Survey of Income and Program Participation

YEAR-APART ESTIMATES
OF HOUSEHOLD NET WORTH FROM THE
SURVEY OF INCOME AND PROGRAM PARTICIPATION

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The views expressed in this paper are those of the authors and do not necessarily reflect those of the U.S. Bureau of the Census.

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INTRODUCTION

The difficulty of collecting accurate data on wealth in a household survey has long been recognized. The modern history of wealth surveys began with a 1946 survey sponsored by the Federal Reserve Board (FRB) and continued with the annual surveys of Consumer Finances conducted by the Survey Research Center at the University of Michigan during the period 1947 to 1970. In the 1960-61 Survey of Consumer Expenditures, sponsored by the Bureau of Labor Statistics (BLS), data on assets and liabilites were collected one year apart, enabling BLS to calculate the net change in assets and liabilities. In 1963 and 1964, the FRB sponsored what might be viewed as the most ambitious effort ever to obtain wealth and saving estimates from a household survey. The 1963 survey collected very detailed asset and liability data from a sample of approximately 2,500 households [Projector and Weiss, 1966]. The households were visited again one year later to obtain the data that were used in producing estimates of household saving [Projector, 1968]. A special feature of the 1963-64 survey was a design that sampled high-income households at a higher rate that other households. Other household surveys that collected a significant amount of data on household wealth included the FRB's 1977 Consumer Credit Survey [Durkin and Ellishausen, 1978], the 1979 Survey of the President's Commission on Pension Policy [Cartwrght and Friedland, 1985], and the 1979 Income and Survey Development Program [Pearl and Frankel, 1982; Radner, 1984].

More recently, data from two major wealth surveys have received a considerable amount of attention. The 1983 Survey of Consumer Finances (SCF) was conducted by the University of Michigan's Survey Research Center and was sponsored by several Federal agencies including the Federal Reserve Board. The survey collected data from a basic representative sample of about 3,800 families and from a special high-income sample of 438 families. Estimates are available from a sampling frame that excludes the high income families and from a frame that includes them [Avery, et. al., 1984 and 1986]. The survey received a good deal of attention when the results were used to estimate the change in wealth inequality [Joint Economic Commitee, 1986]. The second major survey was the Survey of Income and Program Participation (SIPP). SIPP is an ongoing panel survey sponsored by the Bureau of the Census. Each panel remains in sample for two and one-half years and interviews are conducted every four months. The source of the data for the SIPP wealth report was the asset and liability questions that were asked in the fourth wave of the 1984 panel.[1] The interviews were conducted during the period September-December 1984, and the sample of 20,000 households was the largest for any survey containing a detailed set of wealth questions. SIPP wealth data have been presented in a report and in several papers [U.S. Bureau of the Census, 1986; Lamas and McNeil, 1985 and 1986].

The design of the first four panels of SIPP calls for the collection of wealth data twice each panel. The same questions that were asked in wave 4 of the 1984 panel were repeated one year later in wave 7. This design allows us to examine changes in net worth over a one-year period. The major purpose of this paper is to present the wave 4 and wave 7 estimates and offer some conclusions about what the comparisons show about the reliability of the estimates.

Asset and liability data are collected in SIPP because a certain amount of asset data are required to determine program eligibility, because such information makes the SIPP data base more useful to those who want to model the effect of tax and transfer policies, and because net worth provides a dimension of economic status that is not fully captured by income. The design of the asset questions is based on the core questions about income recipiency. In some sense, the marginal cost of SIPP asset questions is small because the ownership of various categories of assets is established in the core of each wave as part of the method of measuring income. Information about the value of certain major assets is collected as a composite amount. For example, the amount held in the following four forms is collected as a single figure; (1) regular savings accounts, (2) money market deposit accounts, (3) certificates of deposit, and (4) interest-earning checking accounts. Another single amount question is asked about four other assets; (1) money market funds, (2) U.S. Government securities, (3) municipal or corporate bonds, and (4) other interest-earning assets excluding mortgages and U.S. Savings Bonds. The assets are grouped in this way to measure income and the grouping is maintained to minimize the cost of the

additional questions about asset value. For other assets, amounts were collected for each type including stocks and mutual fund shares, own home, rental property, other real estate, mortgages held from the sale of property, regular checking accounts, U.S. savings bonds, and other financial assets.

The major asset categories not covered in SIPP are (1) pension plan assets, (2) cash surrender value of life insurance, and (3) consumer durables other than vehicles. SIPP does collect information on whether persons are covered by or vested in a pension plan and information on the face value and type of life insurance policies.

COMPARISON OF SIPP AND SCF ESTIMATES OF NET WORTH

Because the 1983 SCF was designed as a wealth survey, it provides a useful reference for examining some of the basic wealth estimates from SIPP. There are minor differences between SIPP and SCF in the timing of the survey (SIPP interviews were conducted from September 1984 to December 1984; SCF from February 1983 to July 1983) and in the coverage of the household population (SCF did not obtain data for secondary unrelated individuals or for unrelated subfamilies). The major differences have to do with the amount of detail collected and, perhaps most importantly, with the availability of a high income sample for the SCF. The comparisons in Table A distinguish between SCF estimates based on the representative sample and SCF estimates based on the merged sample. The SCF representative sample was selected in approximately the same manner as the SIPP sample. The SCF merged sample combines the high-income sample with the representative sample. The comparisons in table A show SCF data as published in the Federal Reserve Bulletin as well as revised estimates [Avery, et.al., 1986].

The revisions essentially reflect the correction of a very large error on a single questionnaire.

Table A. Comparisons of SIPP and SCF Estimates of Net Worth

NET WORTH	SCF: Before Revision 1/		SCF: After Revision 2/		SIPP
	Representative sample	Merged sample	Representative sample	Merged sample	
Excluding equity in motor vehicle and own business:					
Mean.....	$66,050	N.A.	N.A.	N.A.	$ 65,801
Median.....	24,574	N.A.	N.A.	N.A.	N.A.
Including equity in motor vehicles and own business:					
Mean.....	N.A.	133,502	103,465	119,898	78,574
Median.....	N.A.	30,553	N.A.	N.A.	32,455

1/From the Federal Reserve Bulletins of September 1984 and December 1984.

2/Obtained from the Federal Reserve Board.

Note: The SCF estimates include forms of wealth not included in the SIPP estimates; including the cash value of life insurance and the value of employer-sponsored thrift, profit sharing, stock option, and tax-deferred savings plans. In addition, the SCF and SIPP differ in their measures of business equity. The SCF estimate includes equity in nonpublic businesses in which the person had no management responsibilities. The SIPP questionnaire had no specific questions on such arrangements and probably did not count most of the wealth held in this form.

The first row in table A shows mean net worth when motor vehicle and business equity are excluded. This is a measure of net worth that was published in the Federal Reserve Bulletin and we have chosen to show it here because it offers an opportunity to examine the effect of business equity on the SIPP and SCF estimates. The SIPP and SCF estimates shown in the first row are very close. The second row is based on a more comprehensive measure of net worth and shows the following:

1. The SCF merged sample estimate of mean net worth is much higher than the SCF representative sample estimate (about 16 percent higher).
2. The SCF revision had a large effect on the estimate of net worth (it lowered the estimate of the mean by about 11 percent and the estimate of total net worth by about 1.1 trillion).
3. When business equity is included, the SIPP estimate of mean net worth is much lower than the SCF figures; but the SIPP estimate of median net worth is higher than the SCF estimate even when the comparison is with the SCF estimate that would be expected to produce the highest figure (the merged sample before revision).

Based on a comparison of medians, the SIPP wealth estimates are clearly no worse than the SCF estimates, and might be considered slightly better. This conclusion is reinforced when one considers that the SCF estimates include forms of wealth that are not included in the SIPP estimates[2]. A comparison of means seems to show a much different result, but the measurement issues are complex and the comparison must be approached with caution. Two major measurement issues are the stability of measures of business equity and the effect of including 438 high income families in the SCF sample. Table A shows that the SIPP and SCF estimates of mean net worth are virtually identical when equity in own business is excluded from the net worth

measure and when the SCF estimate is based on the representative sample (the SIPP estimate was $65,801 compared to a SCF estimate of $66,050). When business equity is included, the difference between the SIPP and SCF estimates becomes sizable. The SIPP estimate of mean net worth when business equity is included is $78,574 and the SCF revised estimate based on the representative sample is $103,463. The SCF revised estimate rises to $119,898 when it is based on the merged sample.

The data in table A show that relatively high SCF estimates of business equity and the addition of 438 high-income families to the SCF sample result in SCF estimates of mean net worth that are substantially above the SIPP estimates. Does this mean that the SCF estimates are superior to the SIPP estimates? The proper answer to this question is that the choice of the data set depends upon the intended use of the data. Because of its larger sample size, and because it produces an estimate of median net worth that is slightly higher than any SCF estimate, it seems reasonable to select the SIPP data set when comparing the wealth status of various subgroups of the population. The dramatic effect a single questionnaire can have on mean values makes it prudent to use medians rather than means when making comparisons among demographic, social, or ethnic goups. In fact, the very large effect of "outliers" raises questions about any analysis that depends on means or aggregates. The paper in this conference by Curtin, Juster, and Morgan describes the problems of "outliers" and cites three cases in the SCF sample and one case in the SIPP sample. The first SCF case cited by the authors is the case that led to the major revision in the SCF estimates. An entry of $200,000,000 was subsequently changed to $2,000,000 on the basis of information obtained in 1986. The original value, when weighted, had accounted for approximately ten percent of U.S household wealth. The authors also cite a SCF case in which reported net worth was about one billion dollars.

This case was not included in the final SCF sample because of a lack of information on income, but its inclusion would have approximately doubled the SCF estimate of total U.S. household wealth. The SIPP case involved a questionnaire showing a business equity of $50,000,000. This case was not included in the final SIPP file because the 1984 wealth data appeared to be inconsistent with other data obtained for this household including information on wealth holdings in 1985.

The message for data users is that household survey estimates of aggregate and mean wealth are potentially highly unstable. We advise caution when using either the SCF or the SIPP if conclusions are to be based primarily on cross-section or time-series differences in aggregate or mean wealth.

We do regard household survey estimates of median wealth as useful and valid. This judgement is based on comparisons of medians between SIPP and SCF and between the SIPP estimates from the wave 4 and wave 7 interviews.

COMPARISON OF SIPP NET WORTH ESTIMATES FROM WAVE 4 AND WAVE 7

Tables 1 and 2 provide basic estimates of median, mean, and aggregate household net worth for both wave 4 and wave 7. The data have been weighted to represent all U.S. households. The wave 7 figures have been adjusted by the change in the Consumer Price Index to allow for a constant dollar comparison. Over the 12 month period, the estimates show a $818 decline in household median net worth (from $32,455 to $31,637), a $34 decline in mean net worth (from $78,574 to $78,540), and a $121 billion dollar increase in aggregate net worth (from $6.825 trillion to $6.946 trillion). These estimates of change, however, are not statistically significant.

When comparing net worth estimates, either in the cross-section or over time, both sampling and nonsampling errors must be taken into consideration. The standard errors for each of the net worth estimates in Table 1 are shown in parentheses. For the population subgroups shown in the table, the relatively large sample size of SIPP produces standard errors small enough so that is is possible to identify those race, age, family type, and income groups with relatively high or low levels of net worth. The data also show a certain stability in the net worth estimates between wave 4 and wave 7. For example, consider the following ratios of median net worth: the White to Black ratio was 12 to 1 in both wave 4 and wave 7; the old to young (65 and over to under 35) ratio was 11 to 1 in both waves; the married-couple family to female householder family ratio was 9 to 1 in wave 4 and 11 to 1 in wave 7; and the highest income quintile to lowest income quintile ratio was about 20 to 1 in both wave 4 and wave 7. Table 1 shows very few statistically significant year-to year changes in net worth. The three changes that were significant at the 95 percent confidence level are marked with a single asterisk, and the one change that was significant at the 90 percent confidence level is marked with a double asterisk. As we examine the data more closely, we are likely to conclude that these "significant changes" probably reflect measurement problems.

Sampling error becomes more important as the base of the estimate declines. Table 3 shows the mean net worth of households by income quintile cross-classified by household type and age of householder for both wave 4 and wave 7. The data show a positive relationship between income and wealth

for most types of households by age groups, and there is evidence that net worth increases with age for most types of households by income groups, but the standard errors for most of the cells are very large. Many of the cross-section comparisons have to be carefully qualified, and little can be said about year-to-year changes.

Nonsampling errors in the form of reporting errors and nonresponse may be more important than sampling errors. Reporting errors can have a very large effect on estimates, and it is difficult to determine when a serious reporting error has occurred. The controversy surrounding the Joint Economic Committee's report on changes in wealth inequality underlines the dramatic effect a single observation can have on estimates of mean and aggregate net worth. Every household survey faces this problem, and in wave 4 of SIPP we encountered a case that we considered a problem case. One of the sample households in that wave reported a business equity of $50,000,000. A review of the other entries on the questionnaire raised doubts about the accuracy of that figure, but the evidence was not conclusive. We decided to wait until we could examine the responses to the wave 7 questionnaire before making a final decision on the value to adopt for wave 4. The wave 7 responses convinced us that the wave 4 data were incorrect, and the final value adopted for wave 4 was set equal to the wave 7 response: $2,000,000. Given that the household weight was about 6,500, the decision reduced the potential wave 4 estimate of total business equity by approximately 300 billion dollars.

There is a particular kind of reporting error that is frequently important in panel surveys. The error, called time-in-sample bias, is present in Current Population Survey rotation group estimates of income and labor force activity, and may very well be present in SIPP estimates. Whether this type of error has a serious effect on SIPP estimates of year-to-year change in net worth can be examined as data from the 1985 and other panels become available.

The problems of noninterviews and nonresponse can be serious for household surveys. Noninterviews occur when a person or household refuses to participate in the survey or when the person or household cannot be located in order to conduct an interview. Approximately 11 percent of the households eligible for the first wave interview were noninterviews in wave 4. The figure was about 17 percent in wave 7. These noninterview rates compare favorably to the rates in other wealth surveys. Nonresponse occurs when a respondent does not know the answer to a question, and questions about the value of assets and debts are difficult to answer in the setting of a relatively brief household interview. The problem is compounded when interviews are conducted with proxy respondents, and the SIPP survey design allows for the interview to be conducted with a "knowledgeable" relative if the sample person is not available at the time of the household interview. Nonresponse also occurs when a respondent refuses to answer a question. This is relatively rare in SIPP, but some of the "don't know" responses may, in fact, be polite refusals. When SIPP questionnaires are processed, missing information is imputed using a procedure that searches for a donor

with similar characteristics and then sets the missing value equal to the value reported in the questionnaire of the donor. It is important to realize that the wave 4 data and the wave 7 data were processed independently. Except for the single case described above, we did not use information from one wave to fill in missing information or modify responses in the other wave. The importance of this feature of the processing system will become apparent later when we examine estimates for matched households.

Table 4 shows the proportion of total value that was imputed for selected assets. In wave 4, imputations accounted for nearly 40 percent of the value of stocks and mutual fund shares and the value of own businesses. About 30 percent of the value of rental property was imputed, and about 20 percent of the wealth held in own homes, other real estate, and IRA's. The wave 7 imputation rates were generally similar except for a large increase in the amount of imputation for the value of own business. The rate was approximately 50 percent in wave 7.

In order to test the theory that knowledge of their earlier response would lead respondents to give improved estimates of change, information about wave 4 responses was given to one-half of the sample at the time of the wave 7 interview. This feedback procedure was similar to the procedure used in the 1964 FRB survey [Projector, 1986]. Tables 5 and 6 show median and mean net worth figures by whether the household was in or out of the feedback sample. When the various subgroups are examined, it is difficult to discern any regular effect of the feedback procedure. For example, among the 55 to 64 years of age group, those in the feedback sample reported a smaller change

than the nonfeedback group, but the relationship was reversed for the 65 years and over age group.

The comparison of wave 4 with 7 shows a certain stability in the basic relationships. The net worth data in table 7 illustrate this stability, and the comparison with the income data shows that net worth data are an important addition to our usual set of income tables. Black households, for example, receive about 7 percent of aggregate income, but own only 3 percent of total net worth. On the other hand, families with a householder 65 and over received about 13 percent of total income and owned about 30 percent of total net worth. When we examine year-to-year changes in net worth, the results are less encouraging. Among most population subgroups, the change in net worth was not statistically significant. Perhaps more importantly, those changes that passed the test of statistical significance seem more likely to reflect measurement problems than real economic change. It is difficult to understand, for example, why households with a householder 45 to 54 years of age should have experienced a 9 percent drop in median net worth during a 12 month period.

COMPARISON WITH FLOW OF FUNDS ESTIMATES

The categories used to collect asset data in SIPP, along with information about the number of owners and the values of the assets, are shown in table 8. The wave 4 and wave 7 data are generally similar, although there is some suggestion of a decline in asset ownership (most of the changes in the ownership rate for individual assets were not statistically significant,

but in 10 out of 12 asset categories the measured change was negative). The value of home equity was by far the largest asset category, accounting for nearly 3 trillion dollars out of the aggregate net worth figure of approximately 7 trillion dollars.

The SIPP asset categories are not directly comparable to the categories used by the FRB in their Flow of Funds Accounts estimates (FFA). First, SIPP does not cover all the assets that are included in the FFA estimates. We have mentioned that SIPP excludes pension wealth, the cash value of life insurance, and the value of consumer durables other than vehicles. Cash holdings should be added to the list. There is some ambiguity as to the coverage of estates and personal trusts. SIPP does not have specific questions on these assets and it seems likely that most of this form of wealth is absent from the SIPP estimates. A second difference between SIPP and FFA is the inclusion of holdings of the nonprofit sector in the latter accounts. A rough estimate of the 1984 assets of this sector was $530 billion. A third difference is population coverage; SIPP excludes the institutional and military populations. Finally it should be noted that the FFA household sector estimates are essentially the residuals that remain after allocations are made to other sectors and are not free from measurement error.

Table B compares SIPP and FFA estimates for 1984 by attempting to combine and adjust the categories where necessary. Two categories that are common are equity in own home and motor vehicle equity. The SIPP estimate of home equity is far greater than the FFA estimate ($2.8 trillion versus $1.9 trillion). The SIPP estimate of $0.4 trillion for vehicle equity was slightly less than the FFA estimate of $0.5 trillion.

In order to compare holdings of financial assets, we must add together two categories from the FFA estimates, "deposits and credit market instruments", and "corporate equities", adjust this sum for personal trust and nonprofit sector holdings, and compare the adjusted sum to the sum of certain SIPP categories.

Table B. Conparison of SIPP and Flow of Funds Estimates of Household Wealth (In trillions of dollars)

CATEGORY	SIPP (Wave 4)	Flow of Funds (fourth quarter of 1984)
1. Equity in own home.....	$2.8	$1.9
2. Equity in motor vehicles...	0.4	0.5
3. Financial assets.....	2.5 1/	3.4 2/
4. Equity in noncorporate business.....	1.0 3/	2.5

1/Sum of stock and mutual fund shares ($0.5 trillion), interest-earning assets ($1.2 trillion), regular checking accounts ($43 billion), savings bonds ($33 billion), value of IRA and KEOGH accounts ($0.2 trillion), other financial assets ($0.3 trillion), and the amount of corporate stock included in the SIPP category of "own business or profession" ($0.3 trillion).

2/Sum of deposits and credit market instruments ($3.3 trillion), and corporate equities ($1.5 trillion) less estimated value of estates and personal trusts ($0.9 trillion) and nonprofit sector assets ($0.5 trillion).

3/Sum of equity in own business or profession ($0.8 trillion) less value of corporate stock included in this category ($0.3 trillion) plus equity in rental property ($0.6 trillion).

The SIPP categories that comprise the estimate of financial assets include stock and mutual fund shares, interest-earning assets, regular checking accounts, savings bonds, IRA and KEOGH accounts, other financial assets, and the amount of corporate stock included in the SIPP category of "own business or profession." (certain corporate stock is counted in this category because of the design of the questionnaire). Table B shows that the FFA estimate of financial assets was $3.4 trillion compared to a SIPP estimate of $2.5 trillion. The final category to be compared is equity in noncorporate business. The FFA estimate for this category was $2.5 trillion. The SIPP estimate, obtained by adding together own business or profession (less the corporate stock included in this category) and equity in rental property was $1.0 trillion.

If the FFA estimates are taken at face value, it would appear that SIPP seriously underestimates wealth held in the form of financial assets and business equity and seriously overestimates wealth held in the form of home equity. Based on comparisons with other household survey estimates of home equity and on validation studies of survey estimates of home value [U.S. Bureau of the Census, Wolters and Woltman, 1974], we think it unlikely that the SIPP estimate of home equity is seriously biased. We conclude that the FFA estimate of home equity is not a good reference figure. Validation studies of survey estimates of financial assets show that the failure to report ownership of financial assets is a serious problem [Ferber, et. al., 1968 and 1969], and the evidence seems strong that the SIPP estimates of holdings in the form of financial assets have a serious downward bias.

Finally, the SIPP estimate of business equity is well below the FFA estimate. Again, it seems likely that the SIPP estimate has a serious downward bias, but a definitive conclusion could be reached only after some form of validation study.

The above comparison leaves out the SIPP category of "other real estate" (about $0.3 trillion). Some of the assets in this category are vacation homes; some probably belong in the "own business" category.

CHANGES IN NET WORTH AT THE INDIVIDUAL HOUSEHOLD LEVEL

The discussion thus far has been concerned with the comparison between cross-section estimates. Because SIPP is a panel survey, it is possible to measure changes in net worth at the individual household level. In order to do so, we began with households as they existed on the wave 7 file and matched back to the wave 4 file. We considered a match to exist if the householder in the wave 7 household was present as a householder or spouse of householder in the wave 4 file. We classified the matched household as "having no change in composition" if each wave 7 adult was present in the wave 4 household and each wave 4 adult was present in the wave 7 household. The "matched household" file produces estimates that are not strictly comparable to the wave 4 and wave 7 files taken separately. Some households were not present in wave 7 because of a sample cut that occurred between the two waves.

In interpreting these matched results, it should be remembered that the imputation procedures used for wave 4 and wave 7 were independent. The imputation procedures give cross-section results that are reasonable, but the estimates of change produced by two independent procedures cannot be expected to be reasonable.

Table 10 shows the percent distribution of various household groups by their change in net worth from wave 4 to wave 7. For all matched households without imputations, about 15 percent had a decline of $10,000 or more, 20 percent had an increase of $10,000 or more, 23 percent had an increase or decrease of less than $1,000, and the rest had declines or increases in the $1,000 to $9,999 range. It is difficult to determine the extent to which these estimates reflect real changes and the extent to which they represent measurement problems. We can start by considering that only 2 percent of households have annual incomes of $100,000 or more. For 98 percent of households, then, a change in net worth of $10,000 is a very large change. If asset prices were stable, a $10,000 increase in net worth would mean that more than 10 percent of current income had been saved.

We know, of course, that asset prices were not stable during our reference period. The value of the average share of stock listed on the New York Stock Exchange increased by 12 percent from late 1984 to late 1985. Our data from SIPP, however, show that only about 20 percent of households owned stock and the average value of stock porfolios was about $27,000 in late 1984. Given these considerations, it seems likely that the measured changes in the net worth of individual households has a large error component.

Table 10 shows estimates for households with no change in composition and for a certain set of households that did have a change in composition. Households without a change in composition had, on average, an increase in net worth. Married-couple households had an average increase of $5,329, for example, although 34 percent had a decrease of $1,000 or more and 15 percent had a decrease of $10,000 or more. The universes for two groups of households that did have a change, wave 7 widows who were married, spouse present in wave 4, and wave 7 divorced or separated women who were married, spouse present in wave 4, are quite small. The data show an average net worth increase of $13,000 for the widows and an average decrease of $11,000 for the divorced and separated.

The second page in table 10 shows net worth change data for households that had one or more net worth items imputed in either wave 4 or wave 7. As discussed earlier, the fact that the wave 4 and wave 7 imputation procedures were independent essentially eliminates these households as a data source

for analyzing changes in the net worth of individual households. About 62 percent of the households in this group had a change of $10,000 or more. Unfortunately, there are more households in the "imputed" group than in the "nonimputed" group. Sixty percent of all matched households had one more imputed net worth items in either wave 4 or wave 7.

There is some evidence that the feedback procedure reduces the estimates of change. The third page of table 10 presents data for those matched households with no imputation who were in the feedback sample. The mean difference in net worth for this group was $1,947 versus $3,387 for matched, nonimputed households who were not in the feedback sample. The proportion of feedback sample households with changes of $10,000 or more was 33 percent for the feedback sample and 36 percent for the nonfeedback sample.

The data on the last page of table 10 show a reasonable relationship between income level and change in net worth. One would expect that large changes would be more common for high income household than for low income households and the data support this expectation. Approximately 37 percent of households in the highest income quintile had an increase of $10,000 or more, 24 percent had a decrease of $10,000 or more, and 6 percent had a change of less than $1,000. In comparison, 9 percent of households in the lowest quintile had an increase of $10,000 or more, 7 percent had a decrease of $10,000 or more, and 50 percent had a change smaller than $1,000.

FITTING A SAVINGS MODEL

We have used the SIPP data to fit a simple model of savings in which the change in net worth is a function of the level of total net worth and income at the beginning of the period, the change in income during the period, and certain characteristics of the householder including age, marital status, and race and ethnicity. The set of observations was limited to those households without a change in composition who had no imputed net worth items.

The results of regressing the change in net worth on the independent variables are summarized in Table 12. The regression was significant and had an R^2 of .08. The income variables had a significant positive effect on savings (the value of their coefficients were more than twice as large as the standard errors), wave 4 net worth had a negative and significant coefficient, the age groups "less than 35" and "45 to 54" had a significant negative effect, and the other variables were not significant. These regressions are consistent with the results obtained by Projector when she regressed 1963 savings on 1963 disposable income and December 1962 net worth. In that study the coefficient of income was positive, the coefficient of net worth was negative, and the R^2 was .04 [Projector, 1968].

REPLY TO DISCUSSION BY MARTIN DAVID [3]

In his discussion of this paper, Martin David has provided an extremely valuable critique of household wealth surveys in general and the SIPP survey in particular. We agree with many of his points but we also note that the measurement of household wealth per se has not been viewed as a primary purpose of SIPP. We hope that some of the suggested changes can be adopted, but changes that are costly or that impinge on other aspects of the survey are unlikely to occur. In the area of survey procedures, David recommends that an effort be made to interview the household member who is best able to provide financial information. He also recommends that the questionnaire be modified to obtain data on assets held in trust for children, on business investments in which the person does not play an active management role, and on certain other assets not presently covered. A third major recommendation is to ask respondents to examine records when possible. All of these recommendations seem useful.

David makes a strong case for conducting validation studies. He notes that previous studies identified the problem of false negatives as a major factor in the tendency of survey estimates to fall short of independent estimates. He suggests that information from validation studies could be used to correct for false negatives (change some of the "no" responses) and would provide a basis for imputing amounts to persons who refuse to answer questions on ownership or value.

We agree completely with his statement that the wealth data should be subjected to longitudinal editing and imputation procedures if the data file is to be used to examine changes in wealth. We have attempted to circumvent this problem in some of our analysis by restricting the universe to cases that did not require imputation in either of the two waves, but this approach sacrifices large amounts of data.

The implementation of any of these changes will depend on a review of the evidence concerning their likely benefit and a comparison of the likely benefit with the likely cost. For example, the suggestion that an attempt be made to interview the household member who is most knowledgeable about finances would be accepted only if it could be demonstrated that the cost was small in terms of field resources, response rates, and the quality of other types of data.

CONCLUSIONS

The major purpose of this paper was to present an evaluation of SIPP data on household wealth. The major aspect of the evaluation was comparison of the net worth levels of individual households as reported in interviews conducted one year apart. Other methods of evaluation included comparisons with SCF and FFA estimates.

The major findings include the following:

1. SIPP estimates of the relative wealth holdings of various population subgroups are remarkably stable based on a comparison of median net worth estimates from wave 4 and wave 7.

2. Household survey estimates of aggregate and mean net worth are very sensitive to "outliers" (cases with very high values). These "outliers" may represent response errors or marking errors, or they may, in fact, be an accurate estimate of the holdings of an individual. In the latter case, the "outlier" may or may not be multiplied by an appropriate weight when the raw survey data are converted to estimates of the wealth of U.S. households.

3. The problem of "outliers" is so severe that analyses and evaluations of household survey wealth data that are based solely on aggregate or mean estimates are subject to serious questions about validity.

4. The large differences between wave 4 and wave 7 in the holdings of individual households is additional evidence that household wealth estimates are subject to large reporting or marking errors.

The finding that SIPP produces stable estimates of median net worth suggests that SIPP provides important new data on population subgroup differences in net worth. The relatively large sample size and an estimate of median net worth that is larger than the SCF estimate means that SIPP is the preferred data set for this purpose. The value of SIPP net worth estimates is enhanced by the rich array of demographic, social, and economic data collected during the life of the panel (e.g., personal history characteristics, program participation status, and employer benefit recipiency). We concur with Martin David that certain questionnaire and procedural changes would improve the quality of SIPP wealth data, but we are cautious about the desirability of major changes. We note that differences between household surveys in estimates of mean and aggregate net worth are strongly influenced by "outliers." In the absence of validation studies, we are not prepared to accept an increase in estimated mean or aggregate wealth as evidence that a better source of data has been obtained.

End Notes

[1]The first wave of interviews with the 1984 panel households was October, November, December 1983 and January 1984. In general, a wave is a complete set of interviews with the sample households and is completed over a four month period.

[2]See the note to Table A for a description of these forms of wealth.

[3]The discussion by Martin David (University of Wisconsin) is not included in this Working Paper. It will be available in the Conference Proceedings.

Table 1. Median and Mean Household Net Worth by Selected Household Characteristics: Wave 4 and Wave 7

(In constant dollars. Standard errors in parentheses)

Characteristic	Median net worth			Mean net worth		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
All households	$32,455 (685)	$31,637 (677)	$ -818	$ 78,574 (1,951)	$78,540 (1,747)	$ -34
RACE AND SPANISH ORIGIN						
White	38,915 (798)	37,472 (716)	-1443**	86,153 (2,222)	86,068 (1,984)	-85
Black	3,342 (247)	3,241 (312)	-101	20,180 (1,009)	21,292 (1,360)	1112
Hispanic	4,871 (936)	4,573 (806)	-298	35,827 (3,626)	33,917 (3,976)	-1910
AGE OF HOUSEHOLDER						
Less than 35 years	5,622 (303)	5,129 (284)	-493	22,548 (1,076)	21,575 (892)	-973
35 to 44 years	35,311 (1,344)	34,507 (1,184)	-804	68,555 (2,528)	73,454 (4,034)	4899
45 to 54 years	56,461 (1,764)	51,431 (1,965)	-5030*	114,491 (8,268)	98,046 (5,705)	-16,445*
55 to 64 years	73,454 (2,006)	70,455 (2,044)	-2999	132,279 (5,536)	129,686 (5,668)	-2,593
65 years and over	60,061 (1,629)	58,145 (1,828)	-1916	104,596 (5,239)	112,773 (4,203)	8,177
TYPE OF HOUSEHOLD						
Family	40,653 (904)	39,647 (874)	-1006	90,319 (2,603)	90,394 (2,301)	75
Married-couple	49,715 (1,076)	48,599 (1,017)	-1116	101,689 (3,166)	102,523 (2,796)	834
Female householder	5,620 (841)	4,522 (839)	-1098	37,379 (2,117)	35,424 (2,201)	-1955
Male householder	20,269 (3,351)	22,537 (3,385)	2268	66,960 (8,097)	62,711 (6,171)	-4249
Nonfamily	14,295 (1,032)	13,650 (928)	-645	47,820 (1,740)	48,104 (1,897)	284

Table 1. Median and Mean Household Net Worth by Selected Household Characteristics: Wave 4 and Wave 7

(In constant dollars. Standard errors in parentheses)

Characteristic	Median net worth			Mean net worth		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
INCOME QUINTILE						
Lowest.....	4,119	3,916	-203	27,802	27,899	97
	(618)	(573)		(1,273)	(1,481)	
Second lowest.....	18,692	17,171	-1521	46,499	43,813	-2686
	(1,370)	(1,616)		(1,593)	(1,807)	
Middle.....	24,695	24,673	-22	53,672	59,307	5635*
	(1,364)	(1,423)		(1,674)	(2,493)	
Second highest.....	39,262	37,934	-1328	72,263	72,895	632
	(1,403)	(1,322)		(2,197)	(2,055)	
Highest.....	82,199	84,118	1919	173,432	177,128	3696
	(1,941)	(1,970)		(7,840)	(6,941)	

[1]Income quintile groups are approximate.
*Change is statistically significant at the 95 percent confidence level.
**Change is statistically significant at the 90 percent confidence level.

Table 2. Number of Households and Aggregate Household Net Worth: Wave 4 and Wave 7

Characteristic	Number of households (000's)		Aggregate net worth (in billions of constant dollars)		
	Wave 4	Wave 7	Wave 4	Wave 7	Wave 7 minus Wave 4
All households.....	86,871	88,443	$6825.8	$6946.3	$120.5
RACE AND SPANISH ORIGIN					
White.....	75,419	76,629	6497.6	6595.3	97.7
Black.....	9,515	9,862	192.0	210.0	18.0
Hispanic.....	4,173	4,339	149.5	147.2	-2.3
AGE OF HOUSEHOLDER					
Less than 35 years.....	25,788	25,742	581.5	555.4	-26.1
35 to 44 years.....	17,404	18,162	1193.1	1334.1	141.0
45 to 54 years.....	12,605	12,838	1443.2	1258.7	-184.5
55 to 64 years.....	12,924	13,191	1709.6	1710.7	1.1
65 years and over.....	18,151	18,510	1898.5	2087.4	188.9
TYPE OF HOUSEHOLD					
Family.....	62,864	63,651	5677.8	5753.7	75.9
Married-couple.....	50,690	51,168	5154.6	5245.9	91.3
Female householder....	9,861	10,081	368.3	357.1	-11.2
Male householder.....	2,312	2,402	154.8	150.6	-4.2
Nonfamily.....	24,008	24,792	1148.1	1192.6	44.5
INCOME QUINTILE					
Lowest.....	17,374	17,689	483.0	493.5	10.5
Second lowest.....	17,374	17,689	807.9	775.0	-32.9
Middle.....	17,374	17,689	932.5	1049.1	116.6
Second highest.....	17,374	17,689	1255.5	1289.4	33.9
Highest.....	17,374	17,689	3013.2	3133.2	120.0

Table 3. Mean Net Worth by Type of Household and Income Quintile: Wave 4 and Wave 7

(In constant dollars. Standard errors in parentheses)

Type of household, age of householder and SIPP wave	All income levels	Income quintile				
		Lowest	Second lowest	Middle	Second highest	Highest
MARRIED-COUPLE						
Wave 4.....	$101,689	52,326	54,407	59,266	74,669	183,238
	(3,166)	(4,731)	(2,706)	(2,214)	(2,557)	(9,206)
Wave 7.....	102,523	42,484	53,781	67,196	75,648	184,779
	(2,796)	(4,056)	(3,491)	(3,405)	(2,434)	(7,945)
Under 35 years:						
Wave 4.....	30,343	18,504	13,997	19,939	27,178	61,909
	(1,553)	(6,679)	(2,125)	(1,661)	(2,081)	(5,321)
Wave 7.....	30,845	9,048	13,462	19,123	27,807	67,126
	(1,449)	(2,189)	(1,549)	(1,703)	(1,960)	(5,119)
35 to 54 years:						
Wave 4.....	107,213	68,563	51,441	53,402	67,944	163,256
	(5,352)	(11,340)	(7,777)	(3,820)	(3,720)	(11,296)
Wave 7.....	104,605	55,721	56,133	52,459	67,026	163,372
	(4,740)	(11,108)	(9,964)	(4,231)	(3,540)	(10,230)
55 to 64 years:						
Wave 4.....	164,271	77,528	90,780	89,917	115,849	287,941
	(7,997)	(12,771)	(9,330)	(5,534)	(6,993)	(20,506)
Wave 7.....	161,462	77,445	93,918	109,482	114,293	269,943
	(8,333)	(12,378)	(13,028)	(12,458)	(6,078)	(21,011)
65 years and over:						
Wave 4.....	146,699	50,881	74,359	119,440	185,849	436,525
	(11,295)	(6,698)	(3,167)	(6,621)	(10,948)	(80,775)
Wave 7.....	160,444	38,489	69,950	137,733	199,255	455,827
	(8,454)	(3,825)	(3,438)	(10,177)	(10,201)	(47,729)
FEMALE HOUSEHOLDER						
Wave 4.....	44,781	21,652	42,310	51,090	78,570	143,098
	(1,502)	(1,038)	(1,970)	(3,138)	(6,012)	(15,652)
Wave 7.....	44,442	21,865	38,717	53,408	79,410	149,102
	(1,540)	(1,148)	(2,133)	(3,264)	(5,865)	(17,361)
Under 35 years:						
Wave 4.....	8,865	2,698	6,639	9,508	16,480	41,907
	(1,421)	(1,009)	(1,093)	(1,261)	(2,745)	(19,577)
Wave 7.....	8,074	2,157	5,555	9,443	17,839	42,211
	(1,081)	(754)	(836)	(1,384)	(3,252)	(16,067)

Table 3. Mean Net Worth by Type of Household and Income Quintile: Wave 4 and Wave 7--(continued)

(In constant dollars. Standard errors in parentheses)

Type of household, age of householder and SIPP wave	All income levels	Income quintile				
		Lowest	Second lowest	Middle	Second highest	Highest
35 to 54 years:						
Wave 4.....	41,054	12,934	25,616	39,045	63,799	137,549
	(2,954)	(1,804)	(3,411)	(3,843)	(7,798)	(22,561)
Wave 7.....	32,975	8,440	23,480	39,123	47,624	94,722
	(2,111)	(1,344)	(3,512)	(4,028)	(5,272)	(14,152)
55 to 64 years:						
Wave 4.....	67,726	30,547	64,733	74,896	107,080	176,998
	(4,725)	(3,487)	(6,932)	(9,694)	(18,844)	(31,822)
Wave 7.....	70,392	26,678	53,355	90,437	113,190	239,248
	(5,107)	(2,928)	(6,487)	(9,544)	(14,247)	(46,158)
65 years and over:						
Wave 4.....	67,511	33,161	75,057	116,133	190,602	286,882
	(2,910)	(1,737)	(3,248)	(8,692)	(16,975)	(52,578)
Wave 7.....	71,619	35,576	77,999	116,539	197,768	336,788
	(3,377)	(2,091)	(4,625)	(9,401)	(19,412)	(62,715)
MALE HOUSEHOLDER						
Wave 4.....	48,835	19,132	33,966	36,356	49,684	133,977
	(2,853)	(1,943)	(3,683)	(4,095)	(5,940)	(14,209)
Wave 7.....	47,788	29,538	30,166	40,212	49,077	125,592
	(3,007)	(5,080)	(2,562)	(6,926)	(4,505)	(15,039)
Under 35 years:						
Wave 4.....	18,924	6,283	9,360	14,509	18,625	63,377
	(2,648)	(1,827)	(1,903)	(3,469)	(3,223)	(16,999)
Wave 7.....	13,737	8,640	5,361	12,096	17,840	37,987
	(1,349)	(2,383)	(1,136)	(1,371)	(2,789)	(8,995)
35 to 54 years:						
Wave 4.....	53,838	16,348	34,035	38,495	47,777	117,638
	(5,214)	(4,313)	(6,784)	(8,767)	(8,296)	(17,735)
Wave 7.....	52,456	32,055	34,564	51,858	46,991	98,354
	(6,330)	(10,215)	(5,818)	(19,814)	(5,238)	(19,657)

Table 3. Mean Net Worth by Type of Household and Income Quintile: Wave 4 and Wave 7--(continued)

(In constant dollars. Standard errors in parentheses)

Type of household, age of householder and SIPP wave	All income levels	Income quintile				
		Lowest	Second lowest	Middle	Second highest	Highest
55 to 64 years:						
Wave 4.....	85,694	28,144	65,020	58,368	135,394	195,686
	(11,059)	(6,846)	(13,630)	(11,309)	(49,255)	(38,220)
Wave 7.....	82,483	41,447	42,773	66,086	101,327	205,365
	(10,777)	(17,038)	(8,053)	(17,669)	(26,111)	(39,769)
65 years and over:						
Wave 4.....	90,067	30,438	68,667	116,933	138,529	509,985
	(9,282)	(3,676)	(11,618)	(17,221)	(21,088)	(91,559)
Wave 7.....	93,830	42,082	68,106	101,944	179,205	525,739
	(9,589)	(11,225)	(6,811)	(11,389)	(27,227)	(88,702)

Table 4. Sum of Imputed Values as a Percent of Total Values: Selected Assets

Asset	Wave 4	Wave 7
Stocks and mutual fund shares.....	38.3	39.0
Own business.....	38.7	49.9
Own home.....	18.7	16.8
Rental property.....	28.9	27.8
Other real estate.....	18.6	14.9
IRA	18.3	19.2

Table 5. Median Household Net Worth in Wave 4 and Wave 7 by Whether Household Was in Feedback Sample in Wave 7

(In constant dollars. Standard errors in parentheses)

Characteristic	In feedback sample in Wave 7			Not in feedback sample in Wave 7		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
All households.....	32,944	32,357	-587	32,048	30,890	-1158
RACE AND SPANISH ORIGIN						
White.....	39,268	37,557	-1711	38,533	37,388	-1145
Black.....	3,661	3,418	-243	3,112	3,137	25
Hispanic.....	7,477	7,863	386	2,926	2,963	37
AGE OF HOUSEHOLDER						
Less than 35 years.....	5,719	5,516	-203	5,544	4,781	-763
35 to 44 years.....	34,389	33,279	-1110	36,044	35,674	-370
45 to 54 years.....	55,166	49,881	-5285	57,457	52,450	-5007
55 to 64 years.....	73,065	72,658	-407	73,901	67,298	-6603
65 years and over.....	62,763	59,019	-3744	57,427	57,280	-147
TYPE OF HOUSEHOLD						
Family.....	40,800	39,694	-1106	40,523	39,597	-926
Married-couple.....	49,273	46,916	-2357	50,121	50,076	-45
Female householder....	6,041	5,941	-100	5,350	4,105	-1245
Male householder.....	19,612	22,031	2419	20,718	22,769	2051
Nonfamily.....	15,996	14,977	-1019	12,702	11,620	-1082

Table 5. Median Household Net Worth in Wave 4 and Wave 7 by Whether Household Was in Feedback Sample in Wave 7

(In constant dollars. Standard errors in parentheses)

Characteristic	In feedback sample in Wave 7			Not in feedback sample in Wave 7		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
INCOME QUINTILE						
Lowest.....	4,380	4,738	358	3,932	3,271	-661
Second lowest.....	20,083	20,602	519	17,393	13,987	-3,406
Middle.....	26,278	24,580	-1,698	23,192	24,720	1,528
Second highest.....	37,706	35,700	-2,006	40,588	40,015	-573
Highest.....	85,008	86,170	1,162	80,078	82,346	2,268

Table 6. Mean Household Net Worth in Wave 4 and Wave 7 by Whether Household Was in Feedback Sample in Wave 7

Characteristic	In feedback sample in Wave 7			Not in feedback sample in Wave 7		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
All households.....	80,025	79,161	-864	77,223	77,964	741
RACE AND SPANISH ORIGIN						
White.....	87,573	86,059	-1,514	84,834	86,075	1,241
Black.....	19,945	24,609	4,664	20,397	18,383	-2,014
Hispanic.....	35,982	39,320	3,338	35,662	28,128	-7,534
RACE AND SPANISH ORIGIN						
Less than 35 years.....	22,247	22,683	436	22,832	20,565	-2,267
35 to 44 years.....	65,930	66,245	315	70,793	79,674	8,881
45 to 54 years.....	118,462	103,397	-15,065	110,883	93,274	-17,609
55 to 64 years.....	130,773	127,859	-2,914	133,770	131,494	-2,276
65 years and over.....	111,240	115,478	4,238	98,155	110,075	11,920
TYPE OF HOUSEHOLD						
Family.....	93,241	91,068	-2,173	87,646	89,784	2,138
Married-couple.....	104,257	102,039	-2,218	99,319	102,969	3,650
Female householder....	39,338	38,912	-426	35,591	32,479	-3,112
Male householder.....	76,000	65,141	-10,859	59,083	60,673	1,590
Nonfamily.....	46,549	49,895	3,346	49,060	46,341	-2,719

Table 6. Mean Household Net Worth in Wave 4 and Wave 7 by Whether Household Was in Feedback Sample in Wave 7

Characteristic	In feedback sample in Wave 7			Not in feedback sample in Wave 7		
	Wave 4	Wave 7	Wave 7 minus Wave 4	Wave 4	Wave 7	Wave 7 minus Wave 4
INCOME QUINTILE						
Lowest	26,100	29,552	3,452	29,449	26,233	-3,216
Second lowest	45,171	43,717	-1,454	47,766	43,904	-3,862
Middle	54,167	58,362	4,195	53,214	60,150	6,936
Second highest	71,064	70,406	-658	73,317	75,065	1,748
Highest	185,715	182,931	-2,784	165,794	171,703	5,909

Table 7. Percent Distribution of Aggregate Income and Aggregate Net Worth Among Selected Household Groups: Wave 4 and Wave 7

Characteristic	Aggregate Income		Aggregate net worth	
	Wave 4	Wave 7	Wave 4	Wave 7
All households.....	100.0	100.0	100.0	100.0
RACE AND SPANISH ORIGIN				
White.....	90.5	90.1	95.2	94.9
Black.....	7.0	7.4	2.8	3.0
Spanish origin.....	3.8	3.7	2.2	2.1
AGE OF HOUSEHOLDER				
Less than 35 years.....	26.1	24.8	8.5	8.0
35 to 44 years.....	24.4	24.6	17.5	19.2
45 to 54 years.....	19.3	18.8	21.1	18.1
55 to 64 years.....	16.9	18.0	25.0	24.6
65 years and over.....	13.2	13.7	27.8	30.1
TYPE OF HOUSEHOLD				
Family.....	83.1	82.8	83.2	82.8
Married-couple.....	73.2	73.1	75.5	75.5
Female householder...	7.2	7.0	5.4	5.1
Male householder.....	2.7	2.7	2.3	2.2
Nonfamily.....	16.9	17.2	16.8	17.2
INCOME QUINTILE				
Lowest.....	4.1	4.0	6.7	6.8
Second lowest.....	9.9	9.8	11.5	10.6
Middle.....	15.8	15.3	12.7	14.2
Second highest.....	23.1	22.8	18.6	20.0
Highest.....	47.2	48.1	49.8	48.4

Table 8. Percent of Households Owning and Mean and Aggregate Value of Asset by Type Wave 4 and Wave 7

(In constant dollars)

Asset type	Percent of households owning		Mean net value of asset		Aggregate net value of asset (in billions)	
	Wave 4	Wave 7	Wave 4	Wave 7	Wave 4	Wave 7
Interest earning assets at financial institutions[1]....	71.8	71.2	$15,806	$15,788	$985.3	$993.4
Other interest earning assets[2]..	85.5	84.8	28,946	32,051	212.9	265.0
Regular checking accounts.....	53.9	52.8	922	865	43.2	40.4
Stocks and mutual fund shares[3]..	20.0	19.8	26,834	29,762	466.8	521.9
Own business or profession[4].....	12.9	12.5	63,012	59,731	705.5	660.4
Motor vehicles.....	85.5	84.8	5,442	5,099	404.0	382.6
Own home.....	64.3	64.1	50,475	51,692	2818.6	2932.3
Rental property.....	9.8	9.3	71,982	68,555	610.3	563.0
Other real estate.....	10.0	10.2	34,437	35,185	298.6	317.4
U.S. savings bonds.....	15.0	14.9	2,490	2,214	32.5	29.2
IRA or KEOGH accounts.....	19.5	21.6	8,877	10,015	150.6	191.1
Other financial assets[5].....	7.0	6.5	55,788	50,924	337.1	292.7
ADDENDUM: Unsecured debt.....	67.1	61.5	4,123	4,493	240.5	244.5

[1]Includes passbook savings accounts, money market deposit accounts, certificates of deposit, and interest earning checking accounts.
[2]Includes money market funds, U.S. government securities (other than savings bonds), municipal or corporate bonds, and other interest earning assets (other than mortgages held).
[3]Excludes stock held in own company by self-employed persons.
[4]Includes value of corporate stock for persons employed by self-owned corporations. The value of this stock was 271.1 billion in wave 4 and 229.8 billion in wave 7. For purposes of comparisons with Flow of Funds data, these values should be added to "stocks and matched fund shares" and subtracted from "own business or profession."
[5]Includes mortgages held from sale of real estate, amount due from sale of business, unit trusts, and other financial investments.

Table 9. Flow of Funds Estimates of Household and Nonprofit Sector Net Worth: 1984:4 and 1985:4

(In constant dollars)

Characteristic	Value of asset or liability (in billions)			Value of asset or liability per household		
	1984:4	1985:4	Difference	1984:4	1985:4	Difference
A. Equity in own home.....	$1,927.5	$1,810.8	-$116.7	$22,188	$20,474	-$1,714
B. Equity in motor vehicles.....	473.3	511.8	38.5	5,448	5,787	339
C. Deposits and credit market instruments[1]....	3,321.0	3,557.9	236.9	38,229	40,228	1,999
D. Corporate equities[1].....	1,493.0	1,880.7	387.7	17,186	21,265	4,079
E. Equity in noncorporate business[1].....	2,510.8	2,396.0	-114.8	28,903	27,091	-1,812
F. Consumer debt excluding mortgages and automobile debt[1].....	512.4	571.0	58.6	5,898	6,456	558
G. (Sum of A-E, minus F)...	9,213.2	9,586.2	373.0	106,056	108,388	2,332
ADDENDUM						
Pension fund reserves....	1,435.3	1,659.0	223.7	16,522	18,758	2,236

[1]Includes amounts held in personal trusts and by nonprofit organizations.

Table 10. Matched Households: Change in Net Worth From Wave 4 to Wave 7 by Imputation Status and by Change in Composition Status of the Household

(In current dollars)

Characteristic	Number (000's)	Percent with specified change in net worth from wave 4 to wave 7							Mean difference between wave 4 and wave 7
		Decrease			Decrease or increase: less than $1,000	Increase			
		$10,000 or more	$5,000 to $9,999	$1,000 to $4,999		$1,000 to $4,999	$5,000 to $9,999	$10,000 or more	
NO IMPUTATION									
Total.....	34,380	14.6	5.9	13.2	22.8	15.3	8.3	19.9	$2,686
No change in composition									
Married couple family.....	16,556	15.0	6.5	12.9	13.4	15.3	10.2	26.7	5,329
Female family houlseholder.	3,451	6.9	2.5	11.3	49.1	15.6	5.7	8.9	2,224
Male family householder....	615	7.2	2.7	10.1	30.2	15.6	12.2	22.0	5,947
Nonfamily householder.....	9,187	11.3	5.8	13.5	32.1	15.7	7.0	14.6	2,361
Change in composition									
Married, husband present in wave 4:									
Widowed in wave 7.....	155	27.6	9.7	0.0	7.7	18.8	4.0	32.2	12,593
Separated or divorced in wave 7.....	380	27.3	8.7	29.7	16.8	11.9	4.7	.9	-11,481

Table 10. Matched Households: Change in Net Worth From Wave 4 to Wave 7 by Imputation Status and by Change in Composition Status of the Household--(continued)

(In current dollars)

Characteristic	Number (000's)	Percent with specified change in net worth from wave 4 to wave 7							Mean difference between wave 4 and wave 7
		Decrease			Decrease or increase: less than $1,000	Increase			
		$10,000 or more	$5,000 to $9,999	$1,000 to $4,999		$1,000 to $4,999	$5,000 to $9,999	$10,000 or more	
SOME IMPUTATION									
Total.....	50,672	30.4	6.2	8.1	8.1	9.0	6.2	31.8	-$38
No change in composition									
Married-couple family.....	27,726	28.9	5.6	7.3	5.6	8.2	6.6	37.6	6,962
Female family householder	3,634	26.0	6.0	10.9	17.7	11.7	4.6	23.1	2,593
Male family householder	923	30.9	6.4	8.6	6.9	9.7	9.7	27.8	-23,240
Nonfamily householder	9,605	27.5	7.8	8.9	12.8	10.1	6.6	26.4	3,462
Change in composition									
Married, husband present in wave 4:									
Widowed in wave 7.....	248	34.8	2.9	11.4	12.2	3.8	8.4	26.4	-8,499
Separated or divorced in wave 7.....	514	39.4	4.4	18.3	8.4	12.5	4.6	12.5	-46,151

Table 10. Matched Households: Change in Net Worth From Wave 4 to Wave 7 by Imputation Status and by Change in Composition Status of the Household--(continued)

(In current dollars)

Characteristic	Number (000's)	Percent with specified change in net worth from wave 4 to wave 7							Mean difference between wave 4 and wave 7
		Decrease			Decrease or increase: less than $1,000	Increase			
		$10,000 or more	$5,000 to $9,999	$1,000 to $4,999		$1,000 to $4,999	$5,000 to $9,999	$10,000 or more	
NO IMPUTATION, FEEDBACK FORM USED									
Total.....	16,752	14.1	5.2	13.2	22.8	16.5	8.9	19.3	$1,947
No change in composition									
Married-couple family.....	8,149	13.6	6.7	12.3	14.4	16.3	10.4	26.2	5,846
Female family householder..	1,499	7.9	1.7	13.2	48.8	17.2	5.6	5.5	-1,001
Male family householder....	301	8.1	5.4	10.8	33.1	13.9	10.7	18.0	4,879
Nonfamily householder.....	4,656	12.2	3.5	14.1	31.3	17.5	8.7	12.8	95
Change in composition									
Married, husband present in wave 4:									
Widowed in wave 7.....	93	36.5	5.6	-	7.2	25.5	-	25.1	(B)
Separated or divorced in wave 7.....	168	23.8	15.2	24.6	21.0	4.9	10.5	-	(B)

(B) Base less than 200,000.

Table 10. Matched Households: Change in Net Worth From Wave 4 to Wave 7 by Imputation Status and by Change in Composition Status of the Household--(continued)

(In current dollars)

Characteristic	Number (000's)	Percent with specified change in net worth from wave 4 to wave 7							Mean difference between wave 4 and wave 7
		Decrease			Decrease or increase: less than $1,000	Increase			
		$10,000 or more	$5,000 to $9,999	$1,000 to $4,999		$1,000 to $4,999	$5,000 to $9,999	$10,000 or more	
NO IMPUTATION									
Income quintile in Wave 4									
Lowest	8,538	7.2	4.8	11.5	49.5	13.0	5.1	8.9	2,050
Second lowest	7,225	12.0	6.0	15.2	23.9	20.5	7.6	14.8	3,485
Middle	6,828	14.6	6.3	17.2	13.8	18.3	10.2	19.7	2,164
Second highest	6,577	19.7	6.5	12.8	9.7	14.1	11.0	26.2	2,422
Highest	5,213	24.2	6.3	8.7	5.6	9.4	8.6	37.3	3,634

Table 11. Matched Households: Mean Net Worth in Wave 4 and Wave 7 by Imputation Status and Selected Household Characteristics

(In current dollars. Standard errors in parentheses)

Characteristic	No items imputed in either wave 4 or wave 7				One or more items imputed in either Wave 4 or Wave 7			
		Mean net worth				Mean net worth		
	Number (000's)	Wave 4	Wave 7	Wave 7 minus Wave 4	Number (000's)	Wave 4	Wave 7	Wave 7 minus Wave 4
All households	34,380	$49,754 (539)	$52,440 (568)	$2,686	50,671	$101,118 (1,326)	$101,080 (1,116)	-$38
COMPOSITION CHANGE STATUS								
No change in composition:								
Married-couple family	16,556	66,493 (941)	71,821 (967)	5,328	27,726	122,946 (2,232)	129,908 (1,852)	6,962
Female family householder	3,451	18,174 (770)	20,397 (961)	2,223	3,534	53,450 (1,656)	56,042 (1,995)	2,592
Male family householder	615	37,283 (2,599)	43,229 (2,578)	5,946	923	105,721 (7,543)	82,481 (4,795)	-23,240
Nonfamily householder	9,187	36,249 (788)	38,609 (874)	2,360	9,605	63,945 (1,155)	67,407 (1,507)	3,462
Change in composition:								
Married, husband present in wave 4:								
Widowed in wave 7	155	115,456 (17,856)	128,049 (23,455)	12,593	248	95,169 (8,010)	86,670 (8,611)	-8,499
Separated or divorced in wave 7	380	27,076 (1,901)	15,594 (1,196)	-11,482	514	78,352 (6,768)	32,201 (2,526)	-46,151
RACE AND SPANISH ORIGIN								
White	29,582	54,883 (607)	58,084 (643)	3,201	44,268	110,202 (1,505)	109,676 (1,257)	-526
Black	4,072	11,853 (472)	11,562 (489)	-291	5,282	25,919 (548)	30,668 (1,136)	4,749
Hispanic	1,932	18,513 (1,192)	20,030 (1,227)	1,517	2,184	48,417	48,396	-21

Table 11. Matched Households: Mean Net Worth in Wave 4 and Wave 7 by Imputation Status and Selected Household Characteristics--(Continued)

(In current dollars. Standard errors in parentheses)

Characteristic	No items imputed in either wave 4 or wave 7				One or more items imputed in either Wave 4 or Wave 7			
		Mean net worth				Mean net worth		
	Number (000's)	Wave 4	Wave 7	Wave 7 minus Wave 4	Number (000's)	Wave 4	Wave 7	Wave 7 minus Wave 4
AGE OF HOUSEHOLDER								
Under 35 years	12,652	16,982 (390)	16,567 (319)	-415	13,516	39,807 (838)	31,592 (647)	-8,215
35 to 44 years	6,708	47,854 (1,075)	50,812 (1,083)	2,958	10,306	84,698 (1,447)	102,139 (2,809)	17,441
45 to 54 years	3,971	74,978 (2,470)	79,515 (2,611)	4,537	8,563	134,401 (5,062)	116,509 (3,170)	-17,892
55 to 64 years	4,285	85,723 (1,934)	92,552 (2,105)	6,829	8,189	153,140 (3,007)	157,856 (3,375)	4,716
65 years and over	6,765	75,342 (1,292)	79,846 (1,420)	4,504	10,098	129,532 (3,945)	133,883 (2,575)	4,351
INCOME QUINTILE IN WAVE 4								
Lowest	8,538	17,249 (453)	19,299 (526)	2,050	8,428	43,490 (856)	47,220 (1,377)	3,730
Second lowest	7,225	33,859 (712)	37,345 (889)	3,486	9,775	55,774 (836)	62,307 (1,433)	6,533
Middle	6,828	46,893 (887)	49,057 (958)	2,164	10,186	63,839 (949)	71,291 (1,161)	7,452
Second highest	6,577	65,316 (1,369)	67,739 (1,384)	2,423	10,432	86,417 (1,246)	94,975 (1,769)	8,558
Highest	5,213	110,448 (2,371)	114,082 (2,440)	3,634	11,851	224,480 (5,263)	202,339 (3,970)	-22,141

Table 12. Savings Regression Results for Savings Regression Model

Independent variable	Coefficient	
	Value	Standard error
Wave 4 Net Worth.....	-.15*	0.01
Wave 4 income level.....	4.55*	0.43
Change in income.....	6.35	0.44
Age of Householder[1]		
Less than 35 years.....	-15301.94*	2271.51
35 to 44 years.....	-12055.77*	2481.98
45 to 54 years.....	-4477.93	2799.11
65 years and over.....	273.76	2407.95
Married, spouse present[2].	2639.80	1479.36
Black[3].....	-4261.40	2178.16
Other[3].....	-936.43	4826.76
Spanish[4].....	-2427.58	3014.06
Constant.....	9435.24	

R^2=.08

*Significant at the .05 significance level.
[1]Control group is 55 to 64 years of age.
[2]Control group is other than married, spouse present.
[3]Control group is white.
[4]Control group is nonSpanish.

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