without any information in the updated pension sequence in Wave 3

There are two groups of respondents whose dormant plans do not get updated by using the updated pension sequence in Wave 3; a) Respondents whose Wave 1 job was terminated before Wave 2. They were not included in the preload prepared for the pension sequence of Wave 3. b) Respondents who were not interviewed in Wave 3. For those cases we use the information from the updated pension sequences in Waves 4, 6, 7, or 8; whichever is available first. The updated pension sequence in Wave 4 is similar to the sequence in Wave 3. Therefore, the updating procedure using the updated pension sequence in Wave 4 is similar to the procedure used when updating the information in Wave 2 using the updated pension sequence from Wave 3. However, there are several differences in the updated pension sequences in Waves 6, 7, and 8 compared with those sequences in Waves 3 and 4. These differences are:

1. In Wave 6 going forward respondents who reported “receiving benefits now” are asked two follow-up questions¹³; the amount of the benefit and the date they started receiving benefits. We use this information for updating the DB values.

2. In Wave 6 going forward, respondents who rolled over their DB plan to an IRA account are asked about the date they made the change. This date has an effect on the updated value of the DB plan in Wave 2 if it was on or before respondents’ interview date in Wave 2.

¹³ In Waves 3 and 4 respondents are not asked about the amount and the start date of the benefits. We use the retirement or pension income from the Assets and Income section.

3. From Wave 6 going forward, respondents are asked about the date that they withdrew their DC accounts and rolled them over into an IRA. The reported dates have affected the updated value of the DC plan in Wave 2 if they were on or before respondents' interview date in Wave 2.

4. From Wave 6 going forward, "transferred to new employer" is added to the list of choices that respondents had for disposing their dormant DC accounts. They are also asked about the date they made the transfer. This date has an effect on the updated value of the DB plan in Wave 2 if it was on or before respondents' interview date in Wave 2.

5. In Wave 8, "received/receiving installments" was added to the list of choices that respondents had for disposing their dormant DC accounts. They are not asked about the date that they received the installments. This date has no effect on the updated value of the DC plan in Wave 2.

Pension Wealth in Wave 3

Pension wealth in Wave 3 is updated using the same procedures described above for updating pension wealth in Wave 2. We start with the information from the updated pension sequence in Wave 3 for updating dormant DB values and DC account balances. When appropriate we update pension values from Wave 2. We apply the dates reported for particular actions together with the interview dates in Wave 3 in the updating process.

Respondents who were not interviewed in Wave 3 or were not preloaded for Wave 3's updated pension sequence have their DB values and DC account balances updated with information from the updated pension sequences in Wave 4, 6, 7, or 8; whichever is available first.

Pension Wealth in Wave 4

The updating procedure for pension wealth in Wave 4 is similar to the updating procedure in Wave 3. We start with the information from the updated pension sequence keyed by the preload for the old pension plans in Wave 4. We update DB and DC values from dormant plans based on the dates reported by particular actions considering the interview dates in Wave 4.

Respondents who were not interviewed in Wave 4 or were not preloaded for Wave's 4 updated pension sequence have their DB values and DC account balances updated by using the information from the updated pension sequences in Wave 6, 7, or 8; whichever was first available.

Pension Wealth in Wave 5

The updated pension sequence was not administered in Wave 5. For updating respondents' pension wealth in Wave 5, we use the information from the updated pension sequence in Wave 6. The procedure is similar to the procedure we use for constructing the pension wealth in Wave 4.

Respondents who were not interviewed in Wave 6 or were not preloaded for Wave's 6 updated pension sequence have their DB values and DC account balances updated with the information from the updated pension sequences in Wave 7, or 8; whichever was available first.

Pension Wealth in Wave 6

For updating respondents' pension wealth in Wave 6, we use the information from the updated pension sequence in Wave 6. The procedure is similar to the procedure we use for constructing the pension wealth outcomes for Wave 5.

For respondents who were not interviewed in Wave 6 or were not preloaded for Wave 6's updated pension sequence, their DB values and DC account balances get updated by using the information from updated pension sequences in Wave 7, or 8; whichever was available first.

Pension Wealth in Wave 7

The procedure for updating respondents' pension wealth in Wave 7 is similar to the procedure we use for updating pension wealth in Wave 6. We use the information from the updated pension sequence in Wave 7. We apply the dates of choices made coordinated with respondents' interview dates in Wave 7. The procedure is similar to the procedure we use for constructing the pension wealth in Wave 6.

For respondents who were not interviewed in Wave 7 or were not preloaded for Wave's 7 updated pension sequence, their DB values and DC account balances get updated by using the information from the updated pension sequence in Wave 8.

Pension Wealth in Wave 8

We use the information from the updated pension sequence in Wave 8. The procedure for updating respondents' pension wealth in Wave 8 is similar to the procedure we use for updating pension wealth in Wave 7. We apply the dates of choices made coordinated with respondents' interview dates in Wave 8.

List of Updated Pension Wealth Data Files

Updated Pension Wealth Data Files report separately DB wealth, DC wealth, and total pension wealth, as the sum of the two. Pension wealth levels reported in this project are updated using information from the updated pension sequence, based on responses to questions keyed by the pension preload. There are eight data files, one for each of the eight survey years covered, Wave 1 to Wave 8. They are as follows:

1. PenWlth_w1:

This data file reports separately DB wealth and DC wealth from respondent's current job and their total, and similarly from last and/or previous jobs, and their total as reported in Wave 1. DB wealth from current job (Cur_DBwlth1) includes the prorated present discounted value of expected future benefits from the respondent's most important DB plan on their current job. DC wealth from current job (Cur_DCwlth1) includes the sum of all DC account balances from respondent's current job. DB wealth from respondents' last and previous jobs (Prv_DBwlth1) includes present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 1 for plans in pay status. DC wealth from respondents' last and/or previous job (Prv_DCwlth1) includes the sum of current account balances from those jobs. Pension wealth variable (Penwlth1) is the sum of current and previous DB and DC values. Values for Wave 1 are not updated from the values reported at the time of the first wave even if information collected in the updated pension sequence of some future wave provides conflicting information.

2. UPenWlth_w2:

This data file includes DB and DC wealth from respondent's current job in Wave 2, from last and/or previous jobs, and pension wealth in Wave 2. Constructed variables include:

Cur_DBwlth2: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 2.

Cur_DCwlth2: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 2.

UPrv_DBwlth2: DB wealth from respondent's last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2. The reported value includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 2 for plans in pay status.

UPrv_DCwlth2: DC wealth from respondents' last and/or previous jobs includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2.

UPenwlth2: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values.

3. **UPenWlth_w3:**

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 3.

Constructed variables include:

Cur_DBwlth3: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 3.

Cur_DCwlth3: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 3.

UPrv_DBwlth3: DB wealth from respondent's last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2 and between Wave 2 and Wave 3. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 3 for plans in pay status from those jobs.

UPrv_DCwlth3: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 and from jobs terminated between Wave 1 and Wave 2 and Wave 2 and Wave 3.

UPenwlth3: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 3.

4. UPenWlth_w4:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 4.

Constructed variables include:

Cur_DBwlth4: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 4.

Cur_DCwlth4: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 4.

UPrv_DBwlth4: DB wealth from respondent's last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after their initial interview. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 4 for plans in pay status from those jobs.

UPrv_DCwlth4: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated between Wave 1 and Wave 2, Wave 2 and Wave 3, and Wave 3 and Wave 4.

UPenwlth4: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 4.

5. **UPenWlth_w5:**

This data file includes DB and DC wealth from respondent's current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 5.

Constructed variables include:

Cur_DBwlth5: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 5.

Cur_DCwlth5: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 5.

UPrv_DBwlth5: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' initial interview. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 5 for plans in pay status from those jobs.

UPrv_DCwlth5: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' first interview.

UPenwlth5: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 5.

6. **UPenWlth_w6:**

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 6.

Constructed variables include:

Cur_DBwlth6: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 6.

Cur_DCwlth6: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 6.

UPrv_DBwlth6: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' initial interview. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 6 for plans in pay status from those jobs.

UPrv_DCwlth6: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort) and from jobs terminated after respondents' first interview.

UPenwlth6: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 6.

7. **UPenWlth_w7:**

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 7.

Constructed variables include:

Cur_DBwlth7: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 7.

Cur_DCwlth7: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 7.

UPrv_DBwlth7: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' initial interview. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 7 for plans in pay status from those jobs.

UPrv_DCwlth7: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' first interview.

UPenwlth7: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 7.

8. UPenWlth_w8:

This data file includes DB and DC wealth from respondents' current jobs, from last and/or previous jobs, and the sum of pension wealth from these sources as of Wave 8.

Constructed variables include:

Cur_DBwlth8: DB wealth from current job includes respondent's prorated present discounted value of expected future benefits from the most important DB plan from their current job in Wave 8.

Cur_DCwlth8: DC wealth from current job includes the sum of all DC account balances from respondent's current job in Wave 8.

UPrv_DBwlth8: This constructed variable includes DB wealth from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort), in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' initial interview. It includes the updated present discounted value of expected future benefits for respondents with a dormant DB plan and present discounted value of remaining benefits as of Wave 8 for plans in pay status from those jobs.

UPrv_DCwlth8: DC wealth from respondent's last and/or previous job includes the sum of updated account balances from respondents' last and previous jobs reported in Wave 1 (for the HRS cohort) or in Wave 4 (for the WB cohort), or Wave 7 (for the EB cohort), and from jobs terminated after respondents' first interview.

UPenwlth8: Pension wealth variable is the sum of pension wealth from plans on current jobs and updated previous DB and DC values in Wave 8.