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Inflation, Age, and Wealth

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A comparison of data from two special surveys of household assets and liabilities conducted by the Federal Reserve System in 1977 and 1983, respectively, reveals a significant redistribution of household wealth toward older Americans. This change in the age-distribution of wealth is consistent with the notion that the unexpectedly high rates of inflation during the period between the surveys resulted in increases in home values, social security income, and other sources of wealth from which older households benefited disproportionately.

A stable price level is considered a desirable objective of economic policy for well-known reasons of equity and efficiency.[1] Among the equity issues is the effect of inflation on the distribution of wealth within a society.[2] In particular, unanticipated changes in the rate of inflation and uncertainty about the inflation rate can change the value of various assets and liabilities held in household and business portfolios.

The purpose of this article is to examine selected, recent changes in the age-distribution of household assets and liabilities. In particular, we examine empirically the changes in the age-distribution of net worth that occurred during the period of the late 1970s and early 1980s. The reason for this particular focus is twofold. First, the sharp increases in inflation that occurred during this period are likely to have had important age-specific effects due both to differences in the composition of portfolios of households of various ages and to the existence of inflation-indexed programs designed to assist older Americans.

Second, to the extent that there has been a significant change in the age-distribution of wealth, it may be desirable to revise federal budget policy. A significant proportion of federal expenditures consists of programs that emphasize support for older Americans. Social Security retirement programs and Medicare, for example, together represent nearly 40 percent of total federal expenditures. As the Administration and Congress attempt to deal with the large federal budget deficit, information on the age-distribution of household net worth should be helpful in the debate over program priorities.

The study in this article employs data from two special surveys of consumer finances conducted by the Federal Reserve System. The two surveys provide very detailed information on the composition and value of household portfolios, and afford us the opportunity to obtain a rough "before-and-after" glimpse of the age-distribution of net worth during the high-inflation period spanned by the surveys. Data from the surveys reveal a significant change in the relative wealth status of various age groups that generally favors older Americans, and enable us to determine which components of household portfolios have contributed most to this change.

The remainder of this paper is structured as follows. We review in the first section the changes in economic and policy conditions that occurred during the period of the late 1970s and early 1980s. In the second section, we discuss why these changes may lead to age-specific changes in household

wealth. The third section of the paper summarizes our analysis of survey data. In a fourth section, we briefly review other evidence about the changing economic status of the elderly. The paper concludes with a discussion of qualifications to the study's findings and some policy implications of those findings.

I. A Changing Economic Environment

By the mid-1970s, the economy of the United States was experiencing seriously stagnating growth and a rising — and increasingly volatile — inflation rate. The annual rate of change in the consumer price index (CPI) was 5.8 in 1976, but had risen to over 13.5 percent in 1980 (see Chart 1). As important as the actual changes in the rate of inflation were the apparent upward revisions in inflation *expectations* that also occurred during this period. Although it is difficult to measure long-term inflation expectations directly, they are, in theory, a component of nominal interest rates, and contributed to the observed rapid increase in long-term rates that began in the mid-1970s and peaked in the early 1980s.
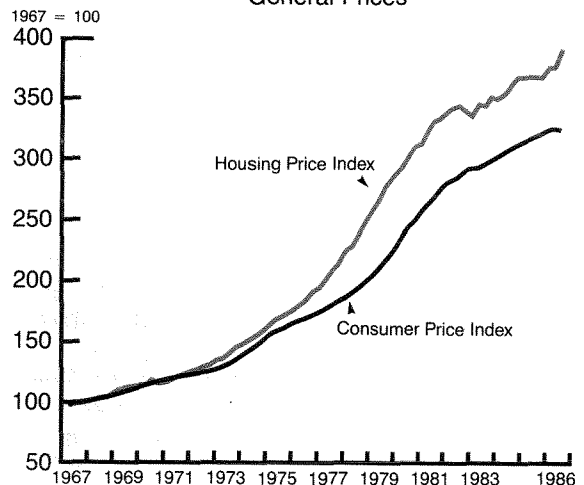
Policy Conditions

These abrupt changes in the inflation rate, inflation expectations, and nominal interest rates took place in a policy environment that was not configured with high rates of inflation in mind. In particular, the federal income tax system incorporated a progressive rate structure, with the rate brackets defined on the basis of nominal taxable income. As their nominal incomes rose, taxpayers found themselves facing higher average and marginal tax rates even if their real (inflation-adjusted) incomes had not risen. Thus, the effective marginal tax rate facing households — an important variable in portfolio decisions — also changed abruptly during this period.

Labor markets too were caught unawares by the rapid acceleration in inflation. Because few labor market participants enjoyed wage adjustments as rapid as inflation, the real hourly wage of the average worker fell by one percent between 1975 and 1980.[3] The practice of indexing wages to the cost of living (so-called cost-of-living allowance or COLA) was not a common feature in the private sector, although a number of government programs, including many income transfer programs, employed such indexing.

Notable among the indexing procedures employed by government programs was the process used to determine Social Security benefit levels. In particular, in 1972, Congress introduced automatic indexing into Social Security pensions. Social Security payments were determined using a formula applied to a nominal, base income standard. As wage inflation occurred, of course, this base automatically was adjusted upward. In addition, as a result of the 1972 amendments, benefit levels derived from this formula also were inflation-indexed. The combined effect was a form of "double-indexing" of Social Security benefits to inflation that resulted in a rise in the average level of monthly Social Security benefits of over 270 percent between 1970 and 1983 — a real increase of 120 percent.[4] Since it is unlikely that then-current and prospective Social Security beneficiaries anticipated the inflation of this period and its impact on benefits, inflation may have conferred a windfall gain on Social Security recipients. (Double-indexing was eliminated in later amendments to the Social Security Act.)

Chart 1
Housing Prices Rose Faster than General Prices

1967 = 100

Housing Price Index

Consumer Price Index

1967 1969 1971 1973 1975 1977 1979 1981 1983 1986

Source: U.S. Department of Commerce; C27 Construction Series and U.S. Department of Labor; Bureau of Labor Statistics

II. Theoretical Implications for the Household Portfolio

To provide a framework for reviewing the effects of this economic and policy environment on the age distribution of net worth, it is helpful first to discuss the simple theory of household asset accumulation.

The Life-Cycle Saving Hypothesis

Economists long have had an interest in the accumulation and disposition of assets over the course of an individual's lifetime.[5] The process is a complicated one as it is likely to depend upon such diverse factors as the earnings profiles of individuals over their "life-cycle", individuals' preferred pattern of consumption over time, how accurately the death of the individual can be forecast, and the strength of bequest motives. The interaction of these and other factors on saving and the distribution of wealth typically is studied in the context of the so-called "life-cycle theory of saving."

The development of the life-cycle theory of saving is credited most frequently to the economist Franco Modigliani, although work by Irving Fisher, Milton Friedman and others also was critical to its development.[6] Because detailed descriptions of the many variants of the theory are easily available in the literature and because its implications for the pattern of wealth accumulation over the life-cycle are not always unambiguous, we will review only the essence of the model and its relationship to our study.

The life-cycle theory of saving begins with the notion that individuals wish to maximize lifetime "utility" — the economist's nomenclature for what colloquially might be called well-being. Lifetime utility has two components. The first consists of the utility derived from consuming goods, services, and leisure time throughout the individual's lifetime. Within this component, the utility of consumption in the future contributes differently to lifetime utility than utility derived from present consumption. Specifically, the utility of future consumption is discounted by the individual's so-called "rate of time preference": the greater the rate of time preference, the less important is future consumption in the perception of lifetime utility.[7] The second component of lifetime utility is the utility derived from bequesting assets at the end of one's life. The weight

that this utility receives in lifetime utility is a measure of the strength of the bequest motive.

Maximization of lifetime utility is constrained, of course, by the resources available to the individual during his lifetime. The availability of resources, in turn, depends on the individual's initial endowment, if any, of assets, and income that flows to the individual from market earnings. In concept, the pattern of earnings over the life-cycle (the "earnings profile") is itself endogenous to the lifetime wealth maximization process because of decisions to enhance human capital through education and decisions about how much labor to supply at each point in time.

Out of their income flows, individuals make consumption (and hence savings) allocations, borrowing and lending in the capital markets to obtain the desired pattern of consumption. The interest rate encountered in borrowing and lending — and its relation to the rate of time preference — influences the way in which individuals will arrange their consumption and savings patterns over their life-cycle.[8]

This process of maximizing lifetime utility subject to resource constraints results in life-cycle patterns of consumption, saving and, hence, financial wealth positions. Depending upon the assumed degree of uncertainty about the length of life and earnings, the relationship between market interest rates and the rate of time preference, the strength of the bequest motive, and other characterizations of the model, various configurations of life-cycle behavior can be derived. If one can assume that most individuals expect the last phase of their "life-cycle" to consist of a period of detachment from the labor force (a period we might call "retirement"), then a general profile of financial wealth over the course of the individual's life emerges. In particular, the distribution of wealth over an individual's life-cycle will be "humped" — rising initially and then falling as the end of life approaches.[9]

The preceding describes the pattern of financial wealth held by individuals at various dates in their own life cycle. The comparative wealth positions of individuals of *different ages measured at the same point in time* (the "age-distribution of wealth") will

only be the same as the life-cycle distribution if life-cycle income prospects were the same for all generations. Historically, however, incomes have grown from one generation to the next. This growth should (everything else being equal) skew the observed age-distribution of wealth toward younger generations. Conversely, a secular decline in the income prospects of newer generations would skew the observed age-distribution of wealth per individual toward older generations.

III. A Life-Cycle View of the 1970s

In this section, we study empirically the effects of the various "shocks" that occurred in the 1970s on patterns of wealth accumulation. In doing so, it is useful to characterize the events of the 1970s in the language of the life-cycle saving theory. We necessarily are selective, both in the economic events we emphasize as well as the characterization of these events in terms of the life-cycle model.

Shocks to Real and Financial Asset Values

The abrupt increases in inflation, inflation expectations, and nominal interest rates that occurred in the late 1970s significantly influenced the relative prices of important financial and real assets. The price of housing, for example, rose sharply over this period, far outstripping the general rate of increases in prices (see Chart 1). Such behavior in housing prices follows directly from the effect of inflation expectations on the demand for durable goods coupled with the fact that the stock supply of housing is relatively price inelastic.[10] Individuals already owning homes, therefore, experienced sharp increases in the value of the housing component of their asset portfolios.

The value of fixed-coupon debt instruments, such as bonds or fixed rate mortgages, for example, fell as nominal interest rates increased. Holders (lenders) of such debt experienced decreases in the value of this component of their financial asset holdings. Borrowers (such as corporations and homeowners, for example) experienced increases in financial wealth.

From the viewpoint of the life-cycle theory of saving, unanticipated increases in asset values are analytically similar to larger initial asset endowments and should have similar effects on the pattern of asset accumulation over the life-cycle. Generally speaking, an increase in initial asset endowment results in a proportional increase in holdings of financial assets in all phases of the life-cycle.[11] The impact of changes in real and financial asset values on the distribution of wealth therefore will depend upon the distribution of these "windfall" gains among households.

About half of the nation's nonhuman wealth is in the form of residential real estate.[12] Since such real estate tends to be held mainly in the portfolios of older households, a change in its value is likely to change the age-distribution of household net worth. Moreover, because most mortgage debt in the mid-1970s was fixed coupon debt, homeowners enjoyed not only increases in the market value of their homes but also a decrease in the market value of their debt burden. Households on the brink of retirement could "capture" a significant proportion of this net worth because retirees no longer are tied to developed metropolitan areas (for example, by work), where housing supply is least elastic (and home price inflation most pronounced). Also, various court rulings often permitted the buyer to assume the low-coupon mortgage debt, something likely to be reflected in the home sales price.[13] This scenario suggests that there may have been a significant transfer of wealth to homeowning households near retirement age.

Social Security Programs

The implications of changes in Social Security programs for saving over the life cycle is difficult to model and, in fact, have been the subject of intense debate in the economics literature.[14] In essence, the Social Security program consists of a tax on the wages of current workers that funds benefits to individuals who have reached a prescribed retirement age and who have severed their attachment to the labor force. Even if the tax and benefit features of

the Social Security system were permanent and could be perfectly forecasted, the effects on private saving still would be ambiguous.

Some have argued that the combination of reduced after-tax income during the working years and the anticipation of benefits to be received in the retirement years will reduce private wealth accumulation.[15] Others have argued that the effect on the accumulation of private wealth depends upon the rationale and strength of bequest motives. In particular, they claim that the wealth implicitly "transferred" from the working generation to the retired generation by the Social Security system will be returned to the younger generation through heightened post-retirement saving and larger bequests.[16] If so, saving over the life-cycle could be largely unaffected by the Social Security system.

Social Security's effect on private saving efforts is further clouded by the possibility that Social Security taxes, benefits or both may be perceived as impermanent or uncertain. In fact, the tax and benefit features of Social Security have changed frequently and are difficult to interpret because of the complexity of tax and benefit formulae and the relationship of taxes and benefits to other economic circumstances.[17] The extent to which Social Security's features are viewed as impermanent or uncertain may affect private saving efforts.

The sharp increase in benefit levels (and concomitant increases in Social Security taxes) that occurred in the 1970s may therefore have had a wide range of possible effects on the private accumulation of wealth. For those at or near retirement age, the decision to add to or dispose of current assets may depend upon whether they view the benefit increase as permanent or temporary and likely to be offset by a future decrease in benefits. Their decision will also depend on whether they believe the increase in retirement benefits is a transfer of income from the younger generation that is offset when retirees adjust their saving for bequest purposes.

IV. The Age Distribution of Net Worth: 1977 vs. 1983

The ambiguity that pervades the theory of saving over the life-cycle limits what we can draw from life-cycle models in the way of useful inferences about likely changes in the age-distribution of wealth. Moreover, the life-cycle saving hypothesis formally deals with the way in which assets accumulate and are disposed of by individuals *over their life cycle,* whereas as a practical matter, policymakers are less concerned with how policy affects the pattern of accumulation of savings over the life cycle than they are with one of its consequences: the age-distribution of net worth at a given point in time. In the remainder of this paper, we look at two "snapshots" of the distribution by age of household financial wealth. Such an approach can shed light only indirectly on the processes that determine life-cycle savings behavior, but it can reveal changes in the financial wealth status of various age groups.

The findings that follow, therefore, are largely descriptions of changes rather than an attempt to verify a particular model of the life-cycle saving theory. Nevertheless, findings that support (at least anecdotally) some of the implications of the life-cycle saving model are highlighted below.

Studying Household Net Worth

There are a number of surveys that, in concept, should provide data useful to our exercise.[18] However, of these, only one publicly available database is designed specifically to survey the financial "balance sheets" of American households accurately. This survey is the Federal Reserve System's Survey of Consumer Finances. Because the survey in its present form was conducted in 1977 and again in 1983, it provides a convenient span for us to see the consequences of the turbulent economic conditions of that time.

Approximately 2,600 and 3,800 randomly selected households, respectively, were interviewed in each survey to obtain information on their various real and financial assets and liabilities.[19] The table presents the components of net worth from the coarse balance sheet categories in the surveys. The only major categories omitted were consumer durables and the present value of private pension assets. Data on consumer durables stocks were not collected in either survey, and data on pensions were not obtained in the 1977 survey, preventing comparison on these items. Theory and some empirical

work argue that institutionalized saving through pension funds will partly depress private wealth accumulation.[20] To the extent that pensions have become more generous and ubiquitous over time, their exclusion may lead to an understatement of the relative wealth of younger versus older households.

Household Net Worth

We turn first to the most aggregative measure of nonhuman household wealth explored in this paper — household financial "net worth." The net worth measure is the residual of the market value of assets and liabilities of the households in our sample. Chart 2 displays the average household net worth for selected age groups in 1977 and 1983.

From Chart 2, it is apparent that, on average, nominal net worth rose for all but the youngest category of households between 1977 and 1983. This is not particularly surprising since nominal income — at least for households as a group — was rising during this inflationary period. The life-cycle savings theory offers an explanation of the relationship between *real* wealth and *real* lifetime or permanent income: as nominal incomes rise, so should nominal net worth, everything else being equal.[21]

Also apparent from Chart 2 is the change in the shape of the age/net worth relationship. In 1977, the net worth relationship was "humped", with measured net worth peaking somewhere near the prevailing retirement age. The existence of saving and wealth relationships that are "humped" with age are predicted by the life-cycle saving theory only at different ages of a given cohort. Since our data measures net worth at a *cross section* of age cohorts at two points in time, we would expect a "humped" age-net worth relationship only if all of the age groups in our sample had the same life-cycle income expectations.[22]

In general, however, growth in life-cycle income over time (as would be expected in a growing economy) should cause each successively younger cohort to have higher life-cycle income expectations and, hence, higher observed accumulated savings per household. This would result in a skewing, over time, of the age/wealth distribution *toward younger individuals*. The data, in fact, show the opposite tendency. Specifically, the bar graph in Chart 2 presents net worth by age group as a percentage of the average household net worth for each of the two surveys. A significant *relative* shift in net worth per

Chart 2
Age – Distribution of Household Net Worth
1977 and 1983
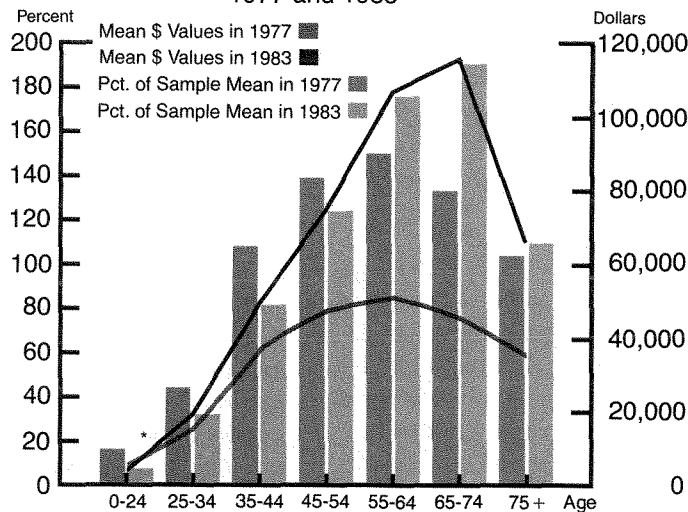
* The difference between the 1977 and 1983 values is not statistically different from zero for this group at the 95% confidence level

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household from young to older households is evident. In particular, between 1977 and 1983, families headed by individuals 55 years and older had increased net worth relative to the population while younger households displayed decreases. This drop is consistent with a relative secular deterioration in the lifetime income expectations of younger generations' households.

Homeownership and Wealth Changes

By decomposing average household net worth into its constituent elements, we find that a significant proportion of the observed increase in net worth between 1977 and 1983 is "explained" — in an accounting sense — by an increase in the value of residential real estate. As data from the Net Worth table indicates, the value of residential real estate per household increased sharply and represented nearly 75 percent of total asset changes between 1977 and 1983.

Furthermore, the mean value of residential real estate assets increased for all household age groups. Chart 3 shows that the average value rose from $29,870 in 1977 to $53,947 per household in 1983. The bar graphs in Chart 3, which express the nominal valu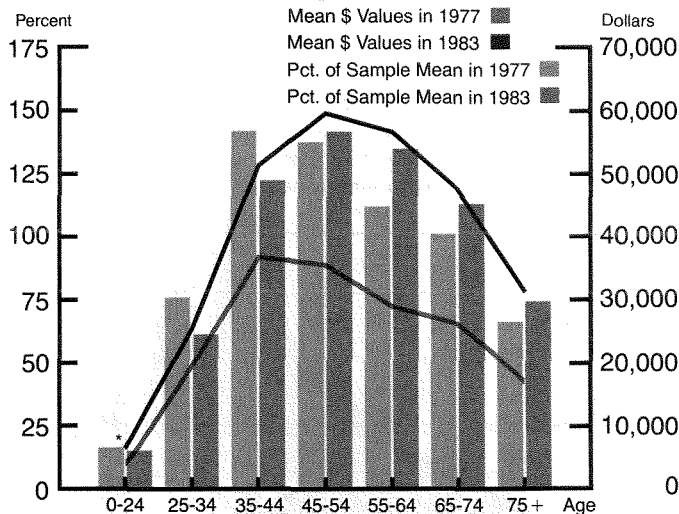e as a percentage of the relevant sample means, reveal a skewing in the age-distribution of this asset toward older households that is similar, although less pronounced, to that observed for net worth in the aggregate (Chart 2). In addition, households in the 45-54 age category had consistently higher holdings of real estate assets relative to the sample mean in 1983 than in 1977, contrary to the finding for their total net worth.

Data on homeownership derived from the surveys also suggest that homeownership prospects deteriorated for younger households. The percentage of homeowners is greater in 1983 than in 1977 for all age categories except the youngest. In fact, the increase in homeownership observed in the oldest age groups is progressively greater for older groups.

Liquid Assets, Stocks and Bonds

Differences in liquid asset and stock and bond holdings also contribute significantly to the observed shift in the age-distribution of wealth toward older households. Chart 4 displays the distribution by age in the two samples of liquid assets (defined as the value of bank deposits, money market mutual fund shares and savings bonds) and holdings of other bonds and stocks. Once again, these measures are presented in bar graphs as a

Chart 3
Age – Distribution of Residential Real Estate
1977 and 1983

Percent

Mean $ Values in 1977
Mean $ Values in 1983
Pct. of Sample Mean in 1977
Pct. of Sample Mean in 1983

Dollars

175 — 70,000

150 — 60,000

125 — 50,000

100 — 40,000

75 — 30,000

50 — 20,000

25 — 10,000

0 — 0

0-24   25-34   35-44   45-54   55-64   65-74   75+   Age

* The difference between the 1977 and 1983 values is not statistically different from zero for this group at the 95% confidence level

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percent of the sample means in each of the two survey periods.

For both categories of financial assets, an interesting pattern emerges. First, generally speaking, households headed by individuals younger than 55 years of age actually hold less (in dollar terms) of these assets in 1983 than in 1977, whereas older households hold significantly more. This change is reflected in a shift in the age-distribution of the asset categories when household holdings are measured relative to sample means.

Among the older households, those aged 75 years and older display the smallest increase between 1977 and 1983. Data disaggregation by type of asset (not shown here) show that the position in stock and bond holdings of this age category deteriorated relative to the sample means in 1983. In contrast, the largest absolute and relative "gains" between 1977 and 1983 are displayed by households aged 65 to 74.

Lacking true panel data, it is not possible to explain this somewhat inconsistent behavior by the oldest (75 years and older) household category with any confidence. The pattern is consistent, however, with what one would expect if, upon retirement, households relocated their residences to areas with lower housing costs than those in which they lived
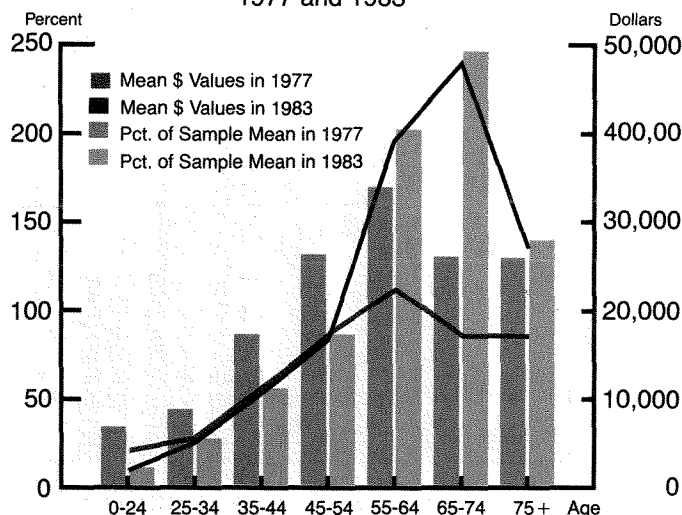
while employed. They then would have been able to "capture" a portion of the net worth in real estate and increase their holdings of financial assets. The oldest households (those aged 75 years and older) may already have made their relocation decisions and, in the time frame of our study, "missed" the opportunity to capture increases in housing value.[23]

Such a scenario may help explain the seemingly paradoxical finding discussed earlier that the age-distribution of residential real estate assets did not shift as dramatically as net worth in favor of older households despite increases in rates of home-ownership. The economic conditions of the late 1970s and early 1980s simply afforded retirement-aged households the opportunity both to capture appreciated real estate values and to increase home-ownership by migrating to lower cost areas.

Mortgage and Consumer Debt

Growth in mortgage and consumer debt liabilities of the average household were a significant — but far from complete — offset to the growth in the average value of household assets. As the Net Worth table indicates, changes in average mortgage and consumer debt liabilities constituted only 20 percent of the total increase in asset holdings observed between 1977 and 1983. Charts 5 and 6 show that

Chart 4

Age – Distribution of Stocks, Bonds and Liquid Assets
1977 and 1983

Percent | Dollars

- Mean $ Values in 1977
- Mean $ Values in 1983
- Pct. of Sample Mean in 1977
- Pct. of Sample Mean in 1983

250 — 50,000
200 — 400,00
150 — 30,000
100 — 20,000
50 — 10,000
0 — 0

0-24   25-34   35-44   45-54   55-64   65-74   75+   Age

nominal mortgage and consumer debt increased for virtually all age categories between 1977 and 1983. In addition, as illustrated by the bar graphs (which display these nominal values as a percentage of sample means), there was a greater propensity for older households to hold both categories of debt in 1983 than in 1977.

That is, the age-distribution of debt, as well as of wealth, shifted toward older households. This shift is consistent with the notion that the demand for debt is positively related to wealth,[24] and with the notion that older households may have been borrowing against equity in relatively illiquid real estate assets to make other desired changes in their portfolio or consumption habits.

Unfortunately, a conceptual problem in the measurement of the market value of mortgage debt makes it difficult to be confident about these findings. In particular, the mortgage measure used here is the book value of outstanding debt rather than its market value. Since interest rates increased significantly between the survey periods, it would be desirable to re-value fixed coupon debt outstanding in 1983 accordingly. Everything else being equal, this re-valuation would tend to reduce the value of mortgage debt held, particularly the debt in the form

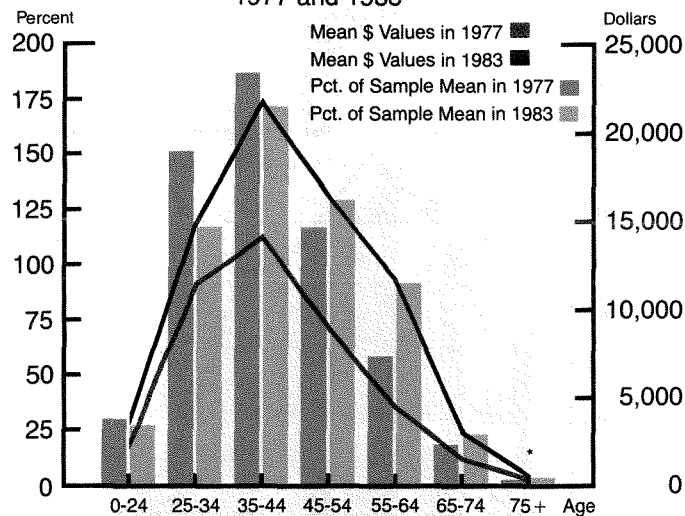## Average Household Net Worth and Its Components, 1977 and 1983

	1977	1983	Difference
Assets			
Total Assets	$43,262	$76,614	$33,352
Total Real Estate	29,870	53,947	24,077
Liquid Assets	8,292	11,607	3,315
Stocks	4,288	5,641	1,353
Bonds	812	2,347	1,535
Other	N/A	3,072	N/A
Liabilities			
Total Debt Liabilities	9,123	15,858	6,735
Real Estate Debt	7,465	12,568	5,103
Consumer Debt	1,658	3,399	1,741
Net Worth	34,139	60,755	26,616
n =	2,563	3,823	

Source: Federal Reserve System, Surveys of Consumer Finances, 1977 and 1983.

of older, low-coupon mortgages typically held by older households.

The problem for our analysis is one of potential double counting. Since many of these low-coupon mortgages also were assumable, the estimates of

Chart 5
Age – Distribution of Mortgage Debt
1977 and 1983

Percent

Mean $ Values in 1977
Mean $ Values in 1983
Pct. of Sample Mean in 1977
Pct. of Sample Mean in 1983

Dollars

0-24   25-34   35-44   45-54   55-64   65-74   75+   Age

* The difference between the 1977 and 1983 values is not statistically different from zero for this group at the 95% confidence level

home value reported by households may include a premium that represents the households' ability to sell their property with an assumable, low-coupon first mortgage.

Thus, although the data are available in the surveys to estimate the market as well as the book value of outstanding mortgage debt, we do not report those computations here.[25] Reporting those computations also would simply reinforce the observed overall changes in the age-distribution of net worth in favor of older households. In addition, a similar pattern in the age-distribution of debt holding for consumer debt (which is typically of shorter term and therefore has a book value that may approximate its market value despite interest rate changes) lends further support to our finding that the demand for at least certain categories of debt appears positively related to household wealth.

IV. Other Observations

The finding that the distribution of household net worth has shifted in favor of older households is only one measure of the changing economic circumstances of older Americans. It also is interesting to examine the average incomes to households of different ages. The available data suggest that the income position of older households also has been improving steadily relative to younger households. In Chart 7, for example, the mean family income for families headed by someone 65 years of age and older is compared with that of younger families. Relative to the average income of all families, the average incomes of older households have increased dramatically in the last decade or so, whereas the relative incomes of younger households have declined.

The incidence of extreme poverty among the elderly also has declined. In Chart 8, the percent of households of various age groups living below the officially defined poverty level is plotted. Those families headed by someone 65 years and older enjoyed (as of 1984) the lowest incidence of poverty of any age group. In addition, the incidence of this measure of poverty declined by 20 percent between 1977 and 1984 for those older than retirement age; the incidence of poverty increased — sharply in some cases — for all younger households over the same time period.

It should be emphasized that none of these findings is based on a direct measure of changes in the level of well-being of older versus younger Americans. Older households face considerable uncer-
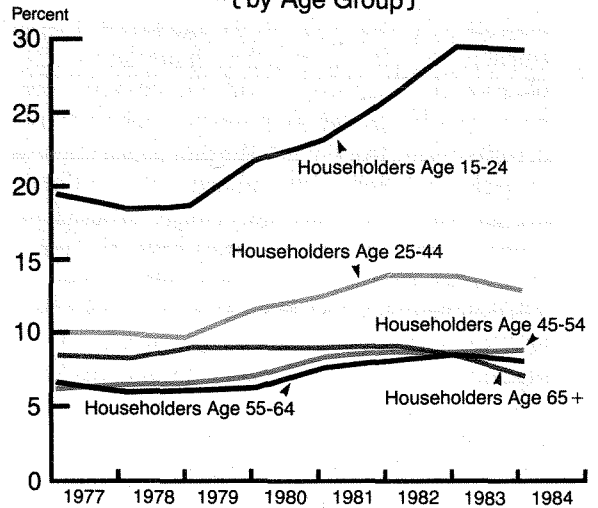
Chart 6
Age – Distribution of Consumer Debt
1977 and 1983
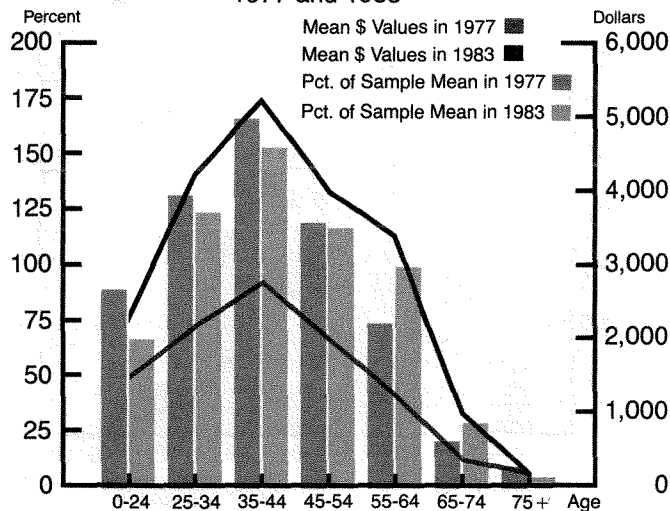
tainty about inflation, their future health, the reliability of Social Security programs, and other influences on the quality of their lives. In addition, the "average" measures presented here do not provide information on the disparities in net worth or income that may exist *within* an age category.
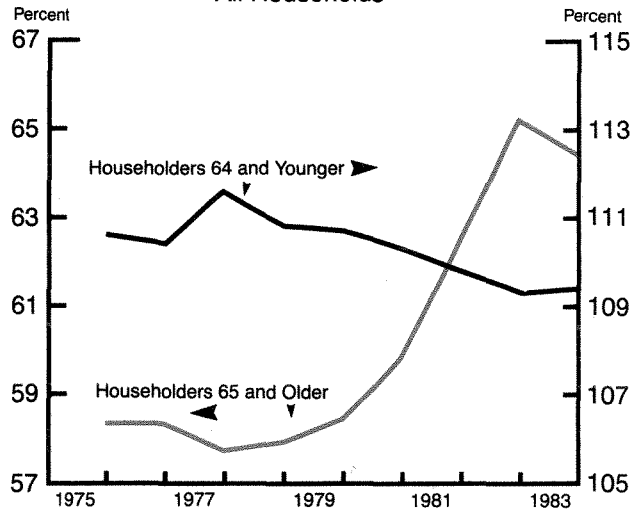
Nevertheless, the data are consistent with the view that changes in Social Security programs and inflation — particularly as inflation affected the housing market — benefitted older households. Not only do the incomes of older households appear to be rising relative to younger households, the observed skewing in the pattern of net worth toward older households is consistent with the view that older households have enjoyed enhanced *lifetime* income expectations.

Chart 8
Percent of Households
with Income Below Poverty Level
[by Age Group]

Percent

Householders Age 15-24

Householders Age 25-44

Householders Age 45-54

Householders Age 55-64

Householders Age 65+

1977 1978 1979 1980 1981 1982 1983 1984

Source: U.S. Bureau of the Census
Current Population Reports, Series P-60

Chart 7
Household Income by Age Group
as a Percent of the Mean Income of
All Households

Percent   Percent

Householders 64 and Younger ▶

Householders 65 and Older

1975   1977   1979   1981   1983

Source: U.S. Bureau of the Census
Current Population Reports, Series P-60

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V. Conclusions and Policy Implications

In summary, our data reveal a significant shift between 1977 and 1983 in the age-distribution of financial wealth toward older households. This observation is consistent with the changing economic conditions and increases in Social Security benefits during that time.[26] The data do not allow us to ascertain whether the dramatic shift occurred because the beneficiary age groups believed the economic changes were transitory (causing them to save rather than spend out of windfall gains) or whether they believed them to be permanent enhancements to their income and wealth at the expense of younger age groups. Even if the latter were the case, the higher-than-average net worth observed for even the most elderly age groups may reflect a desire to make a compensating bequest to the younger households.

What is clear from the Survey of Consumer Finances is that, as of 1983 at least, older households on average were not a disadvantaged group with respect to financial net worth. Indeed, household wealth became an increasing function of the age of the household. This observation, coupled with data from other sources that show changes in the poverty rate and average household income favorable to older households, suggests that the conventional view that older households should receive greater income transfers may be outdated. Given the significance of programs directed at assisting older groups in the federal budget, this observation may imply that changing the level or structure of these programs could be part of an equitable solution to the problem of federal budgetary imbalance.

FOOTNOTES

1. Edward Foster, "Costs and Benefits of Inflation," Federal Reserve Bank of Minneapolis, March 1972.

2. Conceptually, the accumulated stock of human capital also should be embodied in any definition of a societal "wealth" measure. Colloquially, however, the term wealth is employed to describe accumulations of money or property net of claims on those assets — (or, more formally, net worth). Our analysis focuses only on the nonhuman aspects of wealth. In keeping with colloquial usage, terms "wealth" and "net worth" will be used interchangeably to refer to the net value of accumulated nonhuman assets and financial liabilities. An analysis of changes in the broader concept of wealth (namely, one that includes changes in accumulated human capital), while potentially more relevant to a formal study of changes in economic well-being, is not feasible with the available data.

3. Bureau of Labor Statistics, U.S. Department of the Census data.

4. In 1974, special supplementation income (SSI) also was begun for the poor, aged, blind and disabled. The rate of increase in these benefits has been modest, with average monthly benefits only doubling between 1974 and 1984.

5. See, for example, Duesenberry, J. S., *Income, Saving and the Theory of Consumer Behavior,* Cambridge: Harvard University Press, 1949.

6. The life-cycle saving hypothesis and the permanent income hypothesis were articulated at approximately the same time. See, for example, Friedman, Milton, *A Theory of the Consumption Function,* New York: NBER, 1957; Modigliani and Brumberg, "Utility Analysis and the Consumption Function," in *Post-Keynesian Economics,* New Brunswick, New Jersey: Rutgers University Press, 1954; and Ando and Modigliani, "The Life Cycle Hypothesis of Saving," *American Economic Review,* March 1963, pp. 55-84.

7. See Ando and Modigliani, *ibid.*

8. This is because the rate of interest at which an individual can borrow and save influences his ability to smooth consumption optimally in response to stochastic changes in income flows, whereas the rate of time preference is the implicit "discount rate" which the individual uses to evaluate consumption flows in present terms.

9. The theoretical conditions necessary to produce this pattern are discussed in King, M. A. and Dicks-Mireaux, L., "Asset Holdings and the Life Cycle," *The Economic Journal,* June 1982, pp. 247-266.

10. This is discussed in some detail in Pozdena, R. J. "Inflation Expectations and the Housing Market," *Economic Review,* San Francisco: Federal Reserve Bank of San Francisco, Fall 1980.

11. See Blinder, Gordon, and Wise," Social Security, Bequests and the Life Cycle Theory of Saving," National Bureau of Economic Research, Working Paper No. 619, January 1981.

12. *Flow of Funds Accounts,* Board of Governors of the Federal Reserve System, 1985.

13. A watershed legal case in California, *Wellenkamp v. Bank of America,* was decided in favor of a mortgage borrower who attempted to sell her home without retiring the mortgage as called for by the "Due-On-Sale" clause in the mortgage instrument. Virtually throughout the period studied in this paper, the Due-on-Sale clause, while present in most mortgages, was voided or of uncertain legal status, permitting sellers of homes to provide implicit below-market financing for buyers.

14. See Blinder, *et al, op cit.*

15. Martin Feldstein, "Social Security, Induced Retirement and Aggregate Capital Accumulation", *Journal of Political Economy,* 1974, pp. 905-926.

16. Robert Barro, "Reply to Feldstein and Buchanan," *Journal of Political Economy,* April 1976, pp. 343-349.

17. The complexity of the computation of net expected Social Security wealth and its dependency upon age, income and family structure is well illustrated by the simulation performed in A. Pellechio and G. Goodfellow, "Individual Gains and Losses from Social Security Before and After the 1983 Amendments," the *CATO Journal,* Fall 1983, pp. 417-442.

18. The Retirement History Survey (RHS) conducted by the Social Security Administration between 1969 and 1979 followed a sample of near-retirement individuals, and accumulated data on prior work, health and wealth circumstances as well as pre- and post-retirement consumption and saving behavior. This survey has proved very useful in testing a number of hypotheses about retirement, but the detail and reliability of the financial asset data and the particular age group studied do not make it useful here. However, it does permit interesting (though somewhat dated) analyses of a particular age cohort's pre- and post-retirement income. See M. Boskin and J. Shoven, "Poverty Among the Elderly, Are There Holes In The Safety Net?" NBER Working Paper No. 1923, May 1986, who find that there are "pockets" of problems within a generally comfortable retired population. The Michigan panel survey also assembles data on a variety of variables regarding household behavior on a frequent basis. Unfortunately, the financial asset data in this survey is relatively crude.

19. The data sources are the 1977 and 1983 Surveys of Consumer Finances, jointly sponsored by the Federal Reserve Board, the Department of Health and Human Services and five other federal agencies. The surveys were random samples by household; in 1983 a special additional survey of high income households was conducted. This nonrandom sample is not employed in our study. For details on the surveys, see the series of articles by Robert Avery *et al,* in the *Federal Reserve Bulletin,* September 1979, December 1984 and March 1986.

In 1977 total assets consisted of (1) value of the family's home, (2) value of other properties, (3) liquid assets, (4) stocks, and (5) bonds. Detail within these categories varied across surveys. For example, in 1983 separate categories for notes and land contracts, trusts and investment accounts, and other assets were isolated.

Total liabilities included mortgages on homes and other properties and consumer debt defined as (1) installment debt, (2) single payment loans, and (3) credit card debt. These variables were constructed directly from survey detail.

In 1983, an outlying observation was eliminated because during the process of computing aggregate variables we observed reported bond holdings in excess of twelve million dollars for tax-free bonds and stock holdings in excess of three million dollars. These were deemed to be unreliable estimates and would have arbitrarily biased our analysis.

For details on the surveys, see the series of articles by Robert Avery *et al*, in the *Federal Reserve Bulletin*, September 1979, December 1984 and March 1986.

20. See Feldstein, *op cit*, for example.

21. Indeed, one of the difficulties encountered in attempts to explore the shape of the age cohort relationship in wealth using cross-section data is design of the appropriate "real life-cycle income" measure. See, for example, King and Dicks-Mireaux, *op cit.*

22. That is, the cross-section age-distribution of wealth must be "deflated" by cohort-linked changes in life cycle income expectations. For a "humped" age-distribution of wealth to be taken as evidence of a humped pattern over the life-cycle, it must be assumed that all age groups have the same life-cycle income expectations.

23. The opportunity is "missed" on the assumption that households, upon retiring, tend to become increasingly fixed in their residential location, particularly with advancing age.

24. Dunkelberg, W. and Stafford, F., "Debt in the Consumer Portfolio," *American Economic Review*, September 1971, pp. 598-613.

25. In particular, the possibility exists that during the time period of our study, because of widespread assumability of mortgages, perceived home values and actual transactions prices capitalized, at least partly, the difference between book and market value of the assumed mortgages.

26. An interesting direct study of the effect of Social Security on wealth accumulation in the aggregate, however, is available in Feldstein, M. and Pellechio, A., "Social Security and Household Wealth Accumulation: New Microeconomic Evidence," *Review of Economics and Statistics*, 1979, pp. 361-368.