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SOCIAL SECURITY'S TREATMENT OF POSTWAR AMERICANS

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ABSTRACT

Social Security faces a major long-term funding crisis. A 38 or greater percentage increase in the systems' tax rate is needed to meet current benefit payments on an ongoing basis. Tax increases of this magnitude or comparable benefit cuts would significantly worsen what is already a very bad deal for postwar Americans. This paper uses CORSIM -- a dynamic micro simulation model -- and SOCSIM -- a detailed Social Security benefit calculator -- to study this deal.

The study finds that baby boomers will, under current law, lose roughly 5 cents of every dollar they earn to the OASI program in taxes net of benefits. For today's children the figure is 7 cents. Measured as a proportion of their lifetime labor incomes, the middle class are the biggest losers, but measured in absolute dollars, the rich lose the most. Out of every dollar that postwar Americans contribute to the OASI system, 74 cents represent a pure tax. The system treats women better than men, whites better than non-whites, and the college educated better than the non-college educated. While the system has been partially effective in pooling risk across households, it offers postwar cohorts internal rates of return on their contributions that are quite low. Those born right after World War II will earn, on average, a 2.4 percent real rate of return. Those born in the early 1970's will average about a 1 percent real rate of return, and those born at the end of this decade will average essentially a zero rate of return.

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I. Introduction

Social Security is facing a severe long-term financing problem. The problem is much deeper than is either commonly understood or being publicly acknowledged. According to unpublished "intermediate" estimates by Social Security's actuaries, a 4.7 percentage point hike in the current 12.4 percentage point OASDI tax rate is needed to pay for Social Security benefits on an ongoing basis. This tax hike is twice as large as the rate Social Security's Trustees Report says is needed to achieve long-term actuarial balance. The discrepancy is easily explained. The Trustees Report uses a truncated projection horizon -- one which makes Social Security's long-term finances look much better than they actually are.

The size of this requisite tax hike is even more remarkable when one considers that it was calculated using "intermediate" demographic and economic assumptions. Under more pessimistic, but arguably more realistic assumptions, more than a 6 percentage point immediate and permanent payroll tax hike is needed. If such tax hikes are not enacted in the short term, even larger tax hikes will be required in the long term. Alternatively, Social Security benefits will have to be dramatically reduced. Such tax increases or benefit cuts would significantly worsen what is already a very bad deal for postwar Americans.

This paper studies this deal. It first examines the lifetime net-OASI benefits (OASI benefits less OASI taxes) to be paid to postwar generations based on current law, ignoring the tax hikes or benefit cuts needed to maintain the system's solvency. It then shows how this deal worsens when alternative fiscal adjustments are made. The paper also compares the lifetime net benefits of successive postwar cohorts to determine whether younger cohorts are getting a worse deal than older ones. Equally important, it compares Social Security's treatment of the rich, middle-class,

and poor members of each of these cohorts. This intra-cohort analysis of the system's progressivity is also conducted on a lifetime basis. The paper also considers the degree of insurance protection provided by the OASI program. It does so by considering the variability of individuals' lifetime incomes before and after the application of OASI taxes and the provision of OASI benefits. Understanding this insurance function is important since the losses that postwar generations incur through the saving portion of OASI may be offset by gains through its provision of insurance. Finally, the paper considers the real internal rate of return that postwar cohorts earn on their OASI contributions.

Although the paper considers the OASI system in great detail, it leaves out the DI portion of Social Security. It also ignores the taxation of Social Security benefits under federal and state income taxes. Both of these omissions lead to an understatement of Social Security's redistribution from the lifetime rich to the lifetime poor.

Our tools are two: CORSIM -- a dynamic micro simulation model -- and SOCSIM -- a detailed Social Security benefit calculator. We use these programs to calculate lifetime net OASI benefits for baby boomers and their children. CORSIM generates a representative sample of lifetime earnings and demographic trajectories for Americans born or to be born between 1945 and 2000. SOCSIM determines the Old Age Insurance and Survivor benefits and taxes received and paid by the CORSIM sample. The paper then uses these benefits and taxes to a) compute the lifetime net benefits (benefits less taxes) paid to different cohorts and subgroups within cohorts of the baby boomers and their children and b) measure how well OASI pools risk across cohort members by reducing the variance of lifetime income.

CORSIM starts with a representative sample of Americans alive in 1960. It then "grows'

this sample demographically and economically. Specifically, it ages, marries, divorces, fertilizes, educates, employs, unemploys, re-employs, retires, and kills original sample members and their descendants over the period 1960 through 2090. SOCSIM uses completed lifetime demographic and economic experiences to determine OASI retirement, spousal, widow(er), mother, father, children, and divorcee benefits as well as OASI taxes. It does so taking into account Social Security's earnings test, family benefit maxima, actuarial reductions and increases, benefit recomputation, eligibility rules, the ceiling on taxable earnings, and legislated changes in normal retirement ages.

The paper's main findings are:

- Social Security represents a bad deal for postwar Americans. Moreover, the deal has gotten worse over time. Baby boomers are projected to lose roughly 5 cents of every dollar they earn to the OASI program in taxes net of benefits. Generation X'ers and today's children will lose over 7 cents of every dollar they earn in net taxes.

- These losses assume no adjustment to Social Security's taxes or benefits. But major adjustments are inevitable. If OASI taxes are raised immediately by the amount needed to pay for OASI benefits on an ongoing basis, baby boomers will forfeit 6 cents of every dollar they earn in net OASI taxes. Those born after the baby boom will forfeit 10 cents of every dollar they earn in net taxes.

- Measured as a proportion of their lifetime labor incomes, the middle class are the biggest losers from Social Security, but measured in absolute dollars, the rich lose the most. On average, postwar middle-class workers pay 8 cents per dollar earned to OASI in net taxes compared to 5 cents for the lowest paid workers and 3 cents for the highest paid workers. But in absolute terms, today's highest earners pay roughly $1 million measured as of age 65, compared to $400,000 for today's middle-class workers, and $50,000 for today's lowest earners.

- As an average, out of every dollar that postwar Americans contribute to the OASI system, 74 cents represent a pure tax. The pure-tax component of each dollar contributed is 55 cents for the oldest baby boomers and 81 cents for today's newborns. The degree of pure OASI taxation is less than 50 cents on the dollar for very low lifetime earners and greater than 80 cents on the dollar for very high lifetime earners.

- Men pay about 1 percent more of their lifetime earnings to OASI in net taxes than do women. The higher male net tax rates obtain even controlling for lifetime earnings. They reflect shorter male life expectancy and less frequent receipt of OASI dependant and survivor benefits.

- Non whites, because of their shorter life expectancies, face slightly higher (about a third of a percentage point) lifetime OASI net tax rates than do whites. This is particularly true at lower levels of lifetime earnings.

- College-educated workers face somewhat lower (about two thirds of a percentage point) lifetime OASI net tax rates than non college-educated workers, but this difference disappear once one controls for lifetime earnings.

- One rationale for the OASI program is that it pools earnings and longevity risks through the progressivity of its benefit schedule as well as through its provision of dependant and survivor benefits. The data support this view. Across all postwar cohorts, the OASI program reduces the variance of lifetime income by 11 percent. Within each cohort, OASI reduces lifetime income variance by between 6 and 10 percent. However one values Social Security's compulsory provision of insurance, which has been highly successful in overcoming the problem of adverse selection, one should keep in mind that such insurance provision could have been (and still can be) organized by the government without the systematic intergenerational redistribution of resources documented here.

- The internal rate of return earned by postwar cohorts on their social security contributions is very low. It's also falling. Those born right after World War II will earn, on average, a 2.4 percent real rate of return. Those born in the early 1970s will average about a 1 percent real rate of return, and those born at the end of this decade will average essentially a zero rate of return.

We proceed in the next section, II, with a brief discussion of Social Security's long-term financial difficulties and their implications for the baby boomers and their children. Section III briefly reviews the literature on Social Security's inter- and intragenerational redistribution and clarifies how this study breaks new ground. Sections IV and V describe the CORSIM and SOCSIM models, respectively. Section VI summarizes our sample and our constructed data. Section VII present our findings, and Section VIII summarizes and concludes the paper.

II. Social Security's Long-Term Financial Crisis

As mentioned, under intermediate assumptions, a 4.7 percentage point immediate and permanent payroll tax increase is needed to pay for projected benefits on an ongoing basis. Since the current tax rate is 12.4 percent, this would represent a 38 percent tax hike. The magnitude of this tax adjustment is more than twice as large as the requisite tax hike acknowledged in the Social Security Trustees Report!

The reason for the discrepancy is that the Trustees Report looks only 75 years into the future whereas the calculation generating the 4.7 percent requisite tax hike considers what is needed to maintain the system's solvency on a perpetual basis. Although 75 years may appear to be a safe enough projection horizon, Social Security is slated to run major deficits in all years beyond this horizon. The Trustees Report's use of the 75-year truncated projection period explains, in part, why Social Security's finances are again deeply troubled after having been "fixed" by the Greenspan Commission in 1983. Each year that passes brings another major deficit year within the 75-year projection window, and 15 years have now passed since the Commission met.

As painful as a 38 percent tax hike would be, even it would likely fall short of what is really needed to sustain Social Security without cutting benefits. The demographic and economic assumptions comprising the "intermediate" projections appear to be overly optimistic on at least two important counts. First, they assume a slower growth in life span than the U.S. has experienced in recent decades. Second, they assume higher future real wage growth than recent experience would suggest.

Life expectancy for Americans born this year is 76 years. The intermediate projection

assumes that, over the next forty five years, life expectancy will rise by only 3 years, to 79 years. Since this is Japan's current life expectancy, the Social Security Administration would have us believe that it will take America another 45 years just to reach the current Japanese lifespan. In assessing this prognosis, it's worth bearing in mind that the last time U.S. life expectancy grew by 3 years, it took only 20 years -- from 1977 to the present.

Leading demographers, including Professor Ronald Lee of the University of California at Berkeley, project much more rapid growth in life expectancy. Indeed, the mid-range of Lee's projection indicates a 10-year, rather than a 5-year life-span extension between now and 2070. This is twice the rise forecast over this period by Social Security in its intermediate projection. Assuming Lee is right, the requisite immediate and permanent OASDI tax hike rises from 4.7 to 5.4 percentage points.

Since 1975, real wages have grown at only .4 percent per year, although the growth rate in this decade has been almost twice as high. The intermediate projection assumes a .9 percent per year growth rate in real wages over the next 75 years. In conjunction with an extra 5-years of lifespan extension, lowering the real wage growth assumption to .4 percent would raise the needed tax hike to 5.9 percentage points -- a 48 percent increase relative to its current value!

This 48 percentage point hike in the payroll tax would permanently leave the OASDI tax rate at 18.3 percent. But that's only if it were enacted immediately. If the government waited, say, 10 years to raise tax rates, it would have to raise the OASDI tax rate by another .8 percentage points to 19.1 percent to generate the same amount of tax revenue present valued to today. If it waited 20 years, the OASDI tax rate hike would need to rise to over 20 percent.

There are additional factors, including fertility and net migration that could turn out worse

than projected in the intermediate assumptions. Indeed, one can consider the actuaries' high-cost projection that assumes that all critical factors will be worse than those assumed in the intermediate projection. Under the high-cost assumptions, which, by the way, are very close to Lee with respect to life span extension and assume .4 percent future real wage growth, we need a 7 percentage point OASDI tax rate hike right now and forever to pay for Social Security's benefits on an ongoing basis. This would put the OASDI tax rate at 19.4 percent.

Clearly, Social Security's finances are troubled. And clearly, it would be mistaken to assess Social Security's treatment of postwar American generations assuming no future change in current law. Indeed, the government is now actively debating such changes. But knowing precisely what that change will be is, at this point, impossible. Still, the most likely scenario seems to be the maintenance of the program through time, albeit with either major tax hikes, benefit cuts, or both. To cover both of these bases, we entertain below two alternative policies: an immediate and permanent 38 percent increase in the OASI tax rate and an immediate and permanent 25 percent cut in Social Security benefits.

III. Previous Studies of Social Security's Lifetime Net Benefits

Past studies have calculated the value of Social Security's lifetime net benefits for selected types of married couples and single individuals who differ by age of birth, sex, race, and lifetime earnings patterns. These studies include Nichols and Schreitmueller (1978), Pellechio and Goodfellow (1983), Myers and Schobel (1983 and 1993), Hurd and Shoven (1985), Boskin, Kotlikoff, Puffert, and Shoven (1987), Steuerle and Bakija (1994), and Diamond and Gruber (1997).

Steuerle and Bakija's study is fairly representative and may be the best known. The two authors consider three alternative lifetime wage patterns: low, average, and high, where "low" refers to 45 percent of the average value of Social Security-covered earnings, "average" refers to the average value of Social Security-covered earnings, and "high" refers to the value of the maximum taxable level of Social Security-covered earnings. For each cohort reaching age 65 between 1940 and 2050, Steuerle and Bakija calculate the lifetime net benefits from Social Security for singles and married couples for alternative sets of these three lifetime wage patterns. For example, they consider married couples in which both spouses have low earnings, one spouse has low earnings and the other average earnings, and one spouse has average earnings and the other high earnings. Steuerle and Bakija use their assumed earnings trajectories to compute retirement, dependent, and survivor benefits. In the case of survivor benefits, the authors consider all possible truncations of the earnings trajectories resulting from all possible alternative dates of early death. Each of the various state-contingent benefits is actuarially discounted to form a lifetime net benefit.

Steuerle and Bakija's findings generally accord with those of previous studies in showing that today's and tomorrow's workers will fare much worse under Social Security than current and past retirees, that men are being disadvantaged relative to women, and that single individuals and two-earner couples face higher net taxes than do single-earner couples. The authors also claim that "for most of Social Security's history, the system has been regressive within generations. That is, within a given cohort of retirees, net transfers have been inversely related to need: people with the highest lifetime incomes have tended to receive the largest absolute transfers above and beyond what they contributed."

Steuerle and Bakija's study pays careful attention to detail and provides an impressive and

extensive array of calculations. Yet, it raises five concerns. First, in considering only uninterrupted earnings histories, the study omits a potentially very important source of intra- and intergenerational heterogeneity in lifetime Social Security net benefits. Second, in assuming fixed lifetime marital status, the study ignores the role of divorce and remarriage in altering Social Security net benefits. Third, in assuming that receipt of Social Security retirement benefits starts at worker's ages of normal retirement, the study ignores benefit reductions for age, delayed retirement credits, benefit recomputation, and the earnings test -- all of which can materially affect Social Security's lifetime net benefits. Fourth, the study uses an extremely low real interest rate, just 2 percent, in discounting future net benefits. And fifth, in failing to consider workers who earn above the taxable maximum, the study fails to capture an important regressive element of the system -- the fact that for very high income single individuals and couples, Social Security's net lifetime taxation is a smaller fraction of lifetime earnings than it is for Steuerle and Bakija's "high" earners.

The fact is that essentially no Americans experience the kinds of smooth and consistent earnings trajectories assumed by Steuerle and Bakija and the other above-cited authors. To begin, there is considerable variation across and within cohort members in work experience. At the macro level we see periodic recessions, changes over time in the normal (what economists call the "natural rate") of unemployment, changes in the duration of unemployment, changes in labor force participation, a strong and ongoing trend toward early retirement, significant changes over time in fertility rates, and, particularly among the upper income classes, a rise in the average age of first birth. Each of these macro phenomena can materially alter the amount of time members of particular cohorts spend working over the course of their lifetimes. We also know that particular

members within each cohort are differentially affected by these phenomena; i.e., we know that blacks experience much higher unemployment rates in general than whites and that these differences are accentuated during downturns; we know that female labor-force participation has risen dramatically in the postwar period; we know that males are retiring ever earlier, whereas females appear to be retiring somewhat later; and we know that changes over time in fertility rates and the age of first birth have altered the amount of time young females spend working.

Even for workers continuously employed from age 21 through their normal retirement age -- the type of workers Steuerle and Bakija (1994) and other studies consider --, one should expect considerable variation in annual earnings due to variation in weeks worked per year and earnings per week. The Panel Study of Income Dynamics, which is one of the main panel data sets used to study annual earnings, suggests significant year-to-year variation in annual earnings, even of those working full time. Although some of this variation may reflect measurement/reporting error, there is still a very strong empirical basis for modeling annual earnings variability.

The changing propensity of Americans to form and dissolve marriages also provides a strong argument for a micro simulation approach to studying Social Security's treatment of the population. Social Security is anything but neutral with respect to marital status. The system provides dependent benefits to non working spouses and secondary earning spouses, provided the dependent spouse was married for at least 10 years to the living worker on whose earning record she or he wishes to claim such benefits. Social Security also provides survivor benefits to spouses who are married for as little as 9 months provided the marriage is ongoing at the time the decedent spouse dies or provided the marriage had lasted for at least 10 years. In ignoring divorce and the timing of divorce, the studies cited have left out a potentially rich form of Social Security benefit

variation.

By entertaining alternative ages of retirement and Social Security entitlement ages (the age one elects to start collecting Social Security retirement benefits), micro simulation lets us study how benefit reductions for age, delayed retirement credits, benefit recomputation, and the earnings test alter who gets what from Social Security. As detailed below, these decisions and provisions influence not only the worker's own benefits, but also the dependent and survivor benefits that are available under his or her earnings record. For example, individuals who are married for 10 years are eligible to collect spousal dependent benefits at or beyond their age of early retirement, but only if their spouses are themselves collecting Social Security retirement benefits.

As mentioned, Steuerle and Bakija discount Social Security benefits and taxes at a 2 percent real rate of return. In using such a low rate, they bias upward their estimates of Social Security's net benefits for all contributions. But they differentially bias upward their net benefit estimate for those with longer life expectancies -- in this case women.

Steuerle and Bakija justify their discount rate choice as comparable to average real interest rates over time for safe investments. To them "Social Security is an extremely safe investment that is uniquely resistant to economic fluctuations and inflation and receives favorable tax treatment." Each of their rationales is troubled. First, the current real rate of return on the only safe asset available in the economy -- inflation-indexed Treasury bonds -- is 3.8 percent, which is almost twice Steuerle and Bakija's discount rate. Moreover, the maximum maturity of these bonds is currently 30 years. It could well be that safe rates of return for maturities beyond 10 years could exceed 3.8 percent. Second, Social Security is a highly risky asset. It's risky with respect to demographic change, the rate of real wage growth, and legislative changes instigated

by reform-minded politicians. The repeated number of changes over the years to both tax and benefit provisions of Social Security as well as its current dire long-term fiscal position attest to these risks. Third, the system has a sorry history with respect to inflation. The double digit inflation in the early 1970s brought forth double indexation of benefits to inflation. More recently, the CPI Commission reported that Social Security's benefits are being significantly overindexed to inflation because of mismeasurement of the CPI.

Furthermore, Social Security is not a capital asset, and the tax treatments of Social Security contributions and Social Security benefits are not relevant to deciding the rate of return at which these flows should be discounted. What is relevant is the after-tax rate of return workers could otherwise receive were they able to invest their contributions in real assets. The opportunity to invest one's contributions in real assets would arise in the context of a privatization of Social Security. If such a privatization relied on an independent revenue source (e.g., a consumption tax) to pay off benefits accrued under the old system, then workers would be able to invest at the economy-wide *pre-tax* rate of return.[1] This study takes a 5 percent real discount rate as its central assumption, but also show results for 3 and 7 percent discount rates. The 5 percent figure can be viewed as combining a 3.5 percent risk-free, pre-tax real rate with a 1.5 percent premium that accounts for the riskiness of Social Security benefits and taxes.

One finale rationale that Steuerle and Bakija might offer for using a low discount rate is that the OASI program provides annuity, survivor, and intergenerational risk insurance that would otherwise be priced at above actuarially fair values in the marketplace. Our responses are three.

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[1] To fully evaluate the net gains from privatization, one would also need to discount the future value of any new taxes imposed to finance the privatization transition.

First, as Mitchell, Poterba, and Warshawsky (1998) have recently shown, loads on private annuity insurance contracts, like those on life insurance contracts, are fairly modest. Second, as Abel and Kotlikoff (1994) and Hayashi, Altonji, and Kotlikoff (1996) report, there is no evidence of risk sharing across generations in the United States by either the government or the private sector. And third, the government's ability to overcome adverse selection in private insurance markets by effectively compelling universal insurance purchase is not contingent on its OASI program; i.e., such insurance provision could have been (and still can be) organized by the government without the systematic intergenerational redistribution of resources documented here.

Our use of a higher and, in our view, more realistic after-tax discount rate couple with our other methodological choices lead to conclusions that, in many cases, differ from those drawn by Steuerle and Bakija. First, Steuerle and Bakija suggest that, in addition to most lower-income households, "many middle- and upper-income households will continue to receive generous positive transfers from Social Security far into the future." (Steurle and Bakija 1994, p. 112) We find much the opposite: net taxes for all postwar generations are positive and very large at all levels of lifetime incomes. Second, Steuerle and Bakija suggest that for most households net lifetime OASI tax rates will be negative and that "even in the worst case" (op. cit., p.115), this net tax rate will not exceed 5.67 percent. In contrast, we find that baby boomers, as a group, face a 5 percent lifetime net tax rate and that those born after the boomers face a 7 percent rate. We also show that these net tax rates will rise to 6 percent and 10 percent, respectively, if OASI tax are immediately raised by enough to make the OASI system fiscally sustainable.

IV. CORSIM

CORSIM is a dynamic micro simulation model of the U.S. population developed by Professor Steven Caldwell of Cornell University and his associates. The model is a descendant of DYNASIM which was developed in the 1970s by Professor Guy Orcutt of Yale University, Professor Caldwell, and others at the Urban Institute.

Dynamic Micro Simulation

Micro simulation begins with a population sample and then "grows/ages" this population in discrete intervals, such as a month or year. Through the aging process, one simulates life histories for each sample member. Life histories refer to sample member's demographic, economic, health, and social experiences. The simulation is generated by a set of mathematical processes that combine deterministic (systematic) and stochastic (random) elements.

The processes for continuous variables, like income, are typically regression equations with a deterministic component that is based on the sample member's socioeconomic characteristics and an error that is typically drawn from a normal distribution with zero mean and known variance. Discrete-state changes (e.g., the transition from unmarried to married, from living to dead, or not working to working) are generally modeled as logistic functions. These logistics determine the probability of the change in states for each sample member as functions of the member's socio-economic characteristics. They are typically evaluated by taking a random draw from a uniform distribution whose values range from 0 to 1. If the value of the draw, say .7, is higher than the probability predicted by the logistic function, say .6, sample member experiences the change in question. If not, the sample member remains in the initial state. In either case, it is necessary to update the member's record since this information may be relevant for future transitions.

As microsimulation models are solved by simulation, rather than analytically, their solutions are not unique, but depend on the chance elements that are incorporated. So, not only might an individual's outcome differ from that of another person who is identical to him/her on all measured covariates, but also the very same individual could have completely different outcomes across model runs. This lack of a distinctive solution is referred to as Monte Carlo variability. One can contend with Monte Carlo variability by running a model a number of times and averaging the outcomes across the multiple model runs and also by employing variance reduction techniques.[2]

Alignment to Macro Aggregates

Micro simulation models typically incorporate an alignment process in which initial outcomes generated by the model's in-part deterministic and in-part stochastic modules are benchmarked to historical aggregates. These aggregates are typically group specific, such as the average earnings of white females ages 19 to 25 who are married with children in the home and

[2]Rather than using pure random drawings CORSIM decides probabilistic events in interesting ways. A number of variance reduction techniques are employed to reduce the problem of Monte Carlo variability, and Christopher Neufeld (1996b; 1997) provides an excellent overview of these issues. One approach, called the "sidewalk" method, entails keeping a running sum of probabilities, called the sidewalk variable and initialized at 0.5, to decide when events occur. When a unit's contribution to this sum causes the sum to reach or exceed an integer value, then the unit experiences the event (as opposed to the unit experiencing the event when its probability exceeds a random draw). The sidewalk method preserves the principle that probabilities of greater magnitudes result in greater likelihood of experiencing the event. One of the key advantages of the sidewalk method is that the actual number of events experienced by a group never exceeds the expected number of events by more than one. Further, the method prevents the elimination of entire high-event-probability subgroups. It has the disadvantages of first imposing negative dependence of events for related individuals when the initial data base is structured so that individuals within families are processed sequentially and also of non-repeatability across passes in the same run. To combat this limitation, Neufeld developed a "hybrid random number method" in which the advantages of sidewalk are combined with a more traditional tabular method. In this strategy, probabilities are subject to minor adjustment in order to ensure that the expected number of events will be nearly realized.

working part-time. Benchmarking is performed by calculating group-specific alignment factors that are applied within each group to the values of the sample member's predicted continuous variable (such as earnings) and probabilities (such as the chance of divorcing). These adjustment factors are then used in a second pass of the model through the population. For example, if the model generates fewer (more) than the expected number births in a given period, the fertility probabilities for women of childbearing age in the period are scaled upward (downward). One can scale continuous variables in a simple linear fashion or by using more complex non-linear methods (see, for example, Johnson (1996) and Neufeld (1996a, 1997)).

The CORSIM Model

CORSIM begins in 1960. Its initial population is the representative sample of Americans surveyed in the 1960 U.S. Census Public-Use Microdata Sample. This data set is a one-in-one-thousand sample, so one out of every thousand Americans alive in 1960 is included. The Census survey provides much, but not all, the information needed as baseline data. The remaining information is imputed to the 1960 sample from a variety of sources.

CORSIM "grows" the 1960 sample demographically and economically in one-year intervals through the year 2100. Demographic growth refers to birth, death, and immigration, entry into the marriage market, family formation, family dissolution, and the schooling attainment. Economic growth refers to working or not working, choosing annual weeks worked, and determining weekly labor earnings.[3]

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[3]CORSIM's other economic processes include consumption expenditures, saving, federal, state, and local income and property taxation, individual asset holdings, inheritance, and disability.

As detailed in Caldwell, et. al. (1996), these and other CORSIM processes are determined by over one thousand distinct equations, hundreds of rule-based algorithms, and over five thousand parameters. Data used to estimate and test the separate equation-based modules were drawn from large national Microdata files, including High School and Beyond (HSB), the National Longitudinal Survey (NLS), the National Longitudinal Survey of youth (NLS-Y), the Panel Study of Income Dynamics (PSID), the National Longitudinal Mortality Study (NLMS), the Survey of Consumer Finances (SCF), and the U.S. Census Public Use Microdata Sample (PUMS). Data used to construct the rule-based modules and to compute alignment factors are drawn from another six files plus miscellaneous sources.

CORSIM contains a very large number of separate equations due to differences across socio-economic groups in social and economic processes. A variable that is highly predictive of the outcomes of one group may be irrelevant for determining the outcomes of a second group and may act in the opposite direction for a third group. For example, the presence of children in the household may differentially influence the labor market behavior of men and women. Children under age five are likely to increase the probability that a man works, but decrease the probability that a woman works. In such a case, one needs to estimate equations predicting labor market outcomes for men and for women separately, and may even wish to consider estimating separate equations for those individuals who have or don't have young children.

Similarly, when benchmarking the outcomes that are generated by these equations, one wishes to ensure that the proper distribution of outcomes across social groups is maintained. To a certain extent, the alignment factors that are applied to CORSIM outcomes capture both period

and cohort effects.[4] One can easily imagine, for example, why period and cohort factors (changes in laws, political events, natural disasters) would have disparate effects on members of different social groups. As a result one might prefer to define these factors differently for as many socially-relevant groups as possible. The marriage rate for a particular age group, for example, is an outcome that one would expect to vary substantially across years given changes in the number of eligible males and females in the population, shifts in the economy, and changing social norms about the acceptability of remarriage and cohabitation. The micro-equations capture several of these dimensions, but alignment ensures that appropriate totals are achieved for different age-sex groups in each year.

The controls that these alignment procedures impose cross-sectionally on annual outcomes in a dynamic microsimulation model do not necessarily guarantee a close match between the life paths generated by the model and actual life paths. One can, for example, generate extremely accurate predictions of the proportion of the population in the labor force in every year of the simulation, and even faithful distributions of labor force status across demographic groups for each year, without achieving intrapersonal realism in career trajectories. One instance in which this is likely is when one employs a regression equation with a relatively large, unstructured error term. In the CORSIM estimation of weekly earnings, for example, error terms are added to the deterministic component, based on education, prior income, and other factors. These errors vary in size by subgroup, and can be substantial. If these errors are not correlated over time, then, one

[4]Alignment also plays the critical function of assuring that inputs to successive processes are sufficient. For example, if one misspecifies the fertility function and does not subsequently align its predictions, perfectly specified functions for educational attainment and labor force participation would generate inaccurate outputs, since both are dependent upon fertility behavior/outcomes.

can experience dramatic shifts in earnings from year to year.

To try to ensure intrapersonal realism in life-course trajectories, we have employed several strategies. One of the more important is to correlate one's probability of working in a given period with the probability from all previous periods. We do this by assigning what we refer to as "permanent luck" factors to all members of the sample. One can consider these as terms that capture unobserved heterogeneity--like differences in motivation and even social grace. These factors, which are drawn from a normal distribution centered on zero, are then added to the individual's probability of working and the level of work effort (full-time versus part-time). Comparisons of year-to-year transitions observed in the PSID sample more closely resembled CORSIM patterns after this modification was made. Similarly, we impose structure on error terms in the earnings equations, dividing this error into two components: a transitory component drawn each year and then a lagged component. Weights for these respective components vary across social groups. Swan (1997) details related issues.

CORSIM Processes Used in this Study

Table I lists the subset of CORSIM processes used in this study, the data used in their estimation, and the aggregate statistics used in their alignment. We briefly discuss each of the processes.

Fertility -- this process is the probability that a female sample member gives birth in a given year. As indicated in the second column, separate logistic functions are used to calculate this probability -- one for each of 30 different groups of women. These groups are distinguished by their martial

status, race, work status, and whether they already have children. Each logistic function was estimated from NLS data using some or all of the variables listed in column 3 as regressors. These regressors include age, past births, duration of current marriage, current marital status, and labor earnings. Alignment of the logistic probabilities is done first on an age, race, and marital-status-specific basis using Vital Statistics and then on an overall basis using the Social Security Administration's annual total fertility rate.

Mortality -- the logistics for the probability of dying in a given year are calculated separately for 51 groups distinguished by age, sex, race, and marital status. Note that the regressors for these logistics include two economic variables -- employment status and family income -- and education, which is highly correlated with income. This is important. The intragenerational progressivity of Social Security depends critically on whether poor members of particular generations live long enough to receive their benefits. Fortunately, the National Longitudinal Mortality Study used to estimate these logistics contains these key variables. As an individual is aged in CORSIM, CORSIM updates the values of these three variables and uses them in calculating the individual's current probability of dying. Vital Statistics are used to align predicted mortality rates for each of 88 distinct age-race-sex groups and then the Social Security Administration's age-sex-adjusted annual death rate is used as a final global alignment.

Enter Marriage Market for First Time -- this logistic function was estimated separately for 20 groups differing by age, race, sex, schooling, marital status, and weeks worked. The estimation was done on NLS data on individuals who changed their marital status between one year and the

next from never married to married. Since Social Security spousal benefits are available to dependent spouses and Social Security survivor benefits are available to widow and widowers, having marriage depend on earnings and education, as CORSIM does, is another prerequisite for understanding Social Security's intragenerational redistribution. Census data are used to align the logistic-imputed probabilities to produce the correct national totals of first time marriages across 16 age-sex groups.

Assortative Mating -- CORSIM also must decide who marries whom. It does so through an assortative mating process. Specifically, it considers all pairings of unmarried males with unmarried females. Each pairing is assigned a marriage probability and then those pairs with the highest probability are selected as actual marriages. The probability of marriage, which was estimated based on Census data, depends on the differences and levels of the male's and female's ages, the differences in their incomes, race, state of residence, labor force participation, and other factors. Males and females who are closer in age and whose educational levels are closer have higher probabilities of marrying. Given Social Security's provision of spousal and survivor benefits, how marriages are formed will matter to the system's redistribution both across and within generations.

Marital Dissolution -- The determinants of this logistic process are the difference in spouses' ages, the duration of the marriage, the husband's wages, race, and the differences in wage rates between the husband and wife. The process is estimated with PSID data separately for four different groups of married couples. The fours groups are distinguished by the earning status of wife and

the presence of children under 18. National data on divorce are used to align the probabilities, which are derived from the predicted values of the logistics, for 14 groups defined by duration of marriage.

Reentry into the Marriage Market -- CORSIM keeps track of individuals who have become divorced or widowed and gives them the opportunity to reenter the marriage market and, potentially, remarry. There are seven different logistics for reentry into this market that are distinguished by the individual's race, age, sex, and other characteristics. The actual determinants of these functions, which were estimated on PSID data, include education, income, whether one is divorced or widowed, and whether one has children. National Center for Health Statistics data were used to align predicted logistics for 26 groups defined by age, sex, and the reason for dissolution of the prior marriage (divorce versus widowhood).

Education -- The education processes (one for each of 33 separate groups) are also logistics. These logistics, which were estimated with HSB and NLS data, determine whether an individual with a certain number of years of education chooses to continue his or her education for at least one more year. A variety of factors, including age, whether you have a child, whether you're living on your own, and your parents' education influence schooling outcomes. High school graduation rates are then aligned by sex, and a global alignment of college enrollment rates is also imposed.

Work Status and Weeks Worked -- CORSIM's earnings module starts with group-specific probits

determining a) whether sample members work zero or a positive number of weeks during the year and b) given that weeks worked is positive, whether weeks worked exceeds 47 weeks per year (i.e., whether the worker works full year or part year). The 174 groups for which these probits are estimated differ by age, sex, race, whether the sample member has a child, and whether he or she worked part year or full year in the past year. The explanatory variables in the probits, which were estimated on PSID data, include age, education, presence of children, youngest child's age, and marital status. Benchmarking of work status (full-year, part-year, none at all) is done separately for 35 age-race-sex subgroups based on Census and CPS data and is then aligned to coincide with Social Security's aggregate proportion of the population in covered work.

These probits are then followed by regression equations, again estimated on PSID data, which predict the actual number of weeks that an individual works. The prediction is distinct for each of 58 groups differentiated by full- or part-time work status and then age, race, sex, marital status, living with parents, and the presence of children. The regressors in this equation include education and marital status.

Weekly Earnings -- To calculate annual earnings, CORSIM multiplies weeks worked by weekly earnings. Weekly earnings is imputed based on a regression on age, lagged earnings, education, education times earnings, marital status, number of children, and the youngest child's age. Separate imputation regressions were estimated for 116 groups broken down by age, the presence of children, marital status, race, and sex. Total weekly earnings are aligned separately for 70 groups (based on age, sex, full-year vs. part-year status, and, for women, marital status and presence of children) using CPS data and then each of these groups is subjected to the same global

alignment to ensure that predicted aggregate earnings coincide with the NIPA aggregates.

Age of Receipt of Social Security Retirement Benefits -- This is a key variable used by SOCSIM in assigning Social Security retirement, spousal, and dependent benefits to CORSIM sample members. It's key because Social Security reduces retirement benefit for early retirees and increases them for late retirees. Social Security also earnings tests benefits once individuals start receiving them. Finally, Social Security's provision of spousal benefits to current spouses and dependent benefits to children on a worker's earnings record is contingent on whether or not the worker is entitled to collect retirement benefits. For workers who are eligible to become entitled for retirement benefits, CORSIM uses logistic functions, estimated on PSID data, to determine the probability of entitlement. The logistic's regressors include age, lagged change in weeks worked, the level of earnings, education, home ownership, living arrangement, asset income, lagged income, marital status, race, and sex. Social Security Administration data on total numbers of workers applying for retirement benefits are used to align the data for 12 age-sex groups.

CORSIM Post-1996 Alignments

For each year between 1960 and 1996, CORSIM's alignments are based on actual historical aggregates or aggregates that are interpolated between actual historical data. Take, as an example, the proportions of individuals who elect to receive their Social Security retirement benefits at various ages (e.g., sixty-two and sixty-five). CORSIM calculates the historical proportions for these variables by dividing aggregate data on new awards from the Annual Statistical Supplement to the Social Security Bulletin by the total population in the age group. Likewise, historical

alignment data for birth probabilities come from live birth registration data that are collected annually by each of the fifty states.

CORSIM's annual alignment totals for years beyond 1996 incorporate many of the intermediate assumptions pertaining to aggregate fertility, mortality, and migration developed by the Office of the Actuary of the Social Security Administration and reported in the 1997 Trustees' Report (Board of Trustees, 1997). Neufeld (1996a) details this procedure. CORSIM uses the Trustees' assumptions for the total fertility rate (assumed to reach its ultimate level of 1.90 in the year 2020) and the age-sex adjusted death rate[5] (assumed to decline from 832.0 per thousand in 1996 to 529.8 in 2075). It does not include the Trustees' estimates of life expectancy, although it is fairly close to their estimates.[6]

CORSIM further incorporates several of the 1997 Trustees' intermediate assumptions about anticipated economic changes, including the expected growth of wages and prices. The Trustees currently assume that the future value of increase in the Consumer Price Index (CPI) will vary between 3.2 and 3.5 percent over the projection period. Average wages in CORSIM grow as the Trustees anticipate, at a rate of CPI plus a real differential which, in the long term, equals 0.9 percent per year. Again, this is implemented as a part of CORSIM alignment, specifically, the aggregate alignment of workers' wages to the National Income and Product Account totals. The Trustees' intermediate projected changes in the size of the labor force suggest continual growth

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[5]This is defined as the crude rate that would occur in the enumerated total population as of April 1, 1990 if that population were to experience the death rates by age and sex observed in, or assumed for, the selected years (Board of Trustees, 1997: 64).

[6]Life expectancy can be defined at birth or at any other age; the SSA uses estimates from birth and from age 65.

over time, ranging from an increase of zero percent to an increase of one percent. Concerning composition of the labor force, the SSA actuaries anticipate that there will be further declines in work effort among men, and eventual plateauing of increases among women in the future. CORSIM ensures that this outcome is replicated by adjusting the probability that an individual's number of weeks worked is nonzero using the Trustees' sex-specific coverage rate, defined as the proportion of the population age sixteen and over that has Social Security-covered employment in the year.[7]

CORSIM's Shortcomings

The beauty of the dynamic microsimulation model--its great capacity for incorporating complex behavioral and administrative rules, interactions, and feedbacks--is also a potential weakness. If one is modeling dozens of interacting processes, then there are many places at which one could make errors, errors that could cumulate over the simulation process if undetected and/or left unchecked. Caldwell and Morrison (1997) list seven potential sources of error in the outcomes generated in dynamic microsimulation analyses: programming mistakes; imperfect micromodules, that it is, to the errors that one might make in representing the underlying behavioral processes one is modeling, and this includes specification and estimation issues; inaccurate inputs to a social or demographic process simulated in the model; random variation in the initial sample of a model; pure random variation, or Monte Carlo variability; differences between micro- and aggregate-level processes; and inaccurate aggregate data. In this paper, we

[7]These data are not available in published Office of the Actuary reports, but were provided by Nettie J. Barrick and Robert Baldwin (1997; personal correspondence).

concentrate on specification and estimation issues in CORSIM, though a more general discussion is available in Favreault (1998).

One particular area of concern for estimation is that the time frames of data used in the estimation of the social and demographic processes don't cover the entire post-1960 period (e.g., mortality logistics are estimated based on 1980-89 data). In the particular case of the mortality functions, we believe that these data are the best available, and using the most current data for projection purposes is standard practice in demographic modeling. Keeping CORSIM functions updated to the best available data is a never-ending process. Especially troublesome is the fact that the set of equations that generate earnings for individuals in the model are now ten years old. One's concerns about stale data should be attenuated by the alignment procedures, which are in fact year-specific.

One should also consider that data from the PSID and other sources are subject to measurement error that affects the size of the standard errors used in the calculation of earnings. Many of the data from which parameters for CORSIM functions are estimated are based upon self-report, and errors in self-report are known to vary in important ways. Measurement error in self-reported earnings, for example, has been shown to vary inversely with true earnings (see, for example, model explaining this in Pischke, 1995). This could lead to biased parameter estimates for these critical model functions.

One important and appealing feature of the CORSIM specification is the multiple equations and alignment groups, but there are hazards to this modeling approach. When one moves from one regression to another as one ages and moves from one alignment group to another, there can be rather dramatic variability in predicted outcomes. Patterns in fertility and mortality

probabilities illustrate this well. When one examines a distribution of fertility probabilities for women in their childbearing years that are based on Vital Statistics and Census data, for example, one sees a smooth curve that is skewed to the left and peaks in the late twenties. If one plots these same probabilities for CORSIM women, one sees the same overall pattern but a few dramatic discontinuities between distinct ages.

In the CORSIM model, benchmarking is done on an annual basis rather than a lifetime basis. As already noted, this ensures annual consistency but not necessarily realistic lifepaths. Perhaps the most profound challenge that microsimulation modelers now face is to meet annual group-level targets and effectively replicate lifepaths simultaneously.[8] Through experimentation with CORSIM, we frequently find that in order to generate more realistic life paths, we need to relax some cross-sectional constraints. For example, one of the most unrelenting problems we face is the effective replication of individual earnings histories. Under CORSIM's original specification, many workers in the simulated population had extremely variable careers, with earnings jumping and falling dramatically, indeed implausibly, across just a few years. Our current representation of workers' earnings has eliminated a good deal of this variability, but at a certain cost: specifically, relaxation of the constraint that mean earnings for part-time workers in various groups hit annual national means (though earnings totals do continue to meet an overall

[8]One major complication that modelers face is a dearth of reliable data for validating simulated lifepaths. Access to the comprehensive earnings data files held by the Social Security Administration is restricted, and these records lack links between spouses. One of the richest publicly-available sources of longitudinal data on individuals in the U.S., the Panel Study of Income Dynamics, began in 1968, which means that the maximum period for which one can currently validate trajectories using the PSID is less than thirty years. While some retrospective surveys cover longer time frames, data of this sort have numerous limitations. Even if researchers had unrestricted access to ideal validating data, conceptual issues about how to best employ these data arise. A particularly important issue is the time frame for validation. Validating outcomes in pairs of years or in sets of three years can be quite fruitful, but, again, meeting two- or three-year validation targets won't necessarily ensure realism over a longer time frame.

wage pie). We believe that this tradeoff is worthwhile, but will continue to develop strategies to see that the demands of both realistic life paths and historical cross-sectional totals are satisfied. For example, more complicated lag structures in work and wage rate equations, among others, are likely to improve the realism of workers' trajectories.

V. SOCSIM

SOCSIM is a highly detailed OASI benefit calculator developed by Economic Security Planning, Inc. for use in its financial planning software program -- ESPlanner™. SOCSIM calculates retirement, spousal, widow(er), mother, father, children, and divorcee benefits as well as OASI taxes. It does so taking into account Social Security's earnings test, family benefit maxima, actuarial reductions and increases, benefit recomputation, eligibility rules, the ceiling on taxable earnings, and legislated changes in normal retirement ages.

Calculation of OASI benefits, the basics of which are described below, is extremely complex. The Social Security Handbook describing the rules governing these benefits runs over 500 pages. Even so, on many key points, the Handbook is incomplete and misleading. This assessment is shared by Social Security's senior actuaries who were consulted repeatedly in preparing SOCSIM. Their assistance, which proved invaluable, came in the form of both extensive discussions and the transmittal of numerous, highly detailed benefit calculations. The Social Security actuaries also introduced us to their ANYPIA, which calculates PIAs. Unfortunately, the ANYPIA program considers only one person at a time and does not permit the calculation of multiple, interdependent benefits of household members. Consequently, ANYPIA did not provide an alternative to developing SOCSIM, although we have used it, where possible, to check

SOCSIM's accuracy.

Retirement Benefits

Eligibility -- Individuals must be *fully insured* to receive retirement benefits based on their earnings records. Becoming fully insured requires sufficient contributions at a job (including self-employment) covered by Social Security. For those born after 1929, acquiring 40 *credits* prior to retirement suffices for fully-insured status. Earnings between 1937 and 1951 are aggregated and divided by $400, and the result (rounded down to an integer number) are the pre-1952 credits that are added to the credits earned after 1950 in determining insured status. After 1951, workers earn one credit for each quarter of the year they work in Social Security-covered employment and earn above a specified minimum amount. The year of *first eligibility* for retirement benefits is the year in which the individual becomes age 62. The individual is *entitled* to retirement benefits after an application for benefits is submitted, but never before age 62.

Determination of Primary Insurance Amount (PIA) -- The PIA is the basis for all benefit payments made on a worker's earnings record. There are several steps in computing the PIA. *Base years* are computed as the years after 1950 up to the first month of entitlement to retirement benefits begins. For survivor benefits, base years include the year of the worker's death.

Elapsed years are computed as those years after 1950 (or after attainment of age 21, whichever occurs later) up to (but not including) the year of first eligibility. The maximum number of elapsed years for an earnings record is 40 (it could be shorter, for purposes of calculating survivor

benefits if the person dies prior to age 62).

Computation years are calculated as the number of elapsed years less five or 2, whichever is greater. Earnings in base years (up to the maximum taxable limit in each year, and through age 60 or two years prior to death, whichever occurs earlier) are wage-indexed according to economy-wide average wages. Of these, the highest earnings in years equaling the number of computation years are added together and the sum is divided by the number of months in computation years to yield *Average Indexed Monthly Earnings (AIME)*.

Bend Points -- The AIME is converted into a PIA using a formula with *bend points*. The bend point formula is specified as 90 percent of the first X dollars of AIME plus 32 percent of the next Y dollars of AIME plus 15 percent of the AIME in excess of Y dollars. The dollar amounts X and Y are also wage indexed and are different for different eligibility years. The dollar amounts pertaining to the year of attaining age 60 (or, for survivor benefits, the second year before death, whichever is earlier) are applied in computing the PIA.

Benefits- A person who begins to collect benefits at his or her "normal retirement age" (currently age 65) receives the PIA as the monthly retirement benefit. In subsequent years, the monthly benefit is adjusted according to the Consumer Price Index (CPI) to maintain its purchasing power.

Increases in Normal Retirement Ages -- After 2003 normal retirement ages are scheduled to increase by 2 months for every year that a person's 65th birthday occurs later than the year 2003.

This progressive increase in the normal retirement age for those born later ceases between the years 2008 through 2020; those attaining age 65 in these years have a normal retirement age of 66. The postponement in retirement ages resumes after 2020 such that those born after 2025 have a normal retirement age of 67. All cohorts attaining age 65 after that year have a normal retirement age of 67.

Reductions for Age -- A person who begins to collect retirement benefits earlier than the normal retirement age receives a *reduction for age*. The reduction factor is 5/9 of 1 percent for each month of entitlement prior to the normal retirement age. The reduced benefit payment (except for the inflation adjustment) continues even after the person reaches or surpasses the normal retirement age. If the number of months of reduction exceeds 36 months (for example, in case of entitlement at age 62 when the normal retirement age is 67), then the reduction factor is 5/12 of 1 percent for every additional month of early entitlement.

Delayed Retirement Credits--Those who begin to collect benefits after their normal retirement age (up to age 70) receive *delayed retirement credits*. The amount of the delayed retirement credit for each month of delayed entitlement depends on the year in which a person attains normal retirement age. For example, those attaining age 65 in 1997 receive an additional 5 percent in monthly benefits for each year of delay in entitlement. However, those attaining age 65 in the year 2008 will receive an additional 8 percent in benefits for each year of delayed entitlement.

Earnings Test -- If a person continues to work and earn after the month of entitlement, benefits

are reduced because of an *earnings test*. Beneficiaries under the normal retirement age, lose $1 for each $2 earned above an earnings limit. Those older than the normal retirement age, lose $1 for each $3 earned above a higher earnings limit. The earnings limits have already been specified through the year 2000 and are scheduled to grow with average wages in subsequent years. All benefits payable on a worker's earnings record, including the worker's own retirement benefits and spousal and child dependent benefits, are proportionally reduced by the testing of the worker's earnings.

Recomputation of Benefits -- Earnings in any year after entitlement to benefits are automatically taken into account in a recomputation of the PIA for determining the subsequent year's benefit amount. However, these earnings are not indexed before they are included in the AIME calculation. If such earnings are higher than some prior year's earnings (indexed earnings through age 60 or unindexed earnings after age 60) , they result in an increase in the PIA and benefit payable. If they are lower than all previous year's earnings, they will not lower the PIA or benefits since only the highest earnings in base years are included in the calculations.

Spousal and Child Dependent Benefits

Eligibility -- Wives and husbands of insured workers (including divorced spouses) are entitled to *spousal benefits* if the couple was married for at least 10 years at the time of application for spousal benefits, the spouse is over age 62 or has in care a child under age 16 entitled to benefits under the insured worker's record, and the insured worker is collecting retirement benefits. Children of insured workers under age 16 are entitled to *child dependent benefits* if the child is

unmarried and the worker is collecting retirement benefits.

Benefits -- Spousal and child benefits equal 50 percent of the insured worker's PIA (each). Child dependent benefits may be lower only if the *family maximum* applies. Spousal benefits may be lower due to the family maximum, a reduction for age, the application of the earnings test, or the spouse's receipt of retirement benefits based or her or his own earnings record.

Family Maximum -- All benefits paid under a worker's record (except retirement benefits or divorced spousal benefits) are reduced proportionately to bring them within the family maximum benefit level. The maximum benefits payable on a worker's earnings record is determined by applying a bend point formula to the PIA similar to that applied to the AIME in calculating the PIA. For example, the family maximum equals 150 percent of the first $X of PIA plus 272 percent of the next $Y of the PIA plus 134 percent of the next $Z of the PIA plus 175 percent of the PIA greater than $X+$Y+$Z. The values X, Y, and Z are adjusted for each year of the calculation according to the growth in economy-wide average wages. In case the spousal benefit is eliminated for any reason, the benefits payable on the insured worker's record are subjected to the family maximum test again, treating the spouse as though he/she were not eligible for spousal benefits. This may result in higher benefits for children who may be eligible for dependent benefits under the worker's record.

Reduction of Spousal Benefits for Age -- Spouses eligible for the spousal benefit may elect to receive (may become entitled for) their benefits before normal retirement age. In this case the

spousal benefit is reduced by 25/36 of 1 percent for each month of entitlement prior to normal retirement age. If the number of months of reduction exceeds 36 months (for example, in case of entitlement at age 62 when the normal retirement age is 67), then the reduction factor is 5/12 of 1 percent for every additional month of early entitlement.

Earnings Testing of Spousal Benefits -- If a spouse is earning above the amount allowed by the earnings test, the spousal benefits he or she is eligible to receive will be earnings tested according to the pre- and post-normal retirement schedule described above.

Redefinition of Spousal Benefits -- If a spouse is already collecting retirement benefits, the spousal benefit is redefined as the greater of the excess of the spousal benefit over the spouse's own retirement benefit or zero.

Survivor Benefits (Widow(er), Father/Mother, and Children)

Eligibility-- The surviving spouse of a deceased worker is eligible for *widow(er) benefits* if the widow(er) is at least age 60, is entitled (has applied for widow[er] benefits), the worker died fully insured, and the widow(er) was married to the deceased worker for at least 9 months. The widow(er) of a deceased worker is eligible for *father/mother benefits* if the widow(er) is entitled to benefits (has applied), the worker died fully insured, the widower has in care a child of the worker. A surviving child is eligible for *child survivor benefits* on the deceased worker's record if the child is under age 18 and is entitled (an application has been filed) and the worker was fully insured.

Survivor Benefits-- Monthly benefits equal 100 percent of the worker's PIA for a widow(er); they equal 75 percent of the PIA for father/mother and child survivor benefits. Widow(er) and child survivor benefits may be lower only if the family maximum applies. Widow(er)s may become entitled to (elect to receive) survivor benefits earlier than normal retirement age, but not earlier than age 60. In this case the reduction is 19/40 of 1 percent for each month of entitlement prior to normal retirement age. After the widow(er) is 62, he or she is may become entitled to (elect to receive) retirement benefits based on her own past covered earnings record. In this case the widow(er) benefits are redefined as the excess over own retirement benefit or zero, whichever is greater. Finally, widow(er) survivor and own retirement benefits are also subject to the earnings test. If the deceased worker was already collecting a reduced retirement insurance benefit, the widow(er)'s benefit cannot be greater than the reduced widow(er) benefit or the greater of 82.5 percent of the worker's PIA or the worker's own retirement benefit. If the deceased worker was already collecting a retirement insurance benefit greater than the PIA because of delayed retirement, the widow(er) or is granted the full dollar amount of the delayed retirement credit over and above the (reduced) widow(er) benefit. Father/mother benefits are not similarly augmented by delayed retirement credits that the deceased worker may have been receiving.

Father/Mother Benefits -- These benefits may be reduced if the family maximum applies or if the father or mother is entitled to the own retirement benefit. In this case the father/mother benefit is redefined as the excess over the father or mother's own retirement benefit or zero, whichever is greater. Father /mother benefits are also subject to the earnings test. On the other hand, they are not reduced for age. For those eligible to receive both widow(er) and father/mother benefits,

on the other hand, earns nothing until age 26 and then works in three sporadic intervals, making relatively little in the workforce. The sixth, seventh, and eighth columns of pages 1-3 of Table 2 show the net Social Security benefits received by the husband and wife at different ages as well as their children. The wife starts receiving benefits at age 62, whereas the husband starts receiving benefits at age 65. In this particular case, the children receive no benefits because a) their parents die late in life and b) they are too old to receive dependent benefits when their parents begin collecting retirement benefits.

Other columns on these and subsequent pages show the breakdown of the husband's, wife's, and children's benefits into various components. Columns nine through fourteen on pages 1-3 show the husband's retirement benefit, the dependent benefit he receives on his wife's earnings record, the reduction in his benefits arising from the application of the earnings test to his earnings, the reduction in his dependent benefit arising from the application of the earnings test to his wife's earnings, the dependent benefits received by children on the husband's earnings record, and the amount by which their children benefits are reduced because of the application of the earnings test to the husband's earnings. Turn next to pages 4-6 of Table 2. The fourth column shows the widower benefits to which the husband is eligible (in this case zero because the husband predeceases the wife). The next three columns show how much the children will collect as child survivors if the wife dies, the level of father's benefits (which are available to widowers with young children), and the loss of widower benefits via the application of the earnings test to the widower's earnings. The remaining columns on these and other pages of the table present corresponding benefits for the wife. To save space, Table 2 does not separately break out the impact on net benefits of family benefit maxima, actuarial reductions and increases, benefit

the program calculates both and takes the larger benefit.

Calculation of a Deceased Worker's PIA -- The calculation of survivor benefits in the case of a widow(er) benefits uses the larger of two alternative calculation's of the deceased worker's PIA. These are the "wage indexing" method and the "re-indexing" method. Moreover, the year up to which the worker's wages are indexed may be different depending upon whether the deceased worker would have become age 62 before or after the widow(er) attains age 60.

The wage-indexing method -- the last year for indexing earnings is the earlier of a) the year the worker dies minus 2 years or b) the year worker would have attained age 60. Bend point formula dollar amounts are taken from the earlier of the year the worker dies or the year the worker would have attained age 62. The PIA thus calculated is inflated by the CPI up to the year the widow(er) turns age 60 (if later) to obtain the PIA value on which widower benefits would be based. Where applicable, these benefits are then adjusted for the family maximum, reduction for age, delayed retirement credits, and the earnings test.

The reindexing method -- The worker's original earnings are indexed up to the earlier of the year the widow(er) attains age 58 or b) the year the worker attains age 60. The elapsed years are computed as the number of years from 1951 (or the worker's age 22 if later) through the year the widow(er) attains age 60. The computation years equal elapsed years minus 5 years (computation years cannot be less than 2). Bend point formula dollar values are applied from the year the widow(er) attains age 60. There is no subsequent indexing of the PIA for inflation.

The Sequencing of Widow(er) Benefit Calculations -- Widow(er) benefit reductions proceed in a particular sequence: First the widow(er) plus children's benefits are subjected to the family maximum. Second, the widow(er) benefit is reduced for early entitlement (of the widow(er) prior to normal retirement age). Third, the widow(er) benefit is compared to the widow(er) own retirement benefit if entitled to the latter. Fourth, the widow(er) benefit is redefined as the excess over own benefit if own benefit is positive. Finally the earning's test is applied, first to the widow(er)'s own benefit and then to the widow(er) benefit that is in excess of own benefit. If the widow(er) benefit is eliminated as a result of these tests, the benefits payable on the insured worker's record are subjected to the family maximum test again, treating the widow(er) as though he/she were not eligible for the widow(er) benefit. This procedure can potentially increase children's benefits if the family maximum limit was binding the first time through.

Illustrating the Calculations

Table 2 illustrates SOCSIM's benefit calculations for one of the more than ten thousand CORSIM-generated observations considered in this study. The observation is that of a male born in 1945 (who is age 18 in 1963), who became married, and died at age 75. The woman he married was also born in 1945, but died at age 88. Both spouses' earnings from age 18 on are detailed on the first two pages of the table in columns four and five. These dollar amounts as well as all others in the table are adjusted for inflation; specifically, they are expressed in 1997 dollars. The husband begins work at age 19 and retires at age 65. His earnings show a smooth growth, with earnings at the end of his workspan roughly double their value at the beginning. His wife,

on the other hand, earns nothing until age 26 and then works in three sporadic intervals, making relatively little in the workforce. The sixth, seventh, and eighth columns of pages 1-3 of Table 2 show the net Social Security benefits received by the husband and wife at different ages as well as their children. The wife starts receiving benefits at age 62, whereas the husband starts receiving benefits at age 65. In this particular case, the children receive no benefits because a) their parents die late in life and b) they are too old to receive dependent benefits when their parents begin collecting retirement benefits.

Other columns on these and subsequent pages show the breakdown of the husband's, wife's, and children's benefits into various components. Columns nine through fourteen on pages 1-3 show the husband's retirement benefit, the dependent benefit he receives on his wife's earnings record, the reduction in his benefits arising from the application of the earnings test to his earnings, the reduction in his dependent benefit arising from the application of the earnings test to his wife's earnings, the dependent benefits received by children on the husband's earnings record, and the amount by which their children benefits are reduced because of the application of the earnings test to the husband's earnings. Turn next to pages 4-6 of Table 2. The fourth column shows the widower benefits to which the husband is eligible (in this case zero because the husband predeceases the wife). The next three columns show how much the children will collect as child survivors if the wife dies, the level of father's benefits (which are available to widowers with young children), and the loss of widower benefits via the application of the earnings test to the widower's earnings. The remaining columns on these and other pages of the table present corresponding benefits for the wife. To save space, Table 2 does not separately break out the impact on net benefits of family benefit maxima, actuarial reductions and increases, benefit

recomputation, eligibility rules, and legislated changes in normal retirement ages. These factors are, however, fully incorporated directly into the benefit amounts reported in Table 2.

As mentioned, the husband first begins receiving benefits in 2010 at age 65. In that and subsequent years, his retirement benefit is $14,322. But since he earns $14,042 in 2010 -- his last year of work -- his benefit is reduced by the earnings test in the amount of $2,094. His wife's benefits start in 2007 when she's age 62. Since her husband doesn't start collecting retirement benefits until 2010, her net benefit for 2007, 2008, and 2009 equals her retirement benefit that is based on her own fairly meager earnings history. The resulting benefit of $833 is less than a fifth of the $4,707 she receives starting at age 65. At this age, her own $833 retirement benefit is augmented by a $4,537 dependent benefit. But this dependent benefit is tested on the basis of her husband's earnings, producing a $663 reduction and leaving the wife with a $4,707 net benefit. A year later, when her husband is fully retired, the wife receives the full $4,537, which, together with her own retirement benefit, yields a net benefit of $5371. This net benefit continues until the wife becomes a widow at age 76. In that year, her net benefit permanently jumps to $12,705 -- the sum of her own $833 retirement benefit and a $11,871 widow benefit that she receives on her decedent husband's earnings record. Note that the wife's net benefit of $12,705 is less than the $14,322 her husband was receiving prior to his death. The reason is that the wife's chose to collect early retirement benefits starting at age 62. In so doing, she not only subjected her retirement benefits to a reduction for age, but also her widow benefits, once she became widowed.

VI. Sample Selection and Characteristics

Our master sample was produced by running CORSIM from 1960 through 2100. From this master, we selected a) all never married males and females born between 1945 and 2000 who lived to at least age 15, b) all males born between 1945 and 2000 who married women born between 1945 and 2010 and lived to at least age 15, and c) all females born between 1945 and 2000 who married males born between 1945 and 2000 who lived to at least age 15. Selecting the sample in this manner omits a) males born between 1945 and 2000 who married females born either before 1945 or after 2010 and b) females born between 1945 and 2000 who married males born either before 1945 or after 2000. Thus, at the early end of the sample we lose some males who married older women and some women who married older men. At the late end of the sample we lose some males who married very much younger women and some females who married younger men.

Whatever bias this selection process introduces should be absent for cohorts born in the central years of our sample. For these cohorts, we are presumably omitting very few, if any, observations. Take, those born in 1965. The males born in 1955 who are left out of the sample are those who either married women 20 or more years older than themselves or married women 45 or more years younger than themselves. Those females born in 1965 who are omitted from the sample either married males 20 or more years older than themselves or married males 35 or more years younger than themselves.

The tables presented below break the data down by multi-year cohorts, lifetime earnings, sex, race, and education. With the exception of Cohort 95, all multi-year cohorts contain all sample observations born during five consecutive years. Cohort 45 refers to all sample observations born in 1945 through 1949. Cohort 50 refers to all observations born between 1950

and 1954. This definition of the multi-year cohorts prevails except for Cohort 95 which contains all sample observations born during the six year period, 1995-2000. In discussing the results below, we use the term cohort to refer to the multi-year cohort groups.

All reported averages in the tables are cell-specific. All lifetime variables are present values measured in 1997 dollars and calculated as of the year the individual is age 18. Unless otherwise indicated, all present values reflect discounting at a 5 percent real rate. The taxes and benefits used in forming lifetime OASI taxes and benefits are those nominally paid by the taxpayer and his employer and received by the beneficiary. Thus, a dependent benefit paid to a husband is counted as his benefit notwithstanding the fact that the benefit is based on his wife's earnings record. Although the discounting we do here is simple, not actuarial, the average cell values we report are averages over lifespan as well as other outcomes and, in that sense, represent actuarial averages.

The Number and Distribution of Observations

Tables 3 and 4 show the numbers and distribution of observations sorted by their characteristics. The total number of sample observations is 53,269 individuals. These observations are almost equally divided among men and women. They are also fairly evenly distributed across the 11 cohorts. Eighteen percent of the observations are non white, and 40 percent have one or more years of college education. These percentages increase for successive cohorts. Thirteen percent of Cohort 45 is non white, compared with 23 percent of Cohort 95. Twenty-nine percent of Cohort 45 observations have at least one year of college education, compared with 44 percent of Cohort 95.

For the earliest (oldest) cohorts, most of the observations are concentrated among lifetime earnings groups less than $800,000. But since CORSIM takes into account historical as well as projected real wage growth, the distribution of observations for latter cohorts shifts toward higher labor earnings. For example, in Cohort 45 less than 4 percent of the observations have lifetime labor earnings in excess of $1.2 million, whereas in Cohort 95 almost 15 percent have earnings in that range.

In each cohort women are disproportionally represented among low lifetime earners. For example, in Cohort 80, 36 percent of women, but only 11 percent of men, have lifetime earnings below $200,000. At the other earnings extreme, 14 percent of men, but only 5 percent of women have lifetime earnings of $1.2 million or more. Non whites and non college-educated observations also have disproportionately low levels of lifetime earnings. Take Cohort 65. Overall, 58 percent of observations have lifetime earnings below $400,000. But among non whites, this percentage is 68, and among the non college-educated, the percentage is 64.

Average Ages of Death

Since Social Security pays its benefits in the form of annuities, how long one lives is a critical factor in determining how much one benefits from the system. Table 5 reports average ages of death for our sample. As one would expect, later cohorts live longer, females outlive males, whites outlive non whites, and those with college education outlive those without. The average age of death rises from 77 for Cohort 45 to 80 for Cohort 95. Across the entire sample, females outlive males by roughly 6 years. But this age gap narrows for successive cohorts from 7 years for Cohort 45 to 5 years for Cohort 95. The gap between whites and non whites is 2 to

3 years; it's 2 years between those with and without college education. Both of these gaps remain fairly constant through time.

There is also a strong correlation between lifetime earnings and average length of life. Part of this correlation runs from earnings to lifespan; i.e., the mortality probabilities used in the Corsim model are smaller the higher is the level of earnings. But part runs from lifespan to earnings. Those with shorter lifespans have fewer years during which to work and may, for that reason, have lower lifetime earnings. The differences by lifetime earnings levels in lifespan can be substantial. Cohort 80 is illustrative. Those of its members earning less than $200,000 over their workspans die, on average at age 77 -- 4 years lower than their fellow cohort-members earning, over their lifetimes, $1.2 million or more. For men in this cohort the corresponding lifespan gap between rich and poor is 7 years. For women, it's 3 years.

Average Lifetime Labor Earnings

Table 6 reports average lifetime labor earnings within cohort, sex, race, education, and lifetime earnings cells. Average lifetime earnings are generally higher for each successive cohort, beginning with $357,651 for Cohort 45 and continuing to $705,619 for Cohort 95. This primarily reflects movement across lifetime earnings categories rather than increases in mean values of lifetime earnings within the categories. Average lifetime earnings growth is somewhat greater among women than among men. It's also somewhat greater for whites than for non whites and for those without college education than for those with college education.

VII. Findings

This section describes OASI's treatment of postwar Americans. It does so in seven ways. First, it describes average lifetime taxes, benefits, and net taxes. Second, it describes the composition of OASI benefits. Third, it presents the OASI net tax in terms of an equivalent age-65 wealth tax. Fourth, it shows OASI lifetime net tax rates. Fifth, it considers the degree to which contributions made to OASI represent a pure tax. Sixth, it describes how lifetime net tax rates would rise in response to either an immediate and permanent 4.0 percentage point increase in the OASI tax rate or an immediate and permanent a 25 percent reduction in benefits. And seventh, it considers the role of the OASI program in reducing the riskiness of lifetime income.

Average OASI Taxes, Benefits, and Net Taxes

Table 7 reports average lifetime OASI taxes, benefits, and net taxes (taxes minus benefits) within the various cells. The first thing to note is that net OASI taxes are positive for all cohorts. Hence, on this metric, the OASI system is a bad deal for postwar Americans as a group. It's also a deal that gets worse over time. Each successive cohort pays higher net taxes than does the its predecessor.

For members of Cohort 45, participation in OASI is equivalent to being assessed with a one-time tax at age 18 that averages $12,371. On average, this cohort reached age 18 in 1965. The average value of Social Security covered earnings in that year was $24,376. Hence, for members of Cohort 45, the one-time equivalent tax of $12,371 is equal to half of a year's average covered earnings as of the time they reached 18. Note that the gross OASI tax effectively paid by this group at age 18 is $22,456, which is almost as large as a year's covered earnings.

For members of Cohort 95, the average lifetime net tax of $51,157 is more than four times

the size of that paid by Cohort 45. This figure is also almost twice the level of average covered earnings predicted to prevail when this cohort reaches age 18. Although Cohort 95 will pay almost three times what Cohort 45 pays in gross OASI taxes, their gross benefits will be only one fifth higher, assuming, as we do here, no change in future OASI taxes or benefits.

Another key feature of Table 7 is that average net taxes are positive at all levels of lifetime earnings. They are, however, considerably higher at higher levels of lifetime earnings. For example, the lowest lifetime earners in Cohort 75 pay, on average, a $5,448 net tax, whereas the highest lifetime earners pay, on average, a $108,207 net tax. Although the gross benefits of the highest earners in this cohort are more than twice those of the lowest, their gross taxes are almost 10 times higher. Thus, if one measures the OASI's progressivity in terms of absolute net taxes, the system is highly progressive. It's also clear from Table 7 that the fact that the lifetime poor generally die at younger ages than the lifetime rich does not suffice to reverse the system's absolute redistribution from the lifetime rich to the lifetime poor.

Net taxes for males within each cohort are generally about twice those of females. This is not simply due to the fact that women have, on average, lower earnings and that the OASI benefit schedule is progressive. The net taxes of females are lower even after one controls for the level of lifetime earnings. The differences can be quite large. Take Cohort 75 and lifetime earnings level $600,000 to $800,000. Males in this cell pay, on average, $59,453 in net taxes. Females in this cell pay, on average, $55,059, or $4394 less. The main reason for the preferential treatment of females is their longer longevity. As Table 5 shows, women in this cell live 6 years longer than their male cell-mates.

How do non whites and whites compare with respect to their OASI treatment? The answer

is that white cohort members pay more in net taxes than non-white members. In the case of Cohort 90, there is a almost an $8,000 difference in average net taxes. The higher net taxes paid by whites reflects their higher earnings. Once one controls for lifetime earnings, the white-non white differences are much smaller and are often negative, particularly at lower levels of lifetime earnings where whites outlive non whites, on average, by several years.

There are also higher lifetime net tax payments for those with college education. In Cohort 45, the college-educated pay over $4000 more than the non college-educated. This differential grows with successive cohorts. For Cohort 95, it exceeds $13,000. This differential reflects the fact that college-educated cohort members have higher lifetime earnings, on average, than do their less well educated contemporaries. Once one controls for lifetime earnings, the differential is typically negative. In the case of Cohort 80, it's negative at each level of lifetime earnings and ranges from $453 to $1,097. What explains this? The answer is that within a lifetime-earnings range, the less-well-educated generally have shorter average lengths of life and lower average levels of lifetime earnings.

The Composition of Average Lifetime OASI Benefits

Table 8 looks at the composition of OASI benefits. Specifically, it decomposes OASI net benefits into retirement benefits, survivor benefits, dependant benefits, less earnings reductions. Take Cohort 45. Its members received lifetime OASI benefits averaging $10,086. Of this amount, $9,104 represent retirement benefits, $258 represent dependant benefits, $1,301 represent survivor benefits, and minus $577 represent earnings reductions. Across subsequent cohorts, average dependant benefits decline by more than half, whereas average survivor benefits remain

fairly constant. In contrast, average retirement benefits rise by one third. Members of the various cohorts lose, as an average, from 6 percent to 10 percent of their OASI benefits via the earnings reduction.

In each cohort, dependant and survivor benefits are largest among those with the lowest levels of lifetime earnings. They are also much larger for women than for men. This makes sense since for married individuals, the higher are one's lifetime earnings, the more likely they will exceed one spouse's lifetime earnings and the less likely one is to qualify for either dependant benefits or survivor benefits. Over time, as women's earnings grow relative to men's, fewer women qualify for dependant and survivor benefits and the dependant and survivor benefits for which they qualify are smaller. This explains the changing relative levels of retirement, dependant, and survivor benefits across the 11 cohorts.

OASI Age-65 Accumulated Net Taxes

Another way to appreciate the size of the OASI lifetime net tax being imposed on postwar Americans is to consider how much more money they would have at age 65 were they not forced to participate in the OASI system? The fact that they don't have this extra wealth at age 65 can be thought of as effectively equivalent to a wealth tax at age 65. We calculate this age-65 wealth-equivalent tax by simply accumulating up from age 18 to age 65 at our 5 percent real interest rate each observation's lifetime net tax payment.

Table 9 presents accumulated net taxes together with accumulated gross taxes and accumulated gross benefits. Figure 1 graphs these amounts for our 11 cohorts. In considering these data, it's important to keep in mind that the individual amounts being added together to form

the average can differ considerably. Thus, the fact that the average accumulated net tax is positive in a particular cell doesn't preclude some of the observations in that cell from having a negative wealth-equivalent tax. It's also worth bearing in mind that not everyone who is included in the cell actually survives to age 65.

Since the lifetime net taxes presented in Table 7 are positive for all cohorts at all levels of lifetime earnings, the accumulated net wealth taxes are similarly positive. Indeed, the age-65 accumulated net taxes are simply about 10 times the size of the corresponding lifetime net taxes. But expressing the figures in this manner is illuminating. Take Americans born this year who will join the middle class, earning between $600,000 and $800,000 on a lifetime basis. For them, being able to opt out of the OASI program would leave them better off by more than one half million dollars at age 65; i.e., for today's middle class newborns, being forced to participate in the OASI program is equivalent to foregoing more than a half million dollars at age 65! For the lowest lifetime earners, the age-65 effective wealth loss is $55,256 -- the equivalent of 5 years of full-time work at the minimum wage that will likely prevail when they reach 18. For the lifetime richest, the effective wealth loss is a staggering $1.3 million! Figure 2 shows these outcomes. It graphs accumulated net taxes for selected cohorts by levels of lifetime income.

OASI Lifetime Net Tax Rates

Table 10 reports OASI lifetime net tax rates computed as average net taxes within each cell divided by average lifetime earnings in that cell. Bear in mind that the table's entries are not average lifetime tax rates across cell observations, but rather the average rate of net taxation applied to total within-cell lifetime earnings.

Americans born between 1945 and 1949 (Cohort 45) can expect, under current law, to forfeit 3.46 percent of their lifetime incomes to the OASI part of the Social Security System. In contrast, those born between 1995 and 2000 are projected to hand, on net, 7.25 percent of their lifetime incomes to OASI. Figure 3 plots these cohort-specific lifetime net tax rates, but not just under the Table 10 assumption of a 5 percent real discount rate. It also considers 3 percent and 5 percent real discount rates. (The 3 and 5 percent lifetime net tax rate tables corresponding to Table 10 appear as Tables A1 and A2 in the Appendix.)

The level of the net tax rate is clearly sensitive to the choice of discount rate. For Cohort 95, Table 10's 7.25 percent net tax rate falls to 5.43 percent with a 3 percent discount rate, but rises to 8.25 percent with a 7 percent discount rate. Net tax rates are lower the lower the discount rate because a) most OASI benefits are received later than most OASI taxes are paid and b) discounting reduces the present value of a receipt or payment by more the farther away is that receipt or payment in time. But even using a 3 percent discount rate, the net lifetime tax rates for all cohorts are positive.

Although using a lower discount rate reduces the cohorts' net tax rates, is raises the rate at which the net tax rates rise for successive cohorts. The relative slopes of the curves in Figure 3 show this. Based on 5 percent or 7 percent discounts rate, today's newborns face more than twice or nearly twice the lifetime net tax rate as those born right after World War II. But assuming a 3 percent discount rate, the net tax rate increases much more dramatically -- by a factor of almost 5.

What explains this worsening OASI deal? The answer is twofold. First, OASI tax rates have risen through time. In 1963, when those born in 1945 reached age 18 and began to join the

workforce, the combined employee-employer OASI tax rate was 6.75 percent. By 1980, it had risen to 9.04 percent, and by 1990 it was 11.2 percent. The tax rate has declined somewhat since then. Today's rate is 10.7 percent, and the rate after 2000 is scheduled to equal 10.6 percent. The second reason is the scheduled rise in Social Security's normal retirement age. Those cohorts born between 1945 and 1954 can retire with normal benefits at age 66. Those born after 1954, but before 1960, will have to wait an additional 2 months for each year they are born beyond 1954, but before 1960. And those born in 1960 and thereafter must wait till they reach age 67. The rise in the normal retirement age doesn't preclude cohorts from applying for early retirement benefits at age 62, but it does mean that their early retirement benefits will be reduced by a greater percentage. Since life expectancy at birth is currently 76 years, raising the normal retirement age from 65 to 67 represents, on average, eliminating 18 percent of the years one can expect to receive benefits at the normal (non-reduced) rate.

Differences Across Lifetime-Earnings Levels in OASI Lifetime Net Tax Rates

Another striking feature of Table 10's first block of numbers is the higher lifetime net tax rates Social Security imposes on the middle class compared with the poor or the super rich. Take Cohort 80. Its members earning less than $200,000 over their lifetimes face a 4.69 percent lifetime net tax rate. Those earning $1,200,000 face a 5.64 percent rate. In contrast, those in the middle of the earnings distribution, earning from $400,000 to $1,200,000 face an 8.4 percent rate.

Table 11 reiterates and accentuates this message. Table 11 is identical to Table 10 except it classifies observations according to deciles of lifetime labor earnings. Each decile contains a set of individuals who collectively account for 10 percent of total lifetime earnings of the cohort

or cohort subgroup in question. The first decile includes the poorest individuals -- those with lowest lifetime earnings, but whose labor earnings when added together still sums to ten percent of the total. The second decile includes the next poorest groups of lifetime earners, and so on until one reaches the top decile, which contains the sample's highest lifetime earners.

Figure 4 graphs lifetime tax rates for the different deciles for four of the 11 cohorts: Cohort 45, Cohort 60, Cohort 80, and Cohort 95. Consider again Cohort 80. Individuals falling in the first earnings decile of this cohort face a 5.87 percent lifetime net tax rate. Those in the fifth decile face a 8.61 percent net tax rate, whereas those in the tenth decile face a 3.41 percent net tax rate. This feature that the net tax rate at the highest decile is less than that at the lowest holds for all cohorts except Cohorts 45 and 50.

Compared to the net tax rates of those in the middle class, the relatively low net tax rates faced by the poor reflect the significant progressivity of Social Security's PIA benefit formula. Offsetting this somewhat is the fact that individuals with lower lifetime incomes tend to die at younger ages. For upper-income individuals (those in the top two deciles), their relatively low lifetime net tax rates reflects the fact that only a part of their earnings -- the amount up to the ceiling on taxable earnings -- is subject to the OASI payroll tax.

In considering this regressive aspect of the OASI system, it's worth bearing in mind that the super rich pay, in absolute terms, much more in net taxes than do members of the middle class. For example, the super rich in Cohort 80, for example, pay $112,082 in lifetime net taxes -- more than twice the amount paid by those with lifetime earnings of $600,000 to $800,000. It's also important to note that our calculations don't include the taxation of OASI benefits under the federal income tax. Inclusion of these taxes would make Social Security look more progressive.

Male and Female OASI Lifetime Net Tax Rates

Women generally have lower lifetime earnings than men. Consequently, they are more likely than are men to receive dependent benefits and survivor benefits based on their spouse's earnings record. In addition, women live longer than men, permitting them to receive benefits for more years. Both of these factors explain why Table 10's and Figure 5's lifetime net tax rates for men exceed those for women for each of the 11 cohorts. The difference is significant. Across all cohorts, the lifetime net tax rate faced by males is 1.09 percentage points higher than that faced by females. This, again, is based on a 5 percent discount rate. The male-female differential is substantially larger if one discounts using a 3 percent rate. In this case, the average difference across the 11 cohorts is 2.85 percentage points; using a 7 percent discount rate, the average difference is quite small -- .29 percentage points. Thus depending on one's view of the appropriate discount rate, postwar women are either being treated much better, better, or about the same as postwar men by the OASI system.

Regardless of one's view about the right discount rate, it's clear that the male-female differential is either narrowing over time or trivial. Using a 3 percent discount rate, the differential has declined from 4.31 percentage points for Cohort 45 to 1.64 percentage points for Cohort 95. Using a 5 percent discount rate, the decline is from 1.68 to .48 percentage points, and using a 7 percent rate, the differential declines from .41 percent to -.03 percent.

Male-female differences in lifetime net tax rates are largest and most persistent at lower levels of lifetime income where the average lifespan differences are largest and where females receive significant amounts of dependant and survivor benefits relative to their own tax contributions. Take Cohort 95. For males earning up to $200,000, Table 10's-reported net tax

rate is 8.18 percent, whereas for females it's 3.70 percent.

Lifetime Net Tax Rates of Whites and Non Whites

Lifetime net tax rates for non-whites exceed those for whites for each of the 11 cohorts. This is essentially true, not just using a 5 percent discount rate, but also using 3 or 7 percent discount rates. As the tables and Figure 6 show, across all cohorts, the lifetime net tax rate of non whites is .35 percentage points higher than that of whites assuming a 5 percent discount rate. It's .23 percentage points higher assuming a 3 percent discount rate and .40 percentage points higher assuming a 7 percent discount rate. These differences arise primarily because of non white's shorter life expectancies.

OASI Lifetime Net Tax Rates of the College- and Non College-Educated

Those with less education are relatively disadvantaged by Social Security on two counts. First, less education means a shorter life expectancy which, other things equal, means fewer years of collecting Social Security benefits. Second, less education generally means earlier entrance into and earlier exit from the labor market. Since Social Security doesn't credit contributors for making their contributions earlier in time, these tax contributions will have a larger present value than were the same annual contributions made later in life.

As Table 10 and Figure 7 indicate, college-educated cohort members face lower lifetime net tax rates than do non college-educated cohort members for each of the 11 cohorts. On average, the difference in net tax rates is .69 percentage points assuming a 5 percent discount rate; it's .23 percentage points assuming a 3 percent discount rate, and it's .69 percentage points

assuming a 7 percent discount rate.

OASI's Effective Degree of Taxation

Another way to assess OASI's treatment of postwar Americans is to ask what fraction of its payroll taxes are actually taxes. We compute this degree of taxation by forming the ratio within each cell of net taxes to gross taxes. Table 12 and Figure 8 present the results. It shows that for each successive cohort a larger share of OASI contributions represents pure taxes rather than the purchase of a future benefit. For Cohort 45, 55 cents of every dollar contributed represents a pure tax; for Cohort 95, 81 cents of every dollar is a pure tax.

A quick glance through the table shows that the pure tax component of the OASI payroll contribution is higher the higher the level of lifetime earnings. Indeed, for the lowest lifetime earnings class, only about two fifths of every dollar contributed to OASI is a pure tax compared to over four fifths for middle and upper lifetime income earners. The degree of pure taxation is also higher for men than for women, somewhat higher for non whites than for whites, and fairly similar for the non college-educated and the college-educated except for the lowest lifetime income class.

Lifetime Net Tax Rates After Two Alternative Responses to OASI's Long-term Funding Crisis

As mentioned in Section I, Social Security faces a severe long-term financing crisis. Since no one knows how the imbalance will be corrected, it's worth considering OASI's lifetime net taxation of postwar Americans under alternative adjustment scenarios. Table 13 displays lifetime OASI net tax rates assuming the current 10.6 percent OASI tax rate is raised immediately and

permanently by 37.9 percent, which is the ratio of the 4.7 percentage point tax rate hike needed for permanent OASDI balance under the intermediate assumptions to the current 12.4 percentage point OASDI tax rate. This policy leaves the OASI tax rate at 14.6 percent.

Although the new OASI tax rate is 4 percentage points higher than the current rate, the lifetime net tax rates of all postwar Americans don't rise by this amount. The reasons are a) many postwar Americans already have much of their lifetime earnings behind them and the tax hike would not be imposed retroactively and b) those earning above Social Security's ceiling on taxable earnings experience a 4 percent higher rate of taxation only on their OASI-taxable earnings.

Table 13 shows a dramatic worsening because of this policy in the treatment of today's children compared to the baby boomers. For the oldest boomers, Cohort 45, the OASI tax hike would raise their own lifetime net tax rate by less than .5 percent. For Cohort 95, on the other hand, the average net tax rate rises by 3.39 percentage points; i.e., the oldest boomers end up giving Social Security less than one half of one percent more of their lifetime incomes, whereas today's newborns end up giving Social Security over 3 percent more of their lifetime incomes.

The table also shows a significant increase in the lifetime net tax rates of the poor and middle class within each cohort relative to the rich. For Cohort 55 -- the middle of the baby boom -- the net tax rate of the lowest earners rises by just under 1 percentage point; for the highest lifetime earners the rise is three quarters of 1 percentage point. For Cohort 90, the lifetime net tax rate of the poorest group rises by the full 4.0 percentage point tax hike, whereas the highest earners experience only a 2.68 percentage point tax rise. Since men, whites, and the college-educated are disproportionately high earners, the tax hike raises net tax rates somewhat more for women, non whites, and the non college-educated.

Table 14 shows the lifetime net tax rates that would arise if OASI benefits were permanently cut by 25 percent starting in 1998. Unlike the previous policy, which disproportionately hurt later cohorts, this policy does the opposite. Early cohorts lose a bit more because their OASI benefits represent a somewhat larger share of their lifetime incomes. The main reason for this is that these cohorts have lower normal retirement ages than do the later cohorts. Although, in absolute terms, the lifetime rich lose more in benefits than do the poor, these benefits are a much smaller proportion of their lifetime earnings. So, the poor are disproportionately hurt. The same is true of women and the non college-educated within each cohort.

The poor and non college-educated have initially higher OASI benefit levels relative to their lifetime incomes because of the progressivity of the OASI benefit schedule. And women have disproportionately high dependent and survivor benefits as well as retirement benefits. The later two types of benefits are particularly high because of women's greater longevity. As an example of the importance of these factors, compare the 1.73 percentage point rise in the lifetime net tax rate of the poorest women in Cohort 95 with the corresponding .60 percentage point rise of the poorest men in Cohort 95.

How Well Does OASI Pool Risk?

If the OASI program represents a bad financial deal, on average, for postwar Americans, how well does it do in pooling risks the risks these Americans face? Table 15 attempts to address this question. It compares the variance of lifetime earnings before OASI taxes and benefits to the variance of lifetime earnings net of OASI's lifetime net taxation. Specifically, within each cell

indicated in the table, we calculate the percentage difference in quantity a: the variance of lifetime earnings and quantity b: the variance of lifetime earnings minus lifetime OASI taxes plus lifetime OASI benefits. The table reports the percentage reduction calculated as (a-b)/a. The rows labeled *total* show variance reductions across all cohorts.

Across all cohorts, the OASI system reduces lifetime income variance by about 11 percent. The variance reduction is higher (13 percent) among the non college-educated and smaller (9 percent) among the college educated. It's also higher among women (11 percent) and non whites (13 percent) and smaller among men (4 percent) and whites (11 percent). The degree of lifetime-income variance reduction varies across cohorts. It ranges from 10 to 13 percent for cohorts born between 1960 and 2000 and from 6 to 9 percent for cohorts born between 1945 and 1959.

What should one make of these findings? Three things: first, the variance reductions, although small, are not trivial. Second, the OASI system appears successful in reducing lifetime-income variance across and within cohorts and, indeed, within all subgroups of cohorts considered. Third, although the OASI system reduces the variance of lifetime income, this doesn't necessarily mean that it reduces the riskiness of lifetime income. If all agents knew for sure what they would earn, how long they would earn it, and when they would die, lifetime income would be known with certainty; i.e., there would be no risks to pool. Nonetheless, the OASI system could reduce the variance of lifetime income by redistributing from those with high to those with low lifetime incomes. A counter argument here, however, is that even if people know their lifetime earnings once they are in the workforce, they don't know them before they are born, and the OASI system is reducing the risk of being born a low lifetime earner.

Internal Rates of Return on OASI Contributions Earned by Postwar Americans

Table 16 presents calculations of the real internal rate of return projected to be earned by postwar Americans on their OASI contributions. We calculate this rate by determining the discount rate that equates the present value of all benefits received by members of a particular cell to the present value of all contributions paid by members of that cell.

On average, the rate of return being paid to postwar Americans on their Social Security contributions is very small. It is also declining for successive cohorts. Take Cohort 45, which was born after World War II. This cohort is predicted to earn a 2.4 percent real return on its contributions. In contrast, the cohort born in the early 1970s will earn just .95 percent per year. And Cohort 95 (those born between 1995 and 2000) will earn only .15 percent per year, i.e., an essentially zero rate of return!

Internal rates of return are much higher for the lifetime poor than they are for the lifetime rich. Consider Cohort 95. The poorest members of this cohort can expect to earn, on average, a 3.85 percent rate of return, whereas the richest members will earn a negative .35 percent rate of return. Middle-class baby boomers (those with between $400,000 and $1,000,000 in lifetime earnings in Cohorts 45, 50, 55, and 60) can expect to earn between .85 percent per year and 2.15 percent per year. Middle-class children born in this decade will earn between 1.10 and 1.80 percent per year on their contributions.

Men have much lower rates of return than do females. Take Men 70 and Women 70. Their respective internal rates of return are .05 percent and 2.05. This reflects males' shorter lifespans and the progressivity of the benefit schedule. Holding lifetime earnings constant, whites receive slightly higher rates of return than do non whites. The same is true for those with college

education compared to those without.

Conclusion

This paper used CORSIM -- a dynamic microsimulation model -- and SOCSIM -- a detailed Social Security benefit calculator -- to study Social Security's treatment of postwar Americans through its OASI (Old Age Survivors Insurance) program. This treatment is measured in terms of the net taxes (gross taxes minus gross benefits) individuals pay to Social Security over their lifetimes. According to this metric, Social Security represents a bad deal for all postwar Americans and a particularly bad deal for our children.

Although Social Security hits the rich the hardest in absolute terms, making them pay as much as $1 million in net taxes measured as of age 65, it hits them the least in relative terms. The lifetime OASI net tax rate facing the top decile of earners is lower than that faced by any other decile. It's also considerably lower than that facing median earners. The OASI system also favors women over men, whites over non whites, and the college-educated over the non college-educated. These preferences are small and will become smaller through time.

Successive postwar cohorts can expect to receive ever smaller rates of return on their contributions. Those born right after World War II will average a 2.4 percent rate of return, whereas current newborns will average an essentially zero rate of return. The poorest of these newborns can expect to earn a reasonably high (close to 4 percent) rate of return on their contributions, whereas the richest of these newborns can expect to earn a small negative rate of return.

As bad a deal as Social Security is for postwar Americans, it's also a deal that will get

worse through time as the government starts recognizing and dealing with Social Security's severe long-term funding problem. Precisely how bad the deal will get depends on how fast the government acts and whether its asks pre- as well as postwar Americans to help solve Social Security's financial problems.

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Figure 1

OASI Lifetime Gross Tax, Gross Benefit, and Net Tax Accumulated to Age 65 by Cohort

(1997 Dollars)

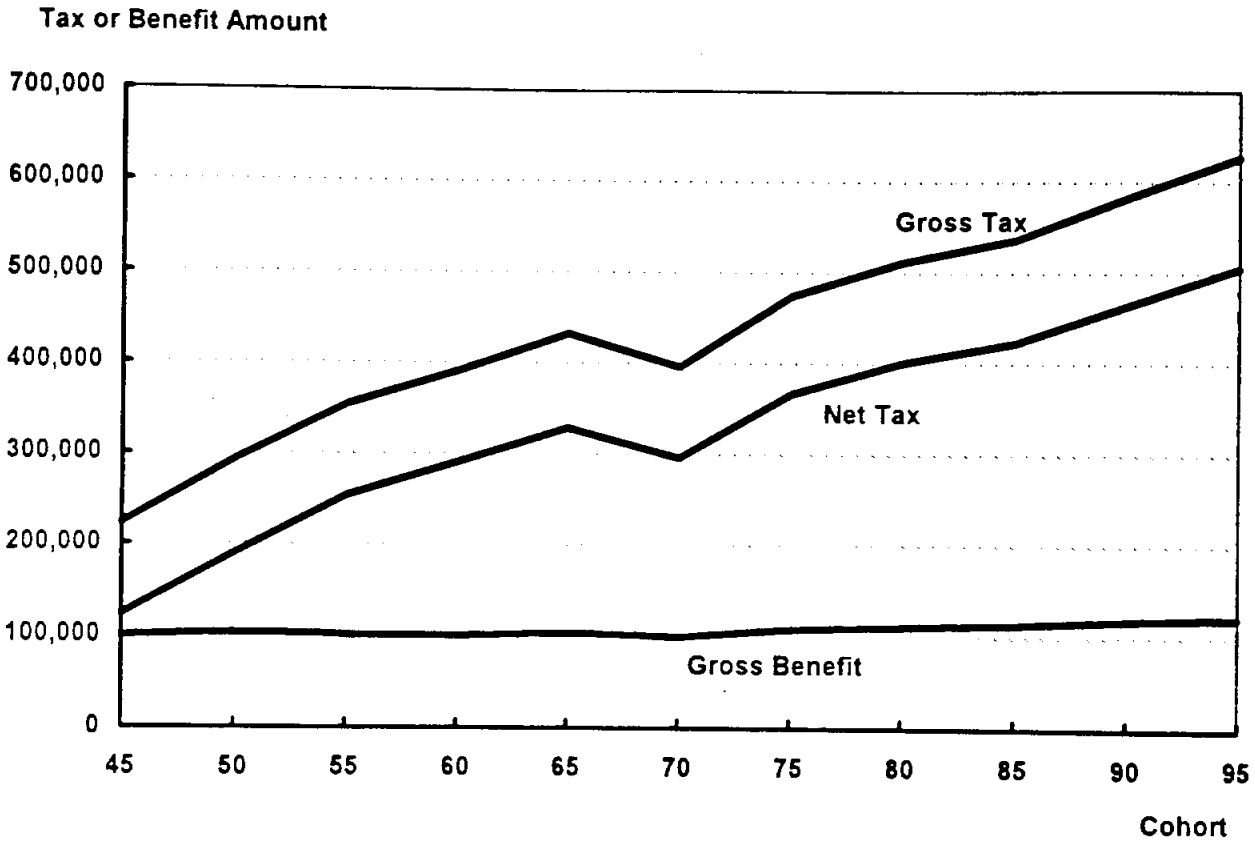

Figure 2

OASI Lifetime Net Tax Accumulated to Age 65 by Selected Cohort and Lifetime Income

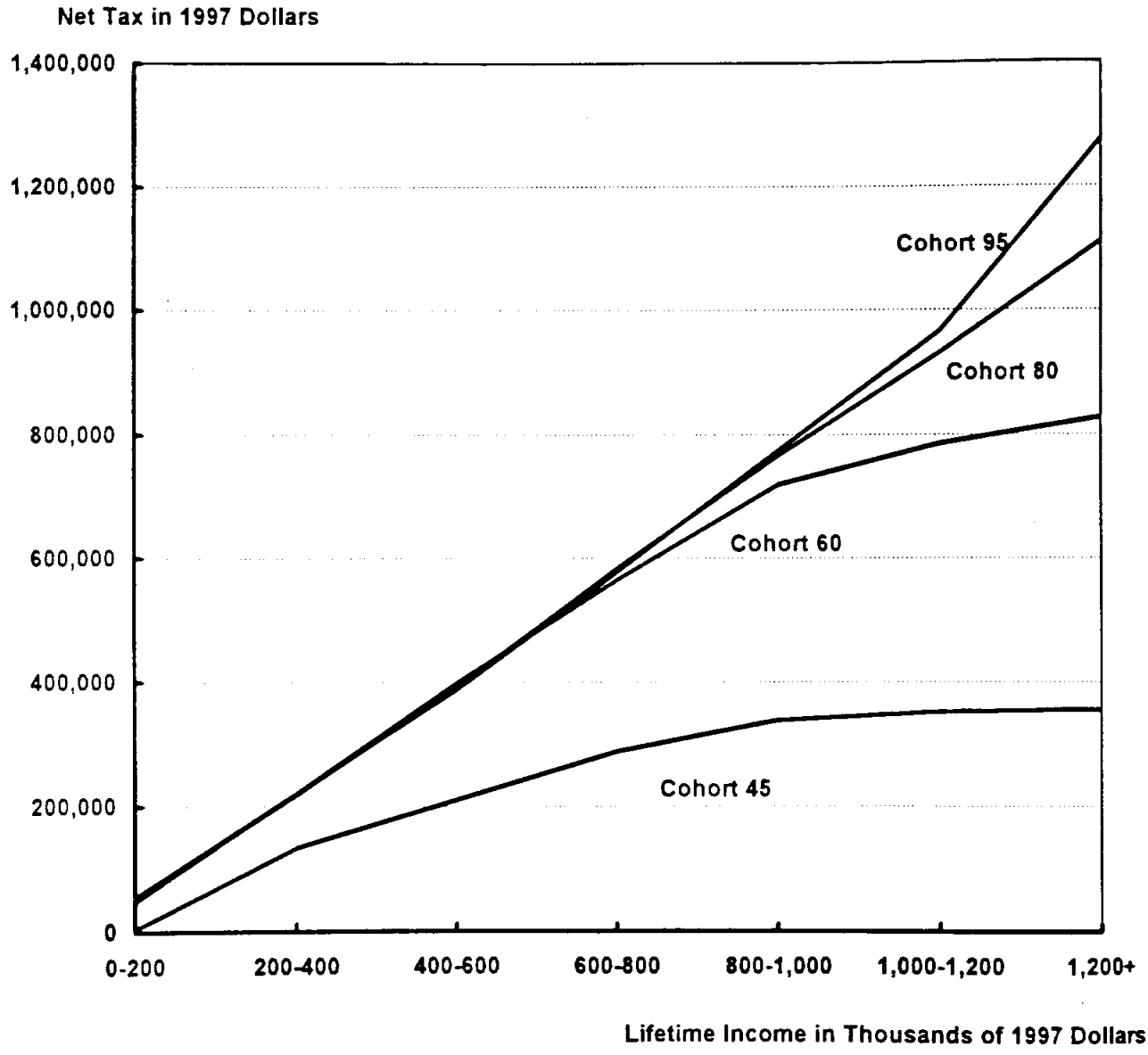

Figure 3

OASI Lifetime Net Tax Rates by Cohort

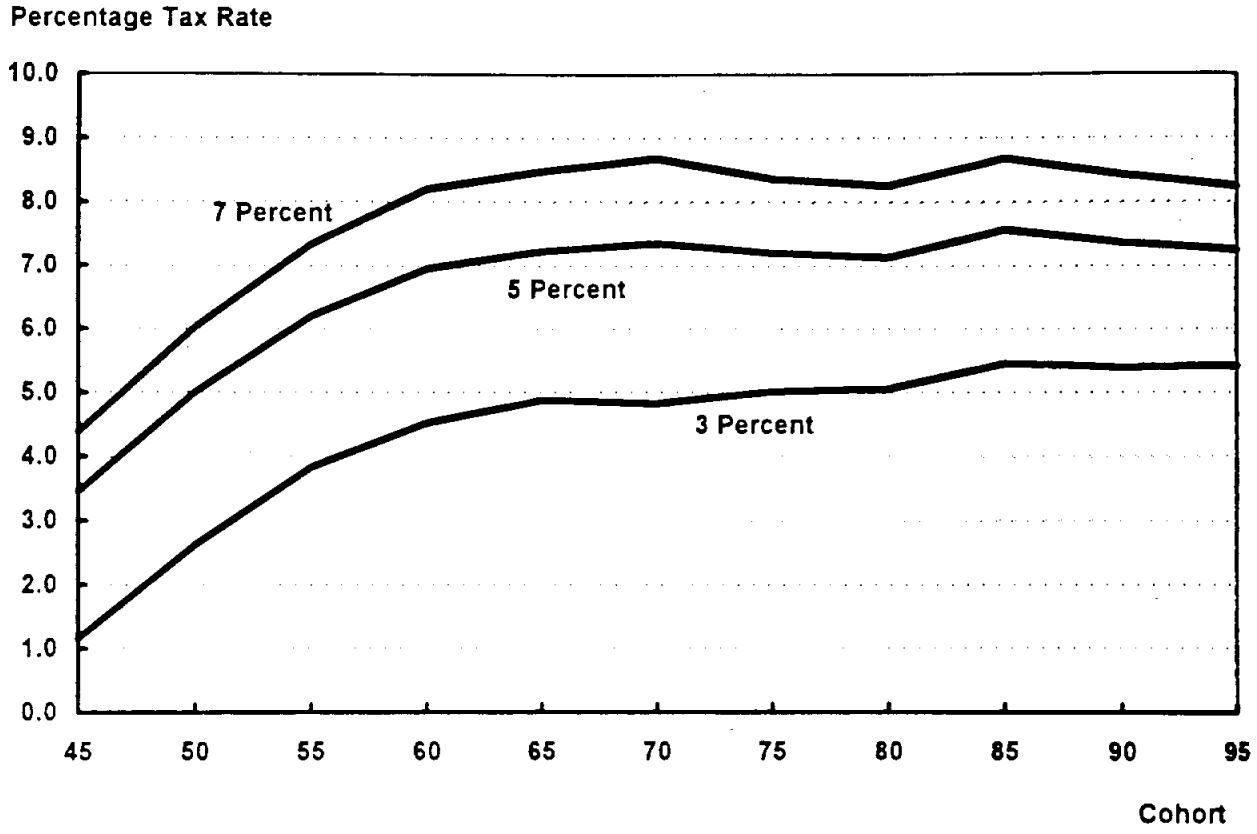

Figure 4

OASI Lifetime Net Tax Rates by Lifetime Income Decile and Cohort

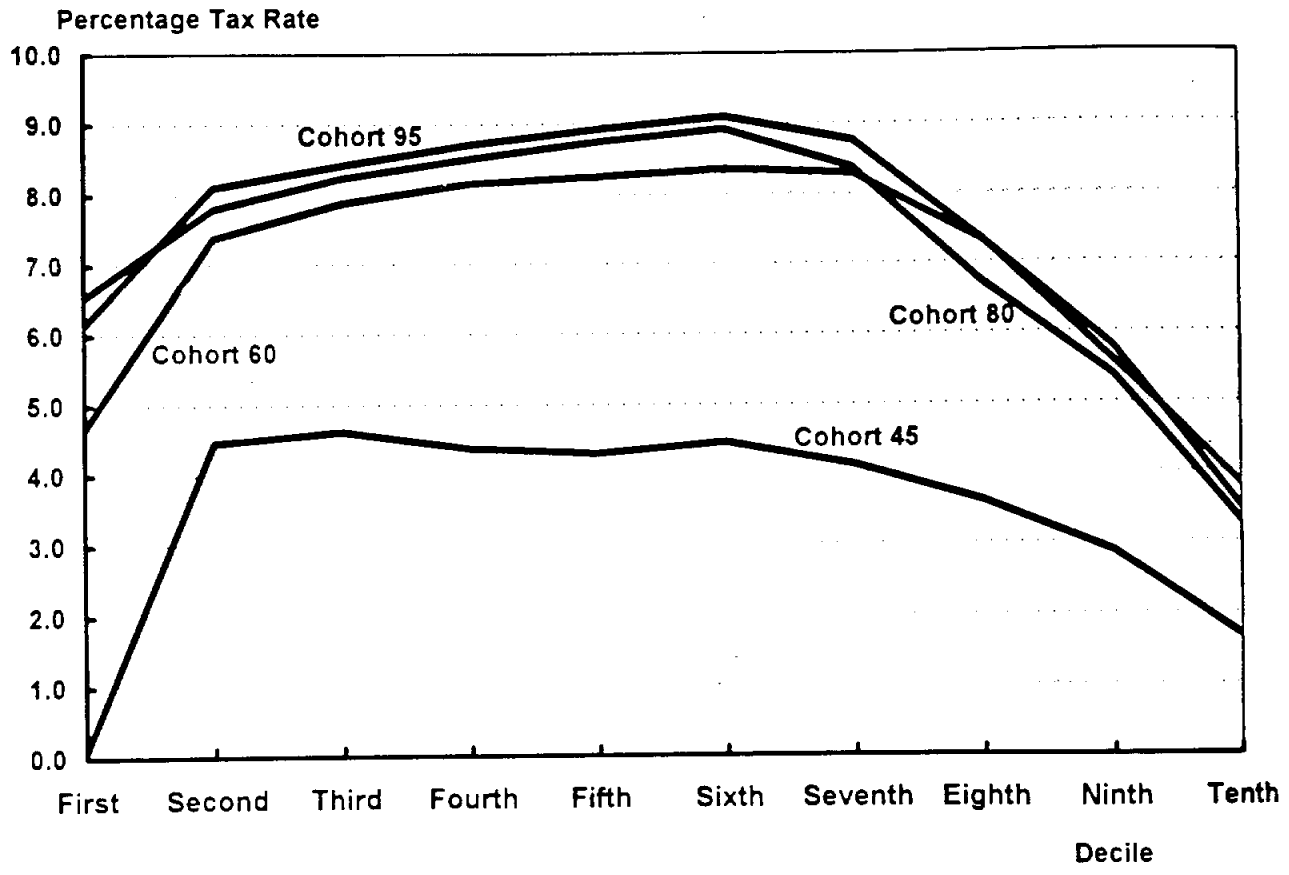

Figure 5

OASI Lifetime Net Tax Rates for Men and Women by Cohort

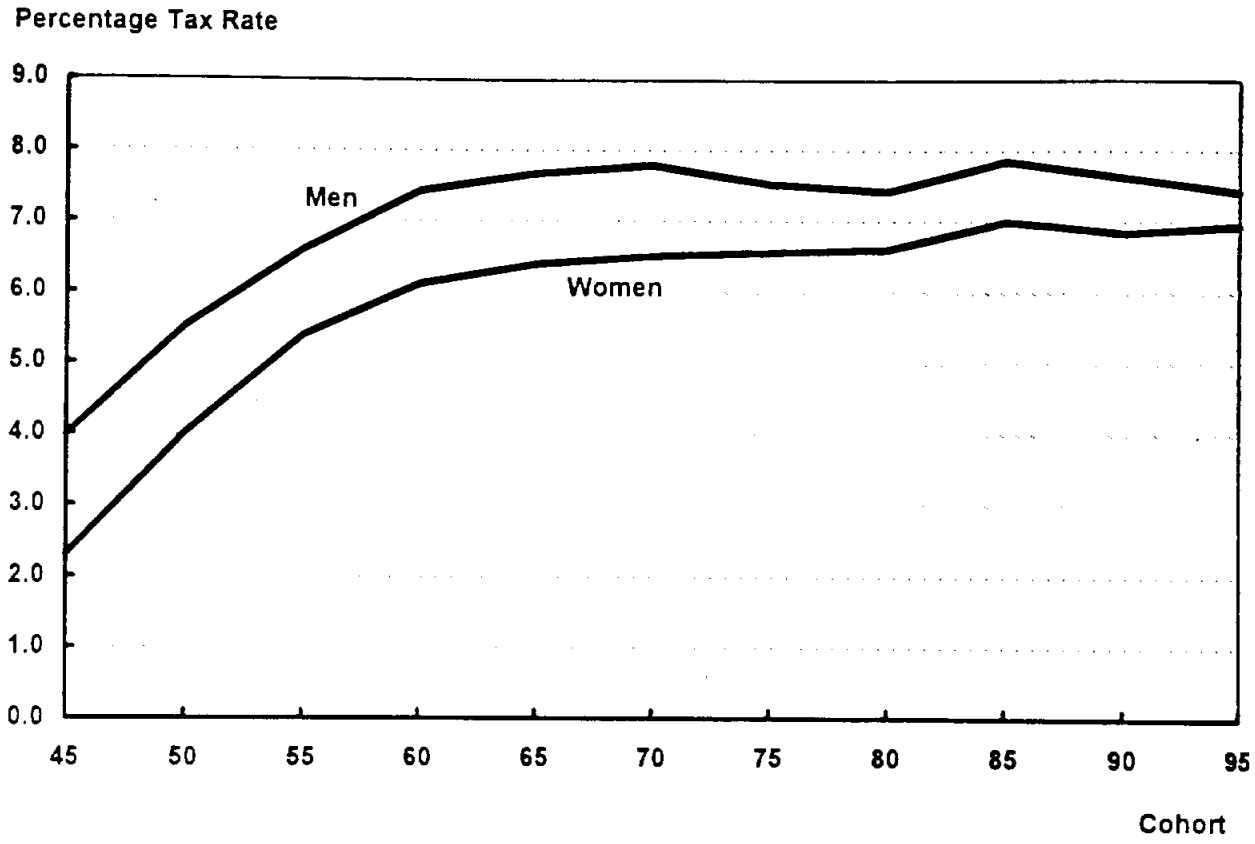

Figure 6

OASI Lifetime Net Tax Rates for Whites and Non-Whites by Cohort

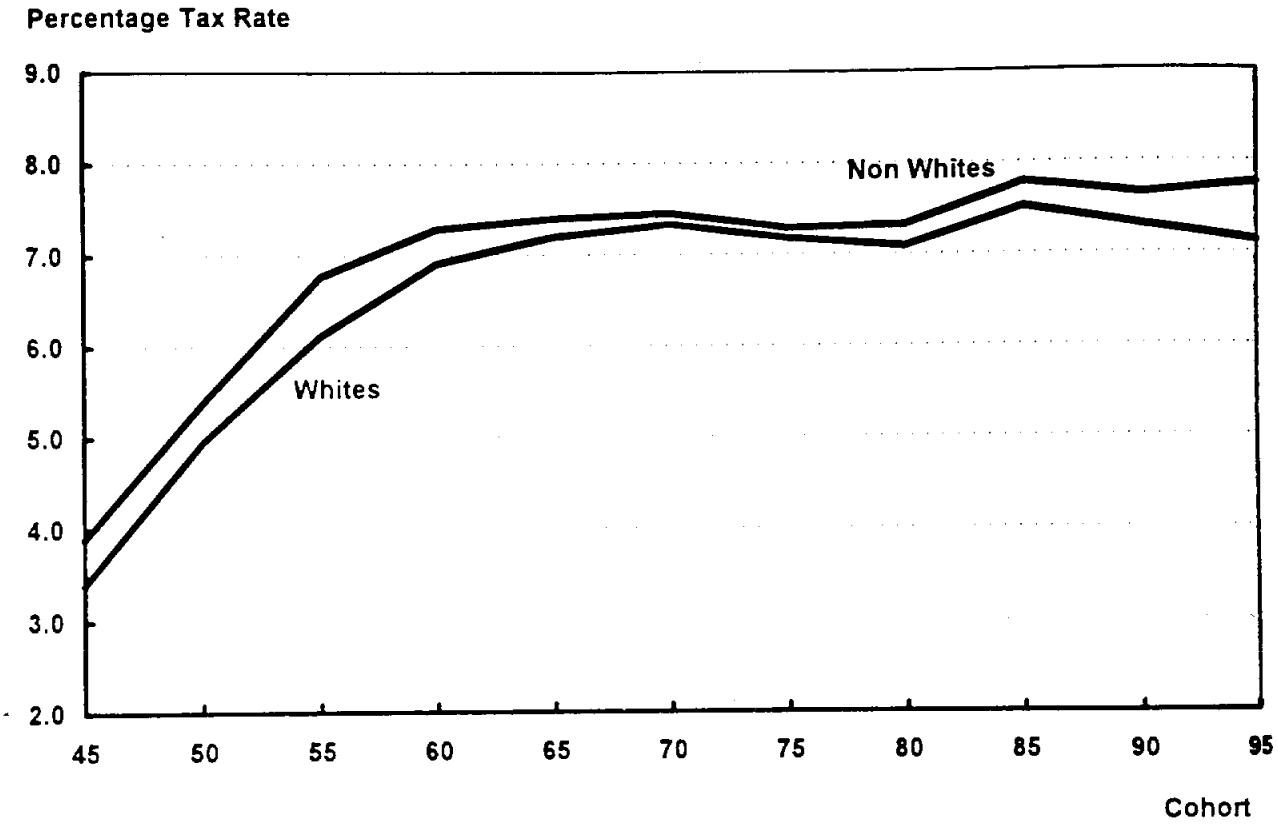

Figure 7

OASI Lifetime Net Tax Rates, College- and Non-College Educated by Cohort

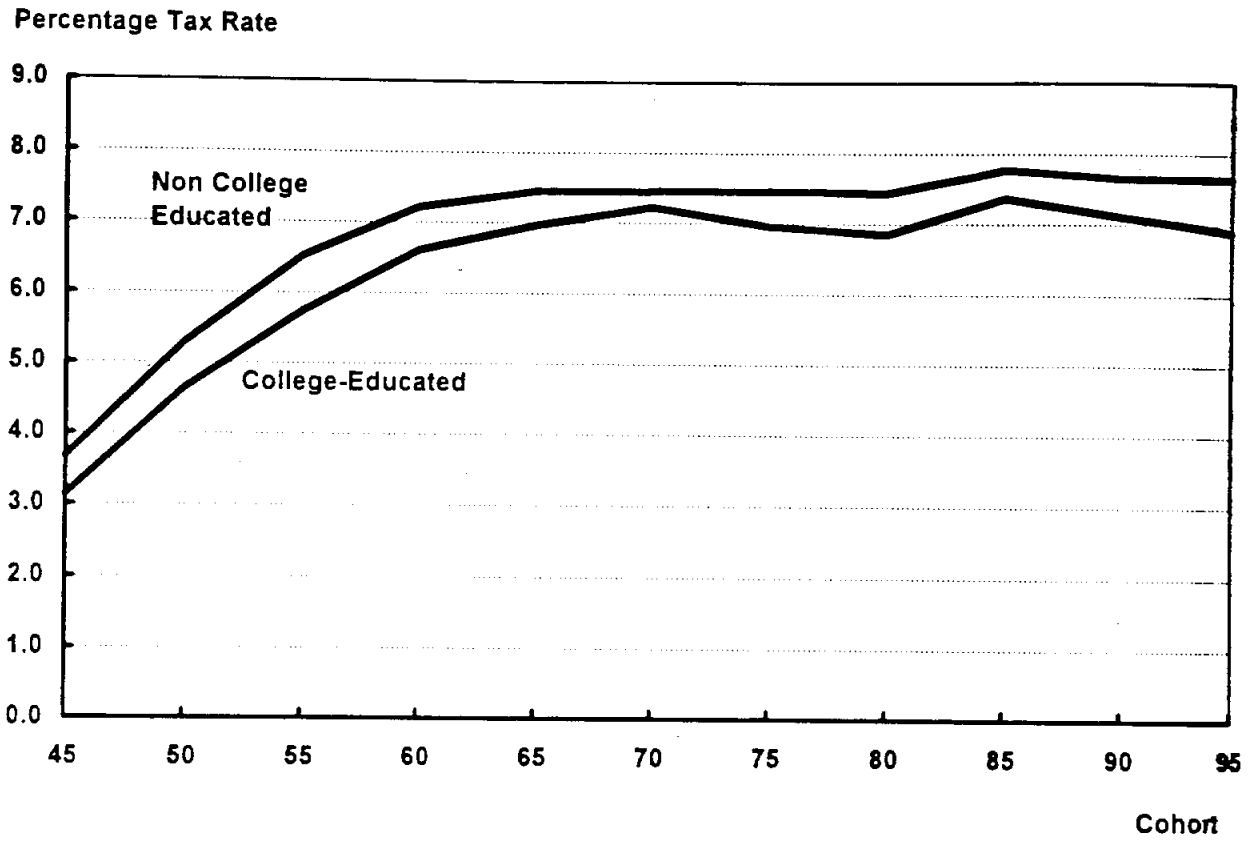

Figure 8

OASI's Degree of Effective Taxation by Cohort

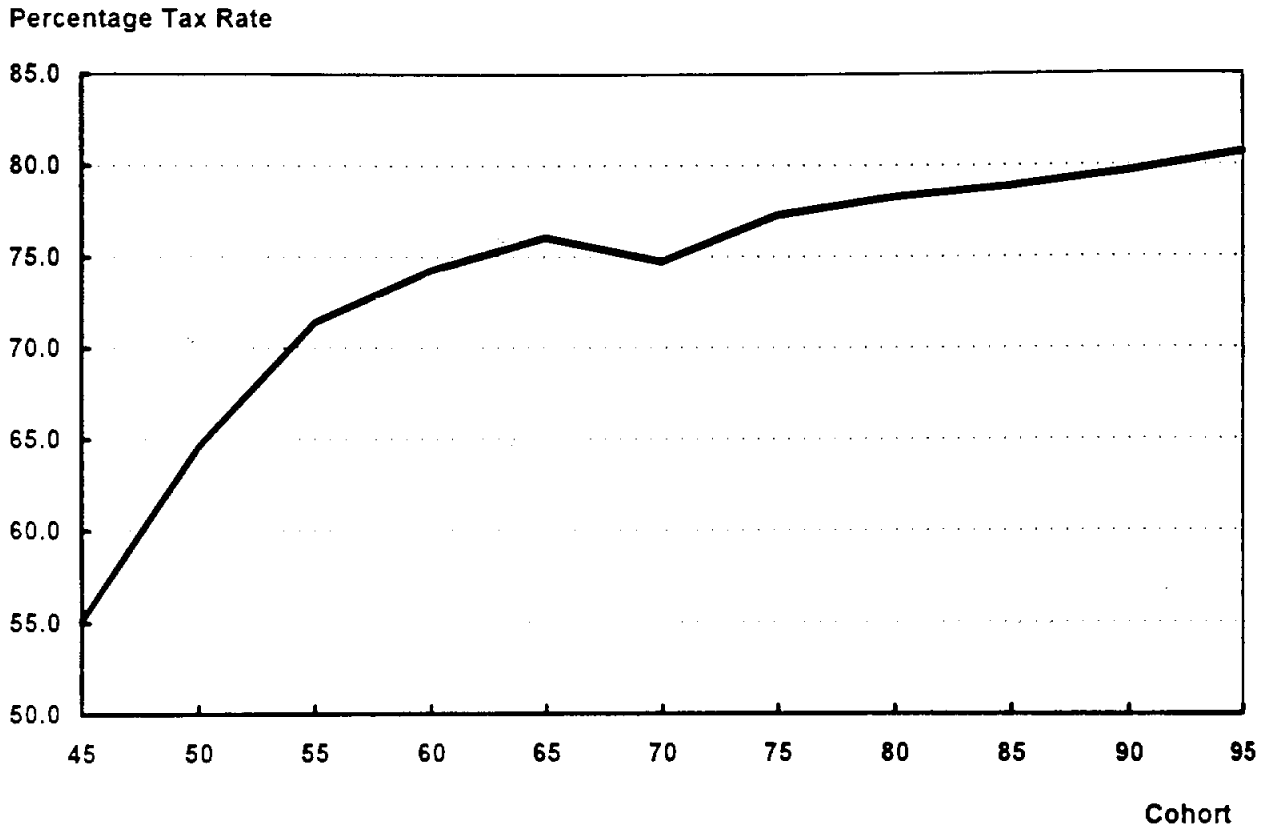

Table 1 CORSIM Modules Used in this Study

Annual process	Groups subject to process and functional form	Process determinants	Data used in process estimation	Alignment Data
Individual Demographics				
Fertility	-30 groups (among women); age < 30, have child, marital status, race, work status -logistic	age, $birth_{t-1}$, $birth_{t-2}$, duration of current marriage, earnings, family income, homeowner status, marital status, parity, schooling status, work status (F/T, P/T)	NLS:1969-87	Vital Statistics - 28 groups SSA Total Fertility Rate
Mortality	-51 groups; age, sex, race, marital status -logistic	age, birth place (US or other), education, employment status, family income, marital status, year	NLMS:1980-89	Vital Statistics - 88 groups SSA age-sex adjusted death rate
Family Demographics				
Enter Marriage Market for First Time	-20 groups; race, schooling status, sex, weeks worked -logistic	age, age^2, education, ln(earnings), number of children, weeks worked	NLS:1973-87	Census - 16 groups

Assortative Mating	-*all* non-related opposite-sex *pairs* in marriage market at t -logistic to estimate probability of match; highest joint ratings married, others return to market for possible marriage at t+1	age difference, age difference*(1 if female older, 0 otherwise), abs(male's total income-female's total income)/1000, difference in education, labor force participation interactions, male's education*(1 if older, 0 otherwise), racial interactions, state of residence, woman's number of children	Census:1980 PUMS	none
Marital Dissolution (Divorce only; Widowhood Determined by Mortality)	-4 groups; earning status of wife, presence of children under 18 -logistic	age difference, duration of union, husband's wages, race, wage advantage	PSID:1968-87	NCHS - 14 groups
Re-Enter Marriage Market upon Widowhood, Divorce	-7 groups; age (under 60/61+), race, sex, widowed or divorced -logistic	age, age^2, education, ln(income), divorced (v. widowed), has child, (1-nowork)*loginc, weeks worked	PSID:1968-87	NCHS - 26 groups
Individual Social and Economic Attainments				
Education: Grade Attendance, Completion	-33 groups; grade level (17 definitions, from pre-school to beyond third year graduate school), race, sex, schooling status -logistic	age, have child, living on own, marital status, parents' education, parents own home	HSB:1980-86; NLS:1979-87	CPS - 2 groups

Work Status (0/FT/PT)	-174 groups; age, have child, living with parents, marital status, race, sex, $weeks_{-1}=0$, $weeks_{-1}>47$ -probit	age, education, have child, $married_{t-1}$, marital status, number of kids, percent unemployment, youngest child's age	PSID:1972-87	Census and CPS - 35 groups SSA coverage rate - 2 groups
Number of Weeks Worked	-58 groups; age, have child, marital status, race, sex, $weeks_t \leq 47$, $weeks_t > 47$ -regression	age, education, have child, $married_{t-1}$, number of kids, percent unemployment, youngest child's age	PSID:1972-87	none
Weekly Earnings Rate	-116 groups; age, have child, marital status, race, sex, weeks $worked_t$, $weeks_{t-1}$ -regression	age, $earnings_{t-1}$, education, education*$earnings_{t-1}$, $married_{t-1}$, number of children, percent unemployment, youngest child's age	PSID:1972-87	Census and CPS - 70 groups NIPA
Age of Receipt of Social Security Retirement Benefits	-Screen for eligibility -logistic for workers	age, change in work $hours_{t-1,t}$, coverage, earnings, education, homeowner, live alone, ln(asset income), ln(change in absolute value of $income_{t-1,t}$), marital $disruption_{t-1,t}$, marital status, race, sex, work hours	PSID:1986-91	SSA Data 1961-1995 12 groups

PSID - Panel Study of Income Dynamics, SSA - Social Security Administration, PUMS- U.S. Census Public Use Microdata Sample, HSB - High School and Beyond, NCHS - National Center for Health Statistics, NLS - National Longitudinal Survey, NLS-Y - National Longitudinal Survey of Youth, NLMS - National Longitudinal Mortality Study, CPS - Current Population Survey, NIPA - National Income and Product Accounts

Table 2 Page 1

Year	Age of husband	Age of wife	Husband's earnings	Wife's earnings	Husband's net benefit	Wife's net benefit	Children's net benefit	Husband's retirement benefits	Husband's dependant benefits	Husband's earnings reduction	Wife's earnings reduction of husband's dependant benefits	Children's dependent benefits from husband's earnings record	Husband's earnings reduction of children's dependant benefits
1963	18	18	0	0	0	0	0	0	0	0	0	0	0
1964	19	19	19570	0	0	0	0	0	0	0	0	0	0
1965	20	20	18583	0	0	0	0	0	0	0	0	0	0
1966	21	21	19628	0	0	0	0	0	0	0	0	0	0
1967	22	22	21048	0	0	0	0	0	0	0	0	0	0
1968	23	23	23053	0	0	0	0	0	0	0	0	0	0
1969	24	24	24162	0	0	0	0	0	0	0	0	0	0
1970	25	25	24337	0	0	0	0	0	0	0	0	0	0
1971	26	26	30171	1682	0	0	0	0	0	0	0	0	0
1972	27	27	32308	1587	0	0	0	0	0	0	0	0	0
1973	28	28	34666	0	0	0	0	0	0	0	0	0	0
1974	29	29	33579	0	0	0	0	0	0	0	0	0	0
1975	30	30	31487	0	0	0	0	0	0	0	0	0	0
1976	31	31	31558	0	0	0	0	0	0	0	0	0	0
1977	32	32	32076	0	0	0	0	0	0	0	0	0	0
1978	33	33	32335	1452	0	0	0	0	0	0	0	0	0
1979	34	34	32617	1533	0	0	0	0	0	0	0	0	0
1980	35	35	33024	1521	0	0	0	0	0	0	0	0	0
1981	36	36	32062	1528	0	0	0	0	0	0	0	0	0
1982	37	37	31458	1528	0	0	0	0	0	0	0	0	0
1983	38	38	31184	1520	0	0	0	0	0	0	0	0	0
1984	39	39	33122	1607	0	0	0	0	0	0	0	0	0
1985	40	40	33672	1629	0	0	0	0	0	0	0	0	0
1986	41	41	34120	1684	0	0	0	0	0	0	0	0	0
1987	42	42	34427	0	0	0	0	0	0	0	0	0	0
1988	43	43	33147	0	0	0	0	0	0	0	0	0	0
1989	44	44	32876	0	0	0	0	0	0	0	0	0	0
1990	45	45	32414	0	0	0	0	0	0	0	0	0	0
1991	46	46	31756	0	0	0	0	0	0	0	0	0	0
1992	47	47	36237	0	0	0	0	0	0	0	0	0	0

Table 2 Page 2

Year	Age of husband	Age of wife	Husband's earnings	Wife's earnings	Husband's net benefit	Wife's net benefit	Children's net benefit	Husband's retirement benefits	Husband's dependant benefits	Husband's earnings reduction	Wife's earnings reduction of husband's dependant benefits	Children's dependent benefits from husband's earnings record	Husband's earnings reduction of children's dependant benefits
1993	48	48	37298	4675	0	0	0	0	0	0	0	0	0
1994	49	49	39731	3920	0	0	0	0	0	0	0	0	0
1995	50	50	41697	3621	0	0	0	0	0	0	0	0	0
1996	51	51	41556	3658	0	0	0	0	0	0	0	0	0
1997	52	52	42280	1988	0	0	0	0	0	0	0	0	0
1998	53	53	42153	1554	0	0	0	0	0	0	0	0	0
1999	54	54	41577	1430	0	0	0	0	0	0	0	0	0
2000	55	55	42195	0	0	0	0	0	0	0	0	0	0
2001	56	56	43019	0	0	0	0	0	0	0	0	0	0
2002	57	57	43127	0	0	0	0	0	0	0	0	0	0
2003	58	58	43576	0	0	0	0	0	0	0	0	0	0
2004	59	59	44698	0	0	0	0	0	0	0	0	0	0
2005	60	60	44868	0	0	0	0	0	0	0	0	0	0
2006	61	61	43920	0	0	0	0	0	0	0	0	0	0
2007	62	62	44110	0	0	833	0	0	0	0	0	0	0
2008	63	63	42233	0	0	833	0	0	0	0	0	0	0
2009	64	64	41189	0	0	833	0	0	0	0	0	0	0
2010	65	65	14042	0	12228	4707	0	14322	0	2094	0	0	0
2011	66	66	0	0	14322	5371	0	14322	0	0	0	0	0
2012	67	67	0	0	14322	5371	0	14322	0	0	0	0	0
2013	68	68	0	0	14322	5371	0	14322	0	0	0	0	0
2014	69	69	0	0	14322	5371	0	14322	0	0	0	0	0
2015	70	70	0	0	14322	5371	0	14322	0	0	0	0	0
2016	71	71	0	0	14322	5371	0	14322	0	0	0	0	0
2017	72	72	0	0	14322	5371	0	14322	0	0	0	0	0
2018	73	73	0	0	14322	5371	0	14322	0	0	0	0	0
2019	74	74	0	0	14322	5371	0	14322	0	0	0	0	0
2020	75	75	0	0	14322	5371	0	14322	0	0	0	0	0
2021	0	76	0	0	0	12705	0	0	0	0	0	0	0
2022	0	77	0	0	0	12705	0	0	0	0	0	0	0

Table 2 Page 3

Year	Age of husband	Age of wife	Husband's earnings	Wife's earnings	Husband's net benefit	Wife's net benefit	Children's net benefit	Husband's retirement benefits	Husband's dependant benefits	Husband's earnings reduction	Wife's earnings reduction of husband's dependant benefits	Children's dependent benefits from husband's earnings record	Husband's earnings reduction of children's dependant benefits
2023	0	78	0	0	0	12705	0	0	0	0	0	0	0
2024	0	79	0	0	0	12705	0	0	0	0	0	0	0
2025	0	80	0	0	0	12705	0	0	0	0	0	0	0
2026	0	81	0	0	0	12705	0	0	0	0	0	0	0
2027	0	82	0	0	0	12705	0	0	0	0	0	0	0
2028	0	83	0	0	0	12705	0	0	0	0	0	0	0
2029	0	84	0	0	0	12705	0	0	0	0	0	0	0
2030	0	85	0	0	0	12705	0	0	0	0	0	0	0
2031	0	86	0	0	0	12705	0	0	0	0	0	0	0
2032	0	87	0	0	0	12705	0	0	0	0	0	0	0
2033	0	88	0	0	0	12705	0	0	0	0	0	0	0

Table 2 Page 4

Year	Age of husband	Age of wife	Widower benefits	Children's survivor benefits if wife dies	Father's benefits	Husband's earnings reduction while a survivor	Wife's retirement benefits	Wife's dependant benefits	Wife's earnings reduction	Husband's earnings reduction of wife's dependant benefits	Children's dependant benefits from wife's earnings record	Wife's earnings reduction of children's dependant benefits	Widow benefits
1963	18	18	0	0	0	0	0	0		0	0	0	0
1964	19	19	0	0	0	0	0	0	0	0	0	0	0
1965	20	20	0	0	0	0	0	0	0	0	0	0	0
1966	21	21	0	0	0	0	0	0	0	0	0	0	0
1967	22	22	0	0	0	0	0	0	0	0	0	0	0
1968	23	23	0	0	0	0	0	0	0	0	0	0	0
1969	24	24	0	0	0	0	0	0	0	0	0	0	0
1970	25	25	0	0	0	0	0	0	0	0	0	0	0
1971	26	26	0	0	0	0	0	0	0	0	0	0	0
1972	27	27	0	0	0	0	0	0	0	0	0	0	0
1973	28	28	0	0	0	0	0	0	0	0	0	0	0
1974	29	29	0	0	0	0	0	0	0	0	0	0	0
1975	30	30	0	0	0	0	0	0	0	0	0	0	0
1976	31	31	0	0	0	0	0	0	0	0	0	0	0
1977	32	32	0	0	0	0	0	0	0	0	0	0	0
1978	33	33	0	0	0	0	0	0	0	0	0	0	0
1979	34	34	0	0	0	0	0	0	0	0	0	0	0
1980	35	35	0	0	0	0	0	0	0	0	0	0	0
1981	36	36	0	0	0	0	0	0	0	0	0	0	0
1982	37	37	0	0	0	0	0	0	0	0	0	0	0
1983	38	38	0	0	0	0	0	0	0	0	0	0	0
1984	39	39	0	0	0	0	0	0	0	0	0	0	0
1985	40	40	0	0	0	0	0	0	0	0	0	0	0
1986	41	41	0	0	0	0	0	0	0	0	0	0	0
1987	42	42	0	0	0	0	0	0	0	0	0	0	0
1988	43	43	0	0	0	0	0	0	0	0	0	0	0
1989	44	44	0	0	0	0	0	0	0	0	0	0	0
1990	45	45	0	0	0	0	0	0	0	0	0	0	0
1991	46	46	0	0	0	0	0	0	0	0	0	0	0
1992	47	47	0	0	0	0	0	0	0	0	0	0	0

Table 2 Page 5

Year	Age of husband	Age of wife	Widower benefits	Children's survivor benefits if wife dies	Father's benefits	Husband's earnings reduction while a survivor	Wife's retirement benefits	Wife's dependant benefits	Wife's earnings reduction	Husband's earnings reduction of wife's dependant benefits	Children's dependant benefits from wife's earnings record	Wife's earnings reduction of children's dependant benefits	Widow benefits
1993	48	48	0	0	0	0	0	0	0	0	0	0	0
1994	49	49	0	0	0	0	0	0	0	0	0	0	0
1995	50	50	0	0	0	0	0	0	0	0	0	0	0
1996	51	51	0	0	0	0	0	0	0	0	0	0	0
1997	52	52	0	0	0	0	0	0	0	0	0	0	0
1998	53	53	0	0	0	0	0	0	0	0	0	0	0
1999	54	54	0	0	0	0	0	0	0	0	0	0	0
2000	55	55	0	0	0	0	0	0	0	0	0	0	0
2001	56	56	0	0	0	0	0	0	0	0	0	0	0
2002	57	57	0	0	0	0	0	0	0	0	0	0	0
2003	58	58	0	0	0	0	0	0	0	0	0	0	0
2004	59	59	0	0	0	0	0	0	0	0	0	0	0
2005	60	60	0	0	0	0	0	0	0	0	0	0	0
2006	61	61	0	0	0	0	0	0	0	0	0	0	0
2007	62	62	0	0	0	0	833	0	0	0	0	0	0
2008	63	63	0	0	0	0	833	0	0	0	0	0	0
2009	64	64	0	0	0	0	833	0	0	0	0	0	0
2010	65	65	0	0	0	0	833	4537	0	663	0	0	0
2011	66	66	0	0	0	0	833	4537	0	0	0	0	0
2012	67	67	0	0	0	0	833	4537	0	0	0	0	0
2013	68	68	0	0	0	0	833	4537	0	0	0	0	0
2014	69	69	0	0	0	0	833	4537	0	0	0	0	0
2015	70	70	0	0	0	0	833	4537	0	0	0	0	0
2016	71	71	0	0	0	0	833	4537	0	0	0	0	0
2017	72	72	0	0	0	0	833	4537	0	0	0	0	0
2018	73	73	0	0	0	0	833	4537	0	0	0	0	0
2019	74	74	0	0	0	0	833	4537	0	0	0	0	0
2020	75	75	0	0	0	0	833	4537	0	0	0	0	0
2021	0	76	0	0	0	0	833	0	0	0	0	0	11871
2022	0	77	0	0	0	0	833	0	0	0	0	0	11871

Table 2 Page 6

Year	Age of husband	Age of wife	Widower benefits	Children's survivor benefits if wife dies	Father's benefits	Husband's earnings reduction while a survivor	Wife's retirement benefits	Wife's dependant benefits	Wife's earnings reduction	Husband's earnings reduction of wife's dependant benefits	Children's dependant benefits from wife's earnings record	Wife's earnings reduction of children's dependant benefits	Widow benefits
2023	0	78	0	0	0	0	833	0	0	0	0	0	11871
2024	0	79	0	0	0	0	833	0	0	0	0	0	11871
2025	0	80	0	0	0	0	833	0	0	0	0	0	11871
2026	0	81	0	0	0	0	833	0	0	0	0	0	11871
2027	0	82	0	0	0	0	833	0	0	0	0	0	11871
2028	0	83	0	0	0	0	833	0	0	0	0	0	11871
2029	0	84	0	0	0	0	833	0	0	0	0	0	11871
2030	0	85	0	0	0	0	833	0	0	0	0	0	11871
2031	0	86	0	0	0	0	833	0	0	0	0	0	11871
2032	0	87	0	0	0	0	833	0	0	0	0	0	11871
2033	0	88	0	0	0	0	833	0	0	0	0	0	11871

Year	Age of husband	Age of wife	Children's survivor benefits if husband dies	Mother's benefits	Wife's earnings reduction while a survivor
1963	18	18	0	0	0
1964	19	19	0	0	0
1965	20	20	0	0	0
1966	21	21	0	0	0
1967	22	22	0	0	0
1968	23	23	0	0	0
1969	24	24	0	0	0
1970	25	25	0	0	0
1971	26	26	0	0	0
1972	27	27	0	0	0
1973	28	28	0	0	0
1974	29	29	0	0	0
1975	30	30	0	0	0
1976	31	31	0	0	0
1977	32	32	0	0	0
1978	33	33	0	0	0
1979	34	34	0	0	0
1980	35	35	0	0	0
1981	36	36	0	0	0
1982	37	37	0	0	0
1983	38	38	0	0	0
1984	39	39	0	0	0
1985	40	40	0	0	0
1986	41	41	0	0	0
1987	42	42	0	0	0
1988	43	43	0	0	0
1989	44	44	0	0	0
1990	45	45	0	0	0
1991	46	46	0	0	0
1992	47	47	0	0	0

Year	Age of husband	Age of wife	Children's survivor benefits if husband dies	Mother's benefits	Wife's earnings reduction while a survivor
1993	48	48	0	0	0
1994	49	49	0	0	0
1995	50	50	0	0	0
1996	51	51	0	0	0
1997	52	52	0	0	0
1998	53	53	0	0	0
1999	54	54	0	0	0
2000	55	55	0	0	0
2001	56	56	0	0	0
2002	57	57	0	0	0
2003	58	58	0	0	0
2004	59	59	0	0	0
2005	60	60	0	0	0
2006	61	61	0	0	0
2007	62	62	0	0	0
2008	63	63	0	0	0
2009	64	64	0	0	0
2010	65	65	0	0	0
2011	66	66	0	0	0
2012	67	67	0	0	0
2013	68	68	0	0	0
2014	69	69	0	0	0
2015	70	70	0	0	0
2016	71	71	0	0	0
2017	72	72	0	0	0
2018	73	73	0	0	0
2019	74	74	0	0	0
2020	75	75	0	0	0
2021	0	76	0	0	0
2022	0	77	0	0	0

Year	Age of husband	Age of wife	Children's survivor benefits if husband dies	Mother's benefits	Wife's earnings reduction while a survivor
2023	0	78	0	0	0
2024	0	79	0	0	0
2025	0	80	0	0	0
2026	0	81	0	0	0
2027	0	82	0	0	0
2028	0	83	0	0	0
2029	0	84	0	0	0
2030	0	85	0	0	0
2031	0	86	0	0	0
2032	0	87	0	0	0
2033	0	88	0	0	0

Table 3
Total Number of Observations

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	1742	1054	669	319	136	89	141	4150
Cohort 50	1911	1272	774	455	243	127	162	4944
Cohort 55	1939	1597	988	469	220	133	256	5602
Cohort 60	1611	1467	927	399	209	123	250	4986
Cohort 65	1281	1354	872	431	208	133	259	4538
Cohort 70	1317	1382	808	356	170	91	162	4286
Cohort 75	1011	1257	832	457	230	158	297	4242
Cohort 80	1117	1250	905	520	299	177	466	4734
Cohort 85	1079	1300	949	602	392	221	481	5024
Cohort 90	952	1283	979	630	411	229	639	5123
Cohort 95	939	1389	1007	713	495	275	822	5640
Total								53269
Men 45	397	682	517	241	108	70	108	2123
Men 50	438	733	554	334	196	100	120	2475
Men 55	398	842	683	355	188	112	203	2781
Men 60	315	710	653	305	153	93	187	2416
Men 65	293	612	557	328	165	100	210	2265
Men 70	297	668	562	272	129	79	124	2131
Men 75	210	530	522	327	172	122	238	2121
Men 80	257	485	580	361	220	126	336	2365
Men 85	248	472	549	420	298	152	371	2510
Men 90	176	436	508	420	308	184	474	2506
Men 95	177	446	515	467	331	190	596	2722
Total								26415
Women 45	1345	372	152	78	28	19	33	2027
Women 50	1473	539	220	121	47	27	42	2469
Women 55	1541	755	305	114	32	21	53	2821
Women 60	1296	757	274	94	56	30	63	2570
Women 65	988	742	315	103	43	33	49	2273
Women 70	1020	714	246	84	41	12	38	2155
Women 75	801	727	310	130	58	36	59	2121
Women 80	860	765	325	159	79	51	130	2369
Women 85	831	828	400	182	94	69	110	2514
Women 90	776	847	471	210	103	45	165	2617
Women 95	762	943	492	246	164	85	226	2918
Total								26854

Table 3
Total Number of Observations

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	1531	882	578	290	129	85	131	3626
White 50	1634	1048	672	402	217	116	149	4238
White 55	1646	1325	861	409	207	124	239	4811
White 60	1326	1205	810	352	190	109	228	4220
White 65	1046	1065	755	371	183	113	233	3766
White 70	1027	1075	689	320	149	82	145	3487
White 75	773	986	672	391	191	139	261	3413
White 80	857	958	732	446	260	151	402	3806
White 85	849	1015	747	501	319	181	418	4030
White 90	713	993	730	514	334	194	549	4027
White 95	718	1016	751	531	390	215	700	4321
Total								43745
Non White 45	211	172	91	29	7	4	10	524
Non White 50	277	224	102	53	26	11	13	706
Non White 55	293	272	127	60	13	9	17	791
Non White 60	285	262	117	47	19	14	22	766
Non White 65	235	289	117	60	25	20	26	772
Non White 70	290	307	119	36	21	9	17	799
Non White 75	238	271	160	66	39	19	36	829
Non White 80	260	292	173	74	39	26	64	928
Non White 85	230	285	202	101	73	40	63	994
Non White 90	239	290	249	116	77	35	90	1096
Non White 95	221	373	256	182	105	60	122	1319
Total								9524
Non College 45	1318	828	428	192	77	34	47	2924
Non College 50	1358	958	485	262	122	38	61	3284
Non College 55	1374	1138	648	280	124	68	114	3746
Non College 60	1149	1048	580	205	114	57	102	3255
Non College 65	894	909	502	201	114	86	100	2806
Non College 70	861	840	444	164	63	30	51	2453
Non College 75	636	738	472	195	94	73	100	2308
Non College 80	694	772	513	257	120	69	199	2624
Non College 85	683	794	554	297	158	105	178	2769
Non College 90	603	808	582	334	186	93	216	2822
Non College 95	595	886	610	357	237	125	328	3138
Total								32129

Table 3
Total Number of Observations

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
College 45	424	226	241	127	59	55	94	1226
College 50	553	314	289	193	121	89	101	1660
College 55	565	459	340	189	96	65	142	1856
College 60	462	419	347	194	95	66	148	1731
College 65	387	445	370	230	94	47	159	1732
College 70	456	542	364	192	107	61	111	1833
College 75	375	519	360	262	136	85	197	1934
College 80	423	478	392	263	179	108	267	2110
College 85	396	506	395	305	234	116	303	2255
College 90	349	475	397	296	225	136	423	2301
College 95	344	503	397	356	258	150	494	2502
Total								21140

Table 4
Distribution of Observations
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	42.0	25.4	16.1	7.7	3.3	2.1	3.4	100
Cohort 50	38.7	25.7	15.7	9.2	4.9	2.6	3.3	100
Cohort 55	34.6	28.5	17.6	8.4	3.9	2.4	4.6	100
Cohort 60	32.3	29.4	18.6	8.0	4.2	2.5	5.0	100
Cohort 65	28.2	29.8	19.2	9.5	4.6	2.9	5.7	100
Cohort 70	30.7	32.2	18.9	8.3	4.0	2.1	3.8	100
Cohort 75	23.8	29.6	19.6	10.8	5.4	3.7	7.0	100
Cohort 80	23.6	26.4	19.1	11.0	6.3	3.7	9.8	100
Cohort 85	21.5	25.9	18.9	12.0	7.8	4.4	9.6	100
Cohort 90	18.6	25.0	19.1	12.3	8.0	4.5	12.5	100
Cohort 95	16.6	24.6	17.9	12.6	8.8	4.9	14.6	100
Men 45	18.7	32.1	24.4	11.4	5.1	3.3	5.1	100
Men 50	17.7	29.6	22.4	13.5	7.9	4.0	4.8	100
Men 55	14.3	30.3	24.6	12.8	6.8	4.0	7.3	100
Men 60	13.0	29.4	27.0	12.6	6.3	3.8	7.7	100
Men 65	12.9	27.0	24.6	14.5	7.3	4.4	9.3	100
Men 70	13.9	31.3	26.4	12.8	6.1	3.7	5.8	100
Men 75	9.9	25.0	24.6	15.4	8.1	5.8	11.2	100
Men 80	10.9	20.5	24.5	15.3	9.3	5.3	14.2	100
Men 85	9.9	18.8	21.9	16.7	11.9	6.1	14.8	100
Men 90	7.0	17.4	20.3	16.8	12.3	7.3	18.9	100
Men 95	6.5	16.4	18.9	17.2	12.2	7.0	21.9	100
Women 45	66.4	18.4	7.5	3.8	1.4	0.9	1.6	100
Women 50	59.7	21.8	8.9	4.9	1.9	1.1	1.7	100
Women 55	54.6	26.8	10.8	4.0	1.1	0.7	1.9	100
Women 60	50.4	29.5	10.7	3.7	2.2	1.2	2.5	100
Women 65	43.5	32.6	13.9	4.5	1.9	1.5	2.2	100
Women 70	47.3	33.1	11.4	3.9	1.9	0.6	1.8	100
Women 75	37.8	34.3	14.6	6.1	2.7	1.7	2.8	100
Women 80	36.3	32.3	13.7	6.7	3.3	2.2	5.5	100
Women 85	33.1	32.9	15.9	7.2	3.7	2.7	4.4	100
Women 90	29.7	32.4	18.0	8.0	3.9	1.7	6.3	100
Women 95	26.1	32.3	16.9	8.4	5.6	2.9	7.7	100
White 45	42.2	24.3	15.9	8.0	3.6	2.3	3.6	100
White 50	38.6	24.7	15.9	9.5	5.1	2.7	3.5	100
White 55	34.2	27.5	17.9	8.5	4.3	2.6	5.0	100
White 60	31.4	28.6	19.2	8.3	4.5	2.6	5.4	100
White 65	27.8	28.3	20.0	9.9	4.9	3.0	6.2	100
White 70	29.5	30.8	19.8	9.2	4.3	2.4	4.2	100
White 75	22.6	28.9	19.7	11.5	5.6	4.1	7.6	100
White 80	22.5	25.2	19.2	11.7	6.8	4.0	10.6	100
White 85	21.1	25.2	18.5	12.4	7.9	4.5	10.4	100
White 90	17.7	24.7	18.1	12.8	8.3	4.8	13.6	100
White 95	16.6	23.5	17.4	12.3	9.0	5.0	16.2	100
Non White 45	40.3	32.8	17.4	5.5	1.3	0.8	1.9	100
Non White 50	39.2	31.7	14.4	7.5	3.7	1.6	1.8	100
Non White 55	37.0	34.4	16.1	7.6	1.6	1.1	2.1	100

Table 4
Distribution of Observations
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non White 60	37.2	34.2	15.3	6.1	2.5	1.8	2.9	100
Non White 65	30.4	37.4	15.2	7.8	3.2	2.6	3.4	100
Non White 70	36.3	38.4	14.9	4.5	2.6	1.1	2.1	100
Non White 75	28.7	32.7	19.3	8.0	4.7	2.3	4.3	100
Non White 80	28.0	31.5	18.6	8.0	4.2	2.8	6.9	100
Non White 85	23.1	28.7	20.3	10.2	7.3	4.0	6.3	100
Non White 90	21.8	26.5	22.7	10.6	7.0	3.2	8.2	100
Non White 95	16.8	28.3	19.4	13.8	8.0	4.5	9.2	100
Non College 45	45.1	28.3	14.6	6.6	2.6	1.2	1.6	100
Non College 50	41.4	29.2	14.8	8.0	3.7	1.2	1.9	100
Non College 55	36.7	30.4	17.3	7.5	3.3	1.8	3.0	100
Non College 60	35.3	32.2	17.8	6.3	3.5	1.8	3.1	100
Non College 65	31.9	32.4	17.9	7.2	4.1	3.1	3.6	100
Non College 70	35.1	34.2	18.1	6.7	2.6	1.2	2.1	100
Non College 75	27.6	32.0	20.5	8.4	4.1	3.2	4.3	100
Non College 80	26.4	29.4	19.6	9.8	4.6	2.6	7.6	100
Non College 85	24.7	28.7	20.0	10.7	5.7	3.8	6.4	100
Non College 90	21.4	28.6	20.6	11.8	6.6	3.3	7.7	100
Non College 95	19.0	28.2	19.4	11.4	7.6	4.0	10.5	100
College 45	34.6	18.4	19.7	10.4	4.8	4.5	7.7	100
College 50	33.3	18.9	17.4	11.6	7.3	5.4	6.1	100
College 55	30.4	24.7	18.3	10.2	5.2	3.5	7.7	100
College 60	26.7	24.2	20.0	11.2	5.5	3.8	8.5	100
College 65	22.3	25.7	21.4	13.3	5.4	2.7	9.2	100
College 70	24.9	29.6	19.9	10.5	5.8	3.3	6.1	100
College 75	19.4	26.8	18.6	13.5	7.0	4.4	10.2	100
College 80	20.0	22.7	18.6	12.5	8.5	5.1	12.7	100
College 85	17.6	22.4	17.5	13.5	10.4	5.1	13.4	100
College 90	15.2	20.6	17.3	12.9	9.8	5.9	18.4	100
College 95	13.7	20.1	15.9	14.2	10.3	6.0	19.7	100

Table 5
Average Age of Death

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	76	78	79	79	78	80	79	77
Cohort 50	77	78	79	80	81	82	80	78
Cohort 55	77	79	78	79	80	79	81	78
Cohort 60	78	78	78	80	81	82	82	79
Cohort 65	77	79	79	80	78	79	81	79
Cohort 70	76	79	80	81	80	80	81	79
Cohort 75	77	79	80	80	80	80	79	79
Cohort 80	77	80	80	80	81	81	81	79
Cohort 85	78	80	80	80	80	80	81	80
Cohort 90	77	80	81	81	81	80	81	80
Cohort 95	76	79	81	81	81	81	82	80
Men 45	61	75	77	77	77	80	77	74
Men 50	65	75	77	78	80	81	80	75
Men 55	61	76	76	78	79	78	81	75
Men 60	64	74	76	78	79	80	81	75
Men 65	63	75	77	78	77	78	80	75
Men 70	62	75	78	80	79	79	81	76
Men 75	63	75	77	79	79	79	78	76
Men 80	63	75	78	79	79	79	80	76
Men 85	66	76	77	78	79	78	79	77
Men 90	57	74	77	79	80	80	80	77
Men 95	56	73	79	79	79	79	80	77
Women 45	80	83	83	83	83	77	83	81
Women 50	80	82	83	84	85	86	81	81
Women 55	81	82	83	82	85	85	83	82
Women 60	81	82	82	86	86	87	84	82
Women 65	81	82	83	85	82	83	86	82
Women 70	80	83	83	83	84	85	81	82
Women 75	81	82	84	85	85	84	84	82
Women 80	81	83	84	84	85	86	84	83
Women 85	82	82	84	86	85	85	84	83
Women 90	82	83	84	84	85	80	85	83
Women 95	80	82	83	85	85	85	85	82

Table 5
Average Age of Death

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	77	78	79	78	78	79	79	78
White 50	77	78	79	80	80	82	80	78
White 55	78	79	78	79	80	79	81	78
White 60	78	79	78	81	81	82	82	79
White 65	78	80	80	80	79	78	81	79
White 70	77	80	80	81	81	80	80	79
White 75	78	80	80	80	81	80	79	80
White 80	78	80	80	80	81	81	81	80
White 85	80	81	81	81	79	81	81	80
White 90	79	81	81	81	81	81	81	81
White 95	77	79	81	82	82	81	82	80
Non White 45	71	77	77	81	76	81	80	75
Non White 50	72	78	80	78	84	82	79	76
Non White 55	73	78	80	80	79	80	78	76
Non White 60	76	75	76	76	76	86	85	76
Non White 65	73	76	75	77	76	84	80	76
Non White 70	73	77	80	80	76	81	86	76
Non White 75	75	77	79	81	78	81	76	77
Non White 80	74	79	80	82	80	80	80	78
Non White 85	73	78	79	79	82	78	77	78
Non White 90	72	77	80	80	81	77	81	77
Non White 95	71	78	80	81	78	80	82	78
Non College 45	76	78	78	79	79	79	80	77
Non College 50	76	78	79	80	81	83	79	78
Non College 55	77	78	78	79	82	80	82	78
Non College 60	77	78	77	79	80	82	82	78
Non College 65	76	79	78	78	77	80	81	78
Non College 70	75	79	78	80	80	77	78	78
Non College 75	77	78	80	80	79	77	77	78
Non College 80	76	78	79	80	80	81	80	78
Non College 85	78	80	79	81	80	80	79	79
Non College 90	77	80	80	80	80	80	81	79
Non College 95	75	79	81	81	80	80	81	79
College 45	76	78	79	78	77	80	78	78
College 50	78	79	78	80	80	81	81	79
College 55	77	80	79	79	78	79	80	79
College 60	80	79	79	81	82	83	82	80
College 65	79	80	80	81	80	78	81	80
College 70	78	80	81	81	81	82	82	80
College 75	79	80	80	81	81	83	80	80
College 80	77	82	81	81	81	81	82	81
College 85	79	81	82	80	80	81	81	80
College 90	78	80	81	82	82	80	82	81

Table 6
Average Lifetime Earnings
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	94,883	293,139	489,742	686,150	883,849	1,087,737	1,747,990	357,651
Cohort 50	102,863	293,650	487,742	689,924	890,697	1,095,297	1,658,019	381,404
Cohort 55	110,514	291,557	488,810	692,716	889,905	1,086,205	1,875,093	411,996
Cohort 60	112,860	294,879	488,935	685,576	890,194	1,095,208	1,768,391	421,992
Cohort 65	114,610	296,887	491,297	694,473	898,167	1,097,515	1,837,207	459,487
Cohort 70	112,875	293,190	490,113	687,420	891,878	1,083,908	1,859,858	407,403
Cohort 75	118,929	292,867	490,644	688,611	891,852	1,097,405	2,000,996	514,874
Cohort 80	114,912	296,222	491,352	694,498	889,536	1,096,719	1,986,060	568,238
Cohort 85	119,502	297,273	493,329	686,138	888,049	1,094,910	1,784,243	566,269
Cohort 90	119,049	299,570	492,006	691,395	889,881	1,094,342	1,937,118	638,122
Cohort 95	121,754	298,158	490,573	692,695	894,272	1,091,429	2,093,083	705,619
Men 45	99,600	303,331	490,914	688,817	883,950	1,084,411	1,732,817	482,685
Men 50	108,746	306,153	487,672	692,311	889,536	1,096,774	1,621,983	505,902
Men 55	111,596	305,956	487,889	693,804	887,472	1,088,510	1,891,242	558,878
Men 60	115,897	309,334	488,941	685,307	885,212	1,096,286	1,748,276	558,258
Men 65	115,437	307,941	495,964	693,003	897,812	1,098,496	1,755,538	597,126
Men 70	116,305	303,907	491,274	691,397	891,894	1,085,082	1,830,133	529,996
Men 75	135,757	302,026	496,601	688,403	893,889	1,096,367	1,964,608	673,267
Men 80	117,935	306,441	493,767	692,486	886,453	1,098,688	1,976,902	724,313
Men 85	122,066	309,895	504,349	683,263	886,944	1,097,760	1,791,013	731,488
Men 90	117,912	314,454	499,917	696,166	888,742	1,093,290	1,929,988	835,560
Men 95	126,646	310,090	496,571	695,561	892,540	1,092,157	2,104,800	917,957
Women 45	93,491	274,453	485,757	677,910	883,457	1,099,990	1,797,648	226,696
Women 50	101,113	276,646	487,917	683,335	895,541	1,089,826	1,760,977	256,604
Women 55	110,234	275,499	490,870	689,328	904,197	1,073,911	1,813,239	267,196
Women 60	112,122	281,321	488,920	686,449	903,806	1,091,865	1,828,096	293,891
Women 65	114,364	287,771	483,044	699,153	899,529	1,094,542	2,187,217	322,333
Women 70	111,876	283,164	487,461	674,541	891,830	1,076,181	1,956,856	286,176
Women 75	114,517	286,190	480,612	689,137	885,810	1,100,923	2,147,780	356,481
Women 80	114,008	289,743	487,041	699,065	898,122	1,091,855	2,009,729	412,428
Women 85	118,737	290,077	478,206	692,774	891,552	1,088,633	1,761,412	401,312
Women 90	119,307	291,909	483,474	681,854	893,288	1,098,642	1,957,599	449,059
Women 95	120,618	292,515	484,294	687,255	897,767	1,089,800	2,062,184	507,543

Table 6
Average Lifetime Earnings
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	94,823	294,032	489,635	687,481	883,195	1,088,655	1,734,558	364,199
White 50	103,805	293,965	487,155	690,437	892,493	1,095,223	1,668,146	389,780
White 55	111,444	291,540	489,119	694,363	887,970	1,087,840	1,899,248	425,582
White 60	114,059	295,433	489,336	686,718	889,107	1,097,666	1,785,177	436,237
White 65	117,142	296,419	493,222	696,245	900,620	1,096,983	1,829,382	473,692
White 70	115,096	293,650	491,332	687,248	890,874	1,083,659	1,861,286	425,527
White 75	121,188	293,230	490,974	689,332	890,617	1,098,262	1,989,914	534,545
White 80	119,364	295,495	491,770	693,466	887,477	1,095,726	2,012,122	593,723
White 85	122,012	297,134	493,146	684,787	886,883	1,096,058	1,793,460	582,533
White 90	124,963	298,303	492,495	693,225	888,804	1,095,918	1,957,463	666,816
White 95	126,665	297,856	491,716	692,257	894,747	1,090,561	2,145,696	744,236
Non White 45	95,315	288,563	490,421	672,840	895,893	1,068,227	1,923,952	312,345
Non White 50	97,304	292,176	491,607	686,034	875,713	1,096,083	1,541,944	331,126
Non White 55	105,288	291,640	486,715	681,487	920,706	1,063,670	1,535,492	329,359
Non White 60	107,281	292,329	486,160	677,020	901,069	1,076,072	1,594,423	343,510
Non White 65	103,336	298,615	478,868	683,514	880,215	1,100,521	1,907,327	390,192
Non White 70	105,009	291,582	483,051	688,951	899,005	1,086,173	1,847,684	328,309
Non White 75	111,591	291,548	489,255	684,343	897,901	1,091,135	2,081,334	433,888
Non White 80	100,237	298,608	489,584	700,717	903,262	1,102,487	1,822,360	463,717
Non White 85	110,238	297,765	494,007	692,843	893,147	1,089,713	1,723,093	500,329
Non White 90	101,406	303,911	490,571	683,288	894,553	1,085,609	1,813,012	532,693
Non White 95	105,801	298,981	487,220	693,972	892,508	1,094,540	1,791,207	579,110
Non College 45	95,452	291,965	487,549	685,645	881,312	1,094,606	1,601,926	303,774
Non College 50	102,959	292,975	485,521	691,849	885,705	1,087,203	1,596,534	330,082
Non College 55	111,280	291,909	485,987	689,053	889,071	1,080,318	1,759,512	367,655
Non College 60	112,323	296,773	483,385	678,118	889,209	1,087,930	1,689,854	367,189
Non College 65	114,287	296,129	492,469	694,347	900,620	1,099,350	1,857,227	406,655
Non College 70	111,378	291,242	483,185	683,211	894,680	1,101,330	1,852,380	346,921
Non College 75	116,577	291,822	489,186	695,785	893,329	1,099,776	1,923,645	438,779
Non College 80	114,037	294,936	491,076	695,012	882,187	1,093,863	1,802,029	486,782
Non College 85	119,202	298,650	492,357	676,768	892,035	1,095,887	1,651,342	484,744
Non College 90	118,675	296,551	489,848	690,280	889,553	1,088,675	1,829,801	527,555
Non College 95	121,251	294,971	491,920	692,286	894,626	1,090,943	1,889,956	589,230

Table 6
Average Lifetime Earnings
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
College 45	93,115	297,441	493,637	686,914	887,160	1,083,491	1,821,023	486,148
College 50	102,626	295,707	491,469	687,311	895,731	1,098,753	1,695,154	482,935
College 55	108,651	290,686	494,189	698,143	890,982	1,092,363	1,967,882	501,489
College 60	114,195	290,141	498,210	693,456	891,377	1,101,494	1,822,518	525,043
College 65	115,356	298,437	489,706	694,583	895,192	1,094,156	1,824,615	545,081
College 70	115,701	296,210	498,563	691,016	890,229	1,075,340	1,863,295	488,343
College 75	122,918	294,354	492,555	683,272	890,832	1,095,369	2,040,260	605,683
College 80	116,347	298,299	491,712	693,995	894,463	1,098,544	2,123,222	669,538
College 85	120,021	295,112	494,693	695,262	885,358	1,094,025	1,862,317	666,375
College 90	119,696	304,706	495,169	692,654	890,152	1,098,217	1,991,918	773,724
College 95	122,625	303,772	488,504	693,105	893,947	1,091,834	2,227,953	851,592

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45								
- taxes	7,622	22,982	34,348	43,814	49,786	51,881	52,111	22,456
-benefits	7,218	9,420	13,114	14,715	15,701	16,405	16,229	10,085
- net taxes	404	13,562	21,235	29,099	34,085	35,476	35,882	12,371
Cohort 50								
- taxes	9,411	27,095	42,220	55,908	64,743	67,444	69,016	29,540
-benefits	7,116	9,195	12,905	15,190	17,704	18,849	17,134	10,450
- net taxes	2,295	17,900	29,314	40,719	47,038	48,595	51,882	19,089
Cohort 55								
- taxes	10,969	29,657	49,181	67,741	81,104	84,684	86,507	35,745
-benefits	7,121	9,119	12,278	13,786	15,777	16,121	18,102	10,213
- net taxes	3,849	20,538	36,903	53,955	65,327	68,563	68,405	25,532
Cohort 60								
- taxes	11,817	31,169	51,661	71,423	88,897	97,805	101,260	39,525
-benefits	6,917	8,905	11,502	14,370	16,344	18,502	17,796	10,177
- net taxes	4,900	22,264	40,159	57,053	72,553	79,304	83,465	29,348
Cohort 65								
- taxes	12,272	31,725	52,246	73,412	91,572	104,109	113,628	43,675
-benefits	6,893	9,329	11,914	13,800	14,571	15,947	17,397	10,457
- net taxes	5,379	22,396	40,332	59,612	77,002	88,162	96,231	33,218
Cohort 70								
- taxes	12,051	31,202	52,086	72,891	92,744	107,373	117,506	40,037
-benefits	6,634	9,199	12,366	14,282	15,507	15,488	17,042	10,110
- net taxes	5,417	22,003	39,719	58,609	77,237	91,885	100,465	29,927
Cohort 75								
- taxes	12,614	31,048	51,967	72,547	92,948	107,599	124,090	47,950
-benefits	7,166	9,279	12,148	14,344	15,205	15,527	15,883	10,900
- net taxes	5,448	21,770	39,819	58,203	77,743	92,071	108,207	37,050
Cohort 80								
- taxes	12,182	31,388	52,037	73,046	92,623	109,756	128,623	51,749
-benefits	6,797	9,421	12,545	14,152	15,377	15,773	16,542	11,233
- net taxes	5,385	21,968	39,492	58,894	77,246	93,984	112,082	40,516

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 85								
- taxes	12,663	31,495	52,247	72,511	93,291	112,622	131,761	54,275
-benefits	7,239	9,563	12,601	14,308	14,926	15,410	15,825	11,481
- net taxes	5,424	21,932	39,645	58,203	78,365	97,211	115,935	42,793
Cohort 90								
- taxes	12,619	31,744	52,049	73,048	93,822	113,102	137,516	58,960
-benefits	7,319	9,765	12,592	14,569	15,726	15,202	16,471	11,999
- net taxes	5,299	21,979	39,458	58,479	78,096	97,900	121,045	46,961
Cohort 95								
- taxes	12,900	31,589	51,915	73,175	93,660	113,415	145,397	63,388
-benefits	7,322	9,297	12,799	14,861	15,586	15,965	16,548	12,231
- net taxes	5,578	22,292	39,116	58,314	78,074	97,450	128,848	51,157
Men 45								
- taxes	8,539	23,820	34,084	43,607	49,349	51,556	50,835	29,295
-benefits	3,512	8,406	12,457	14,131	14,906	17,131	15,228	10,093
- net taxes	5,027	15,414	21,626	29,476	34,443	34,425	35,607	19,203
Men 50								
- taxes	10,261	28,636	42,266	55,955	64,901	66,900	69,272	38,510
-benefits	3,871	8,177	12,188	14,237	16,932	17,962	17,066	10,650
- net taxes	6,390	20,459	30,079	41,717	47,969	48,938	52,206	27,860
Men 55								
- taxes	11,299	31,339	49,282	68,209	81,256	85,093	86,822	47,174
-benefits	3,209	7,844	11,544	13,312	15,198	15,635	17,720	10,319
- net taxes	8,090	23,495	37,738	54,897	66,058	69,458	69,101	36,854
Men 60								
- taxes	12,259	32,780	51,823	72,218	89,995	98,934	102,658	51,808
-benefits	3,552	7,484	10,905	13,564	15,486	17,492	17,484	10,330
- net taxes	8,706	25,296	40,918	58,653	74,509	81,442	85,174	41,479
Men 65								
- taxes	12,356	32,899	52,946	73,780	93,299	105,467	114,108	56,225
-benefits	3,583	7,825	10,952	12,958	13,996	14,956	16,750	10,380
- net taxes	8,773	25,073	41,994	60,822	79,303	90,512	97,358	45,844

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Men 70								
- taxes	12,390	32,323	52,258	73,524	93,595	107,944	120,017	51,677
-benefits	3,424	7,826	11,858	13,995	15,169	15,110	17,125	10,319
- net taxes	8,965	24,497	40,401	59,529	78,426	92,834	102,893	41,358
Men 75								
- taxes	14,397	32,029	52,654	72,985	93,992	109,540	125,094	61,600
-benefits	3,856	7,799	11,283	13,532	14,578	14,923	15,029	10,921
- net taxes	10,541	24,231	41,371	59,453	79,415	94,617	110,065	50,679
Men 80								
- taxes	12,501	32,484	52,341	73,337	93,471	111,283	130,079	65,155
-benefits	3,845	7,947	11,574	13,453	14,712	14,642	16,001	11,361
- net taxes	8,656	24,537	40,767	59,884	78,759	96,640	114,078	53,794
Men 85								
- taxes	12,939	32,843	53,431	72,402	93,551	113,996	133,067	68,935
-benefits	3,838	8,110	11,496	13,050	14,170	14,460	15,320	11,425
- net taxes	9,101	24,733	41,935	59,352	79,382	99,536	117,747	57,510
Men 90								
- taxes	12,495	33,308	52,990	73,778	94,052	114,533	139,447	76,124
-benefits	2,873	7,907	11,372	13,829	15,254	15,377	16,085	12,247
- net taxes	9,622	25,401	41,618	59,949	78,798	99,156	123,362	63,877
Men 95								
- taxes	13,424	32,869	52,635	73,592	94,501	114,973	147,216	80,594
-benefits	3,066	7,224	12,095	14,035	14,652	15,088	15,924	12,401
- net taxes	10,359	25,645	40,540	59,557	79,849	99,885	131,291	68,193
Women 45								
- taxes	7,351	21,447	35,249	44,454	51,472	53,078	56,287	15,293
-benefits	8,311	11,279	15,347	16,521	18,766	13,730	19,507	10,077
- net taxes	-960	10,168	19,902	27,933	32,706	39,348	36,780	5,216
Women 50								
- taxes	9,159	24,999	42,102	55,781	64,081	69,459	68,285	20,548
-benefits	8,081	10,578	14,713	17,819	20,925	22,135	17,328	10,250
- net taxes	1,078	14,421	27,389	37,962	43,156	47,324	50,957	10,298

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Women 55								
- taxes	10,884	27,782	48,953	66,283	80,212	82,506	85,302	24,479
-benefits	8,131	10,542	13,921	15,263	19,176	18,716	19,564	10,109
- net taxes	2,753	17,240	35,032	51,021	61,036	63,789	65,738	14,370
Women 60								
- taxes	11,709	29,658	51,275	68,843	85,896	94,307	97,111	27,978
-benefits	7,735	10,238	12,924	16,984	18,688	21,631	18,719	10,034
- net taxes	3,974	19,420	38,351	51,859	67,208	72,676	78,392	17,945
Women 65								
- taxes	12,247	30,757	51,007	72,240	84,946	99,994	111,573	31,170
-benefits	7,875	10,569	13,615	16,480	16,774	18,953	20,171	10,534
- net taxes	4,372	20,188	37,392	55,760	68,172	81,040	91,401	20,636
Women 70								
- taxes	11,952	30,154	51,691	70,840	90,066	103,617	109,312	28,528
-benefits	7,568	10,483	13,528	15,210	16,570	17,974	16,770	9,904
- net taxes	4,384	19,671	38,163	55,630	73,497	85,643	92,542	18,624
Women 75								
- taxes	12,147	30,333	50,810	71,446	89,852	101,019	120,042	34,301
-benefits	8,034	10,358	13,606	16,387	17,064	17,573	19,326	10,880
- net taxes	4,113	19,976	37,205	55,059	72,788	83,446	100,715	23,421
Women 80								
- taxes	12,086	30,694	51,496	72,387	90,261	105,985	124,862	38,366
-benefits	7,679	10,356	14,280	15,739	17,229	18,565	17,940	11,106
- net taxes	4,407	20,338	37,216	56,648	73,033	87,420	106,922	27,260
Women 85								
- taxes	12,580	30,726	50,620	72,762	92,467	109,593	127,356	39,638
-benefits	8,254	10,391	14,118	17,210	17,325	17,504	17,531	11,538
- net taxes	4,326	20,335	36,503	55,551	75,142	92,089	109,825	28,100
Women 90								
- taxes	12,647	30,939	51,035	71,588	93,132	107,251	131,969	42,523
-benefits	8,328	10,722	13,907	16,048	17,137	14,489	17,580	11,762
- net taxes	4,319	20,217	37,128	55,540	75,995	92,762	114,389	30,761

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Women 95								
- taxes	12,778	30,983	51,160	72,384	91,961	109,933	140,599	47,338
-benefits	8,311	10,277	13,535	16,428	17,470	17,925	18,194	12,072
- net taxes	4,468	20,706	37,626	55,956	74,490	92,008	122,406	35,267
White 45								
- taxes	7,613	23,048	34,156	44,010	49,728	51,983	51,911	22,648
-benefits	7,463	9,486	13,183	14,602	15,760	16,355	16,051	10,252
- net taxes	150	13,562	20,973	29,408	33,968	35,628	35,860	12,397
White 50								
- taxes	9,479	27,050	42,139	55,931	64,938	67,090	69,254	29,927
-benefits	7,421	9,185	12,795	15,216	17,423	18,963	17,292	10,624
- net taxes	2,058	17,865	29,344	40,716	47,515	48,127	51,962	19,304
White 55								
- taxes	11,042	29,639	49,199	67,823	81,260	84,622	86,654	36,494
-benefits	7,397	9,208	12,264	13,744	15,759	16,150	18,219	10,429
- net taxes	3,645	20,431	36,935	54,080	65,501	68,471	68,435	26,064
White 60								
- taxes	11,921	31,224	51,692	71,514	89,090	97,962	101,566	40,578
-benefits	7,117	9,130	11,594	14,539	16,565	18,168	17,651	10,450
- net taxes	4,805	22,095	40,098	56,975	72,525	79,795	83,914	30,128
White 65								
- taxes	12,549	31,681	52,421	73,547	91,855	104,203	114,025	44,844
-benefits	7,120	9,525	12,157	13,998	14,732	15,210	17,335	10,732
- net taxes	5,429	22,156	40,264	59,549	77,123	88,992	96,690	34,112
White 70								
- taxes	12,294	31,265	52,201	72,851	93,028	107,329	117,465	41,643
-benefits	6,960	9,494	12,329	14,305	16,019	15,334	16,554	10,459
- net taxes	5,334	21,771	39,872	58,546	77,009	91,995	100,911	31,184
White 75								
- taxes	12,853	31,096	51,988	72,576	92,847	107,597	124,440	49,539
-benefits	7,399	9,563	12,140	14,305	15,373	15,365	15,990	11,177
- net taxes	5,454	21,533	39,848	58,271	77,474	92,232	108,450	38,363

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 80								
- taxes	12,654	31,309	52,086	72,922	92,514	110,225	129,111	53,623
-benefits	7,226	9,605	12,560	13,930	15,322	15,606	16,576	11,510
- net taxes	5,427	21,704	39,526	58,992	77,192	94,618	112,535	42,113
White 85								
- taxes	12,930	31,477	52,234	72,359	93,437	112,844	132,143	55,500
-benefits	7,799	9,784	12,703	14,300	14,411	15,586	16,100	11,750
- net taxes	5,131	21,693	39,531	58,059	79,026	97,257	116,043	43,750
White 90								
- taxes	13,245	31,618	52,159	73,224	93,757	113,221	137,748	60,953
-benefits	7,956	9,960	12,710	14,564	15,739	15,270	16,363	12,299
- net taxes	5,289	21,658	39,449	58,660	78,018	97,951	121,385	48,653
White 95								
- taxes	13,419	31,570	52,043	73,244	93,465	113,278	146,696	65,536
-benefits	7,807	9,425	12,871	14,813	15,812	15,966	16,567	12,476
- net taxes	5,612	22,145	39,171	58,431	77,653	97,312	130,129	53,060
Non White 45								
- taxes	7,684	22,648	35,570	41,855	50,862	49,709	54,726	21,125
-benefits	5,438	9,083	12,674	15,851	14,609	17,470	18,560	8,932
- net taxes	2,246	13,565	22,896	26,004	36,253	32,239	36,166	12,193
Non White 50								
- taxes	9,010	27,305	42,752	55,735	63,110	71,175	66,287	27,213
-benefits	5,318	9,242	13,634	14,995	20,046	17,646	15,323	9,410
- net taxes	3,692	18,063	29,118	40,740	43,064	53,529	50,965	17,803
Non White 55								
- taxes	10,562	29,745	49,054	67,177	78,616	85,547	84,440	31,192
-benefits	5,568	8,685	12,369	14,076	16,058	15,722	16,464	8,899
- net taxes	4,994	21,060	36,684	53,101	62,558	69,825	67,976	22,293
Non White 60								
- taxes	11,331	30,913	51,450	70,739	86,969	96,583	98,094	33,728
-benefits	5,989	7,871	10,869	13,105	14,138	21,103	19,291	8,675
- net taxes	5,342	23,042	40,581	57,634	72,831	75,480	78,803	25,053

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non White 65								
- taxes	11,039	31,888	51,116	72,579	89,504	103,580	110,071	37,974
-benefits	5,882	8,605	10,346	12,576	13,391	20,112	17,954	9,117
- net taxes	5,157	23,282	40,770	60,004	76,113	83,468	92,118	28,857
Non White 70								
- taxes	11,192	30,983	51,418	73,241	90,728	107,775	117,857	33,031
-benefits	5,478	8,167	12,583	14,074	11,873	16,886	21,201	8,588
- net taxes	5,714	22,816	38,835	59,167	78,855	90,889	96,656	24,443
Non White 75								
- taxes	11,839	30,875	51,878	72,376	93,442	107,608	121,552	41,407
-benefits	6,408	8,243	12,183	14,577	14,380	16,712	15,103	9,761
- net taxes	5,431	22,632	39,696	57,799	79,062	90,895	106,450	31,646
Non White 80								
- taxes	10,625	31,649	51,830	73,794	93,353	107,035	125,563	44,064
-benefits	5,381	8,817	12,482	15,488	15,744	16,738	16,328	10,101
- net taxes	5,243	22,832	39,347	58,305	77,609	90,298	109,235	33,963
Non White 85								
- taxes	11,676	31,559	52,293	73,261	92,655	111,616	129,225	49,308
-benefits	5,171	8,776	12,223	14,345	17,180	14,614	14,005	10,392
- net taxes	6,505	22,783	40,069	58,916	75,475	97,002	115,220	38,916
Non White 90								
- taxes	10,749	32,175	51,727	72,271	94,103	112,445	136,102	51,637
-benefits	5,419	9,098	12,244	14,593	15,670	14,827	17,129	10,896
- net taxes	5,330	23,077	39,483	57,678	78,433	97,618	118,974	40,741
Non White 95								
- taxes	11,214	31,639	51,539	72,974	94,381	113,905	137,942	56,352
-benefits	5,746	8,948	12,585	15,001	14,743	15,960	16,439	11,426
- net taxes	5,468	22,691	38,954	57,973	79,638	97,945	121,502	44,926
Non College 45								
- taxes	7,940	22,986	34,027	44,038	50,606	52,766	51,567	20,735
-benefits	7,060	9,403	12,899	14,411	16,111	16,493	17,480	9,576
- net taxes	880	13,583	21,128	29,627	34,495	36,273	34,087	11,159

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non College 50								
- taxes	9,609	27,122	42,203	56,498	65,251	69,233	68,238	27,118
-benefits	6,827	8,995	12,882	14,722	17,713	19,398	15,305	9,691
- net taxes	2,782	18,127	29,322	41,777	47,538	49,835	52,933	17,428
Non College 55								
- taxes	11,143	29,751	48,945	67,952	81,373	84,797	87,528	33,568
-benefits	6,788	8,892	11,814	13,169	16,288	16,386	18,870	9,630
- net taxes	4,355	20,860	37,131	54,783	65,085	68,411	68,658	23,938
Non College 60								
- taxes	11,786	31,363	51,135	70,983	89,039	98,952	103,101	35,923
-benefits	6,598	8,732	11,071	13,767	15,605	18,105	18,031	9,409
- net taxes	5,189	22,631	40,064	57,216	73,433	80,847	85,070	26,514
Non College 65								
- taxes	12,224	31,645	52,462	73,869	91,951	104,191	115,596	39,871
-benefits	6,346	8,928	11,365	13,125	14,041	16,179	17,350	9,572
- net taxes	5,877	22,717	41,097	60,744	77,910	88,011	98,245	30,299
Non College 70								
- taxes	11,882	31,001	51,387	72,593	92,931	109,222	117,457	35,106
-benefits	6,382	8,948	11,656	13,772	15,457	13,554	15,032	9,210
- net taxes	5,500	22,053	39,731	58,821	77,474	95,668	102,425	25,896
Non College 75								
- taxes	12,362	30,930	51,803	73,199	93,483	107,924	126,063	42,758
-benefits	6,725	8,797	12,198	14,010	14,384	13,381	14,498	9,981
- net taxes	5,638	22,134	39,606	59,188	79,099	94,543	111,565	32,777
Non College 80								
- taxes	12,089	31,249	52,024	73,283	91,933	110,458	128,543	46,597
-benefits	6,520	8,988	12,164	13,834	14,415	15,850	15,788	10,375
- net taxes	5,569	22,261	39,860	59,449	77,518	94,608	112,755	36,221
Non College 85								
- taxes	12,628	31,640	52,178	71,524	93,542	113,599	131,210	48,378
-benefits	6,900	9,238	12,039	14,389	14,932	15,595	14,959	10,708
- net taxes	5,728	22,402	40,139	57,135	78,610	98,003	116,251	37,671

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non College 90								
- taxes	12,580	31,430	51,806	72,965	93,723	112,158	138,612	51,491
-benefits	6,979	9,497	12,375	14,097	14,550	14,928	16,182	11,120
- net taxes	5,601	21,934	39,432	58,868	79,173	97,230	122,431	40,370
Non College 95								
- taxes	12,852	31,246	52,092	73,184	93,783	114,075	145,380	56,534
-benefits	6,949	8,968	12,727	14,593	15,070	15,355	16,045	11,411
- net taxes	5,903	22,278	39,365	58,592	78,713	98,719	129,335	45,124
College 45								
- taxes	6,633	22,971	34,919	43,476	48,715	51,333	52,383	26,560
-benefits	7,707	9,484	13,495	15,176	15,165	16,350	15,604	11,298
- net taxes	-1,074	13,487	21,424	28,300	33,551	34,983	36,779	15,262
College 50								
- taxes	8,926	27,013	42,247	55,107	64,230	66,680	69,486	34,330
-benefits	7,826	9,805	12,945	15,825	17,695	18,615	18,239	11,953
- net taxes	1,100	17,208	29,302	39,282	46,535	48,065	51,247	22,377
College 55								
- taxes	10,548	29,424	49,629	67,427	80,757	84,566	85,687	40,140
-benefits	7,929	9,683	13,162	14,700	15,116	15,845	17,485	11,391
- net taxes	2,619	19,741	36,468	52,727	65,641	68,722	68,202	28,749
College 60								
- taxes	11,892	30,683	52,542	71,887	88,727	96,815	99,992	46,300
-benefits	7,711	9,337	12,223	15,007	17,230	18,844	17,633	11,622
- net taxes	4,181	21,346	40,319	56,879	71,497	77,971	82,358	34,678
College 65								
- taxes	12,383	31,888	51,952	73,013	91,113	103,960	112,391	49,838
-benefits	8,156	10,148	12,659	14,390	15,213	15,523	17,426	11,891
- net taxes	4,227	21,740	39,294	58,624	75,900	88,437	94,964	37,946
College 70								
- taxes	12,370	31,515	52,937	73,145	92,633	106,464	117,529	46,638
-benefits	7,109	9,588	13,233	14,717	15,536	16,439	17,965	11,315
- net taxes	5,261	21,927	39,705	58,428	77,098	90,025	99,564	35,323

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45								
-retirement benefits	4,488	9,450	13,469	15,393	16,276	16,931	16,744	9,104
-dependant benefits	607	13	0	0	0	0	0	258
-survivor benefits	2,308	649	622	444	357	273	442	1,301
-earnings reductions	184	693	979	1,122	933	799	957	577
Cohort 50								
-retirement benefits	4,581	9,043	13,287	15,989	18,333	19,257	17,676	9,624
-dependant benefits	590	16	0	0	0	0	0	232
-survivor benefits	2,147	796	643	583	512	138	441	1,232
-earnings reductions	201	662	1,024	1,382	1,141	546	982	638
Cohort 55								
-retirement benefits	4,496	8,729	12,656	14,849	16,992	16,891	18,428	9,430
-dependant benefits	544	31	0	0	0	0	0	197
-survivor benefits	2,348	1,095	820	650	651	539	596	1,390
-earnings reductions	267	735	1,199	1,713	1,867	1,308	921	804
Cohort 60								
-retirement benefits	4,561	8,382	11,965	15,147	17,009	18,741	17,988	9,454
-dependant benefits	497	16	0	0	0	0	0	165
-survivor benefits	2,109	1,326	654	987	290	319	783	1,332
-earnings reductions	250	820	1,117	1,764	955	558	975	774
Cohort 65								
-retirement benefits	4,571	8,705	12,299	14,775	15,261	16,419	17,610	9,840
-dependant benefits	414	32	0	0	0	0	0	126
-survivor benefits	2,151	1,375	692	401	638	271	522	1,256
-earnings reductions	243	784	1,079	1,377	1,328	742	736	765
Cohort 70								
-retirement benefits	4,384	8,792	12,933	15,397	16,544	16,703	17,392	9,567
-dependant benefits	454	15	0	0	0	0	0	144
-survivor benefits	2,037	1,252	629	527	184	206	297	1,214
-earnings reductions	240	860	1,195	1,642	1,222	1,421	647	816
Cohort 75								
-retirement benefits	4,595	8,691	12,563	15,185	16,310	16,223	16,286	10,399

Table 7
Average Lifetime OASI Taxes, Benefits and Net Taxes

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
College 75								
- taxes	13,041	31,216	52,181	72,062	92,578	107,319	123,089	54,146
-benefits	7,914	9,964	12,083	14,592	15,772	17,370	16,586	11,996
- net taxes	5,127	21,252	40,098	57,470	76,807	89,948	106,503	42,150
College 80								
- taxes	12,333	31,613	52,054	72,815	93,086	109,308	128,683	58,156
-benefits	7,252	10,120	13,044	14,463	16,022	15,723	17,103	12,301
- net taxes	5,082	21,494	39,010	58,352	77,065	93,585	111,580	45,856
College 85								
- taxes	12,722	31,267	52,342	73,472	93,122	111,737	132,084	61,515
-benefits	7,824	10,073	13,390	14,229	14,923	15,243	16,334	12,431
- net taxes	4,898	21,194	38,953	59,243	78,200	96,494	115,750	49,084
College 90								
- taxes	12,686	32,277	52,406	73,142	93,903	113,748	136,956	68,120
-benefits	7,907	10,222	12,909	15,102	16,699	15,390	16,619	13,077
- net taxes	4,779	22,055	39,496	58,040	77,205	98,358	120,337	55,043
College 95								
- taxes	12,983	32,191	51,642	73,166	93,547	112,865	145,407	71,984
-benefits	7,968	9,875	12,909	15,130	16,060	16,473	16,882	13,259
- net taxes	5,015	22,316	38,733	58,037	77,487	96,393	128,526	58,725

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
-dependant benefits	535	32	0	0	0	0	0	137
-survivor benefits	2,286	1,248	816	633	543	770	312	1,223
-earnings reductions	249	692	1,231	1,473	1,649	1,466	714	858
Cohort 80								
-retirement benefits	4,584	8,904	13,056	15,107	16,500	16,982	17,396	10,977
-dependant benefits	524	38	0	0	0	0	0	134
-survivor benefits	1,927	1,334	752	620	535	648	571	1,133
-earnings reductions	238	856	1,263	1,576	1,658	1,857	1,425	1,011
Cohort 85								
-retirement benefits	4,802	8,872	12,892	15,197	16,095	16,779	16,915	11,197
-dependant benefits	501	45	0	0	0	0	0	119
-survivor benefits	2,175	1,344	937	749	479	674	409	1,188
-earnings reductions	238	699	1,229	1,639	1,648	2,043	1,499	1,023
Cohort 90								
-retirement benefits	4,701	9,048	12,914	15,503	16,784	16,497	17,380	11,766
-dependant benefits	650	56	2	0	0	0	0	135
-survivor benefits	2,281	1,482	1,219	506	878	460	550	1,250
-earnings reductions	314	822	1,543	1,441	1,936	1,755	1,458	1,152
Cohort 95								
-retirement benefits	4,573	8,601	13,135	15,782	16,678	17,137	17,838	12,119
-dependant benefits	612	57	1	0	0	0	0	116
-survivor benefits	2,448	1,276	941	752	709	524	535	1,151
-earnings reductions	308	638	1,277	1,674	1,802	1,697	1,825	1,155
Men 45								
-retirement benefits	3,433	8,800	12,887	14,714	15,405	17,561	15,651	10,436
-dependant benefits	7	12	0	0	0	0	0	5
-survivor benefits	154	139	222	184	298	128	287	182
-earnings reductions	81	545	652	767	797	558	711	531
Men 50								
-retirement benefits	3,771	8,495	12,590	15,135	17,643	18,423	17,538	11,036
-dependant benefits	57	2	0	0	0	0	0	11
-survivor benefits	167	281	235	168	276	89	251	226

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
-earnings reductions	124	601	638	1,065	987	550	723	622
Men 55								
-retirement benefits	3,213	8,399	11,988	14,590	16,584	16,375	18,007	10,904
-dependant benefits	12	0	0	0	0	0	0	2
-survivor benefits	159	124	186	239	353	216	90	176
-earnings reductions	175	680	629	1,517	1,739	956	376	763
Men 60								
-retirement benefits	3,547	7,890	11,507	14,762	16,158	17,828	17,771	10,840
-dependant benefits	34	0	0	0	0	0	0	5
-survivor benefits	93	237	345	356	128	166	151	246
-earnings reductions	122	644	947	1,554	800	501	438	761
Men 65								
-retirement benefits	3,620	8,252	11,795	14,095	14,934	15,620	16,965	10,990
-dependant benefits	20	0	0	0	0	0	0	3
-survivor benefits	124	222	150	147	151	194	444	195
-earnings reductions	181	649	994	1,283	1,089	858	659	807
Men 70								
-retirement benefits	3,336	8,236	12,671	15,194	16,337	16,335	17,546	10,943
-dependant benefits	41	0	0	0	0	0	0	6
-survivor benefits	167	207	247	200	102	182	242	206
-earnings reductions	120	617	1,061	1,399	1,271	1,406	663	836
Men 75								
-retirement benefits	3,829	8,143	12,054	14,647	15,706	16,135	15,575	11,588
-dependant benefits	11	0	0	0	0	0	0	1
-survivor benefits	112	233	178	275	424	111	112	209
-earnings reductions	96	577	949	1,389	1,553	1,322	658	877
Men 80								
-retirement benefits	3,649	8,357	12,552	14,626	15,894	15,924	17,031	12,168
-dependant benefits	39	0	0	0	0	0	0	4
-survivor benefits	231	277	227	325	182	625	115	254
-earnings reductions	74	687	1,205	1,498	1,364	1,906	1,146	1,064
Men 85								

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1,2m+	Total
-survivor benefits	2,599	2,348	1,392	3,032	731	793	2,657	2,352
-earnings reductions	281	985	1,524	2,444	1,378	734	2,571	786
Women 65								
-retirement benefits	4,853	9,079	13,190	16,942	16,515	18,839	20,376	8,694
-dependant benefits	531	58	0	0	0	0	0	250
-survivor benefits	2,752	2,326	1,651	1,210	2,506	505	858	2,312
-earnings reductions	262	896	1,231	1,673	2,247	390	1,062	724
Women 70								
-retirement benefits	4,690	9,312	13,530	16,057	17,196	19,127	16,888	8,207
-dependant benefits	575	29	0	0	0	0	0	282
-survivor benefits	2,581	2,229	1,500	1,583	441	364	475	2,212
-earnings reductions	275	1,087	1,501	2,429	1,067	1,518	593	796
Women 75								
-retirement benefits	4,796	9,091	13,420	16,537	18,103	16,522	19,150	9,210
-dependant benefits	672	55	1	0	0	0	0	273
-survivor benefits	2,856	1,987	1,890	1,534	893	3,005	1,116	2,236
-earnings reductions	289	775	1,705	1,684	1,933	1,954	940	839
Women 80								
-retirement benefits	4,863	9,251	13,955	16,200	18,188	19,596	18,338	9,789
-dependant benefits	669	62	1	0	0	0	0	263
-survivor benefits	2,434	2,005	1,691	1,290	1,518	703	1,749	2,011
-earnings reductions	287	964	1,368	1,752	2,477	1,736	2,147	958
Women 85								
-retirement benefits	5,120	9,079	13,661	17,442	18,247	18,683	18,457	10,122
-dependant benefits	637	70	0	0	0	0	0	234
-survivor benefits	2,785	2,019	2,030	2,081	896	1,463	961	2,175
-earnings reductions	287	780	1,575	2,313	1,818	2,642	1,886	993
Women 90								
-retirement benefits	5,143	9,392	13,590	16,403	17,835	15,544	18,430	10,458
-dependant benefits	789	85	4	0	0	0	0	262
-survivor benefits	2,764	2,166	2,339	1,293	1,946	1,146	1,419	2,231
-earnings reductions	370	923	2,026	1,648	2,647	2,202	2,269	1,190

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1,2m+	Total
-retirement benefits	3,737	8,509	12,332	14,225	15,416	15,915	16,458	12,273
-dependant benefits	47	0	0	0	0	0	0	5
-survivor benefits	131	159	141	172	348	316	246	199
-earnings reductions	76	557	976	1,347	1,594	1,771	1,385	1,052
Men 90								
-retirement benefits	2,751	8,381	12,287	15,053	16,433	16,730	17,014	13,131
-dependant benefits	36	0	0	0	0	0	0	3
-survivor benefits	155	154	180	113	520	292	247	225
-earnings reductions	69	628	1,095	1,337	1,699	1,646	1,176	1,112
Men 95								
-retirement benefits	2,915	7,549	13,078	15,212	16,067	16,468	17,352	13,413
-dependant benefits	27	0	0	0	0	0	0	2
-survivor benefits	164	189	174	251	164	125	194	189
-earnings reductions	40	514	1,157	1,427	1,579	1,505	1,622	1,203
Women 45								
-retirement benefits	4,799	10,642	15,449	17,489	19,638	14,610	20,321	7,708
-dependant benefits	784	16	0	0	0	0	0	523
-survivor benefits	2,944	1,585	1,983	1,246	587	810	949	2,472
-earnings reductions	214	964	2,088	2,219	1,458	1,690	1,763	625
Women 50								
-retirement benefits	4,822	9,787	15,041	18,345	21,210	22,345	18,068	8,208
-dependant benefits	748	36	0	0	0	0	0	454
-survivor benefits	2,736	1,497	1,668	1,728	1,495	321	982	2,241
-earnings reductions	224	746	1,999	2,254	1,780	530	1,723	654
Women 55								
-retirement benefits	4,828	9,096	14,154	15,655	19,392	19,644	20,039	7,977
-dependant benefits	681	65	0	0	0	0	0	390
-survivor benefits	2,914	2,178	2,242	1,932	2,404	2,259	2,532	2,587
-earnings reductions	291	798	2,475	2,326	2,620	3,187	3,007	844
Women 60								
-retirement benefits	4,808	8,844	13,054	16,396	19,334	21,572	18,634	8,151
-dependant benefits	610	31	0	0	0	0	0	317

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1,2m+	Total
-dependant benefits	490	19	0	0	0	0	0	150
-survivor benefits	2,059	1,359	654	531	167	199	325	1,229
-earnings reductions	255	948	1,291	1,711	1,224	1,538	711	897
White 75								
-retirement benefits	4,796	8,914	12,687	15,174	16,544	16,140	16,486	10,742
-dependant benefits	582	40	0	0	0	0	0	144
-survivor benefits	2,271	1,332	736	740	565	871	292	1,218
-earnings reductions	248	723	1,283	1,609	1,736	1,646	788	927
White 80								
-retirement benefits	4,922	9,009	13,038	14,962	16,584	17,075	17,545	11,300
-dependant benefits	575	48	0	0	0	0	0	141
-survivor benefits	1,981	1,393	857	643	570	657	439	1,148
-earnings reductions	250	846	1,335	1,675	1,832	2,126	1,408	1,080
White 85								
-retirement benefits	5,142	8,943	13,058	15,283	15,830	17,142	17,276	11,471
-dependant benefits	531	57	0	0	0	0	0	126
-survivor benefits	2,384	1,526	943	672	421	704	387	1,250
-earnings reductions	256	744	1,298	1,656	1,841	2,260	1,563	1,097
White 90								
-retirement benefits	5,204	9,174	13,087	15,628	17,007	16,849	17,347	12,138
-dependant benefits	677	67	0	0	0	0	0	136
-survivor benefits	2,449	1,528	1,128	533	701	385	530	1,232
-earnings reductions	376	811	1,505	1,597	1,969	1,964	1,514	1,207
White 95								
-retirement benefits	4,980	8,714	13,264	15,879	17,042	17,176	17,921	12,429
-dependant benefits	676	60	0	0	0	0	0	127
-survivor benefits	2,465	1,299	1,036	629	624	571	598	1,154
-earnings reductions	311	648	1,428	1,696	1,853	1,782	1,952	1,233
Non White 45								
-retirement benefits	3,451	8,916	13,004	16,647	15,510	17,478	19,223	8,203
-dependant benefits	368	43	0	0	0	0	0	163

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Women 95								
-retirement benefits	4,958	9,099	13,195	16,866	17,912	18,634	19,121	10,912
-dependant benefits	747	83	1	0	0	0	0	222
-survivor benefits	2,979	1,790	1,744	1,702	1,810	1,416	1,435	2,048
-earnings reductions	371	696	1,403	2,142	2,252	2,125	2,362	1,110
White 45								
-retirement benefits	4,631	9,554	13,543	15,267	16,318	16,905	16,555	9,234
-dependant benefits	640	8	0	0	0	0	0	272
-survivor benefits	2,374	687	685	482	364	286	475	1,354
-earnings reductions	179	763	1,046	1,149	922	836	979	608
White 50								
-retirement benefits	4,741	9,048	13,171	16,015	18,098	19,376	17,832	9,757
-dependant benefits	615	18	0	0	0	0	0	242
-survivor benefits	2,279	820	700	655	503	100	442	1,298
-earnings reductions	213	704	1,077	1,454	1,178	512	982	674
White 55								
-retirement benefits	4,678	8,792	12,688	14,882	17,034	16,917	18,560	9,649
-dependant benefits	581	37	0	0	0	0	0	209
-survivor benefits	2,418	1,147	725	643	626	472	620	1,398
-earnings reductions	279	768	1,149	1,782	1,901	1,238	961	826
White 60								
-retirement benefits	4,651	8,643	12,080	15,398	17,244	18,426	17,866	9,750
-dependant benefits	546	19	0	0	0	0	0	177
-survivor benefits	2,169	1,345	708	1,062	311	329	823	1,357
-earnings reductions	249	878	1,195	1,921	990	588	1,038	834
White 65								
-retirement benefits	4,818	8,896	12,549	15,092	15,476	15,855	17,560	10,171
-dependant benefits	432	40	0	0	0	0	0	131
-survivor benefits	2,140	1,295	708	353	634	174	567	1,208
-earnings reductions	271	707	1,103	1,447	1,379	819	793	779
White 70								
-retirement benefits	4,667	9,063	12,966	15,485	17,076	16,673	16,940	9,978

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1,2m+	Total
-survivor benefits	1,833	458	224	59	240	0	9	934
-earnings reductions	214	334	553	855	1,141	9	672	367
Non White 50								
-retirement benefits	3,639	9,016	14,046	15,790	20,292	18,001	15,883	8,824
-dependant benefits	438	8	0	0	0	0	0	174
-survivor benefits	1,371	685	255	36	584	544	425	834
-earnings reductions	130	467	677	831	830	898	985	422
Non White 55								
-retirement benefits	3,478	8,418	12,443	14,626	16,327	16,539	16,565	8,103
-dependant benefits	334	0	0	0	0	0	0	124
-survivor benefits	1,955	842	1,467	699	1,055	1,462	259	1,342
-earnings reductions	199	576	1,540	1,249	1,325	2,278	360	669
Non White 60								
-retirement benefits	4,144	7,182	11,163	13,266	14,660	21,193	19,255	7,821
-dependant benefits	270	1	0	0	0	0	0	101
-survivor benefits	1,832	1,243	283	423	78	237	364	1,193
-earnings reductions	256	554	577	584	599	327	328	439
Non White 65								
-retirement benefits	3,471	8,002	10,684	12,814	13,686	19,600	18,058	8,226
-dependant benefits	334	3	0	0	0	0	0	103
-survivor benefits	2,198	1,671	589	700	663	822	120	1,485
-earnings reductions	121	1,070	926	938	958	310	224	698
Non White 70								
-retirement benefits	3,382	7,841	12,742	14,616	12,769	16,972	21,246	7,775
-dependant benefits	328	2	0	0	0	0	0	120
-survivor benefits	1,956	876	480	487	305	263	50	1,152
-earnings reductions	189	552	639	1,029	1,201	349	95	460
Non White 75								
-retirement benefits	3,942	7,878	12,041	15,247	15,166	16,831	14,831	8,988
-dependant benefits	381	1	0	0	0	0	0	110
-survivor benefits	2,333	942	1,153	0	435	35	451	1,241
-earnings reductions	250	578	1,011	670	1,221	153	179	578
Non White 80								

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
-retirement benefits	3,470	8,559	13,132	15,981	15,942	16,441	16,458	9,653
-dependant benefits	358	7	1	0	0	0	0	103
-survivor benefits	1,751	1,142	310	482	300	596	1,402	1,072
-earnings reductions	199	890	961	974	498	299	1,531	728
Non White 85								
-retirement benefits	3,546	8,621	12,279	14,772	17,250	15,135	14,523	10,085
-dependant benefits	393	0	0	0	0	0	0	91
-survivor benefits	1,406	694	916	1,130	733	537	560	936
-earnings reductions	175	541	972	1,557	803	1,059	1,078	721
Non White 90								
-retirement benefits	3,199	8,617	12,407	14,950	15,818	14,544	17,582	10,398
-dependant benefits	571	20	7	0	0	0	0	131
-survivor benefits	1,781	1,324	1,484	389	1,645	877	666	1,315
-earnings reductions	131	863	1,654	747	1,793	594	1,119	949
Non White 95								
-retirement benefits	3,252	8,295	12,757	15,501	15,329	16,999	17,366	11,105
-dependant benefits	403	47	1	0	0	0	0	81
-survivor benefits	2,392	1,215	661	1,109	1,026	355	174	1,140
-earnings reductions	301	609	833	1,609	1,611	1,394	1,101	900
Non College 45								
-retirement benefits	4,584	9,436	13,293	15,263	16,825	17,252	18,457	8,627
-dependant benefits	493	12	0	0	0	0	0	226
-survivor benefits	2,170	600	739	278	400	58	192	1,289
-earnings reductions	185	645	1,134	1,133	1,114	817	1,169	564
Non College 50								
-retirement benefits	4,636	9,027	13,376	15,879	18,672	19,877	16,128	9,016
-dependant benefits	454	8	0	0	0	0	0	190
-survivor benefits	1,964	627	516	540	373	252	683	1,144
-earnings reductions	226	670	1,012	1,697	1,332	731	1,506	660
Non College 55								
-retirement benefits	4,604	8,690	12,217	14,660	17,709	17,316	19,217	9,023

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non College 90								
-retirement benefits	4,779	9,101	12,871	15,303	15,686	15,929	17,049	10,956
-dependant benefits	403	17	0	0	0	0	0	91
-survivor benefits	2,151	1,253	1,039	392	937	349	757	1,210
-earnings reductions	354	874	1,535	1,599	2,075	1,350	1,625	1,137
Non College 95								
-retirement benefits	4,574	8,551	13,211	15,538	16,040	16,420	17,329	11,294
-dependant benefits	388	22	0	0	0	0	0	80
-survivor benefits	2,298	1,096	762	768	527	575	716	1,118
-earnings reductions	309	701	1,244	1,714	1,498	1,640	2,000	1,081
College 45								
-retirement benefits	4,188	9,502	13,783	15,588	15,560	16,732	15,888	10,242
-dependant benefits	960	18	0	0	0	0	0	335
-survivor benefits	2,739	830	415	694	302	406	567	1,330
-earnings reductions	179	867	703	1,107	697	788	851	609
College 50								
-retirement benefits	4,446	9,091	13,136	16,137	17,991	18,992	18,610	10,826
-dependant benefits	924	42	0	0	0	0	0	316
-survivor benefits	2,597	1,312	855	641	651	89	295	1,407
-earnings reductions	138	640	1,046	953	947	467	666	595
College 55								
-retirement benefits	4,234	8,824	13,494	15,129	16,066	16,446	17,793	10,252
-dependant benefits	886	85	0	0	0	0	0	291
-survivor benefits	3,067	1,490	532	409	207	541	498	1,509
-earnings reductions	257	716	865	838	1,157	1,143	806	661
College 60								
-retirement benefits	4,577	8,362	12,649	15,620	17,740	18,950	17,829	10,752
-dependant benefits	877	46	0	0	0	0	0	245
-survivor benefits	2,555	1,735	635	864	213	323	437	1,387
-earnings reductions	298	807	1,061	1,478	723	429	633	763
College 65								
-retirement benefits	4,615	8,854	12,656	15,470	15,928	16,302	17,708	10,997

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
-dependant benefits	403	9	0	0	0	0	0	151
-survivor benefits	2,052	936	972	814	995	536	717	1,331
-earnings reductions	272	743	1,374	2,305	2,417	1,467	1,064	874
Non College 60								
-retirement benefits	4,555	8,390	11,555	14,699	16,399	18,499	18,219	8,763
-dependant benefits	345	4	0	0	0	0	0	123
-survivor benefits	1,930	1,163	665	1,102	354	314	1,284	1,302
-earnings reductions	231	825	1,151	2,034	1,148	708	1,472	779
Non College 65								
-retirement benefits	4,552	8,633	12,035	13,979	14,711	16,482	17,455	9,126
-dependant benefits	272	5	0	0	0	0	0	88
-survivor benefits	1,743	1,042	574	340	339	400	216	1,054
-earnings reductions	221	753	1,244	1,195	1,009	703	321	696
Non College 70								
-retirement benefits	4,378	8,691	12,371	14,596	16,221	14,732	15,328	8,643
-dependant benefits	283	1	0	0	0	0	0	100
-survivor benefits	1,969	1,184	484	815	344	1	21	1,248
-earnings reductions	248	929	1,200	1,640	1,109	1,179	317	781
Non College 75								
-retirement benefits	4,641	8,575	12,659	14,974	15,588	13,843	14,860	9,591
-dependant benefits	346	3	0	0	0	0	0	96
-survivor benefits	1,960	980	796	898	862	1,016	328	1,174
-earnings reductions	222	761	1,257	1,862	2,067	1,478	690	880
Non College 80								
-retirement benefits	4,603	8,669	12,818	14,929	15,597	17,121	16,621	10,160
-dependant benefits	353	7	0	0	0	0	0	95
-survivor benefits	1,819	1,278	662	723	628	491	534	1,139
-earnings reductions	254	965	1,317	1,817	1,811	1,763	1,367	1,020
Non College 85								
-retirement benefits	4,874	8,895	12,580	15,413	15,878	17,045	16,243	10,520
-dependant benefits	290	10	0	0	0	0	0	75
-survivor benefits	1,906	1,148	737	1,012	796	865	443	1,162
-earnings reductions	170	817	1,279	2,037	1,742	2,314	1,727	1,048

Table 8
The Composition of Average Lifetime OASI Benefits

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
-earnings reductions	308	526	1,328	1,633	2,081	1,744	1,710	1,248

Table 8
The Composition of Average Lifetime OASI Benefits
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1,2m+	Total
-dependant benefits	741	87	0	0	0	0	0	188
-survivor benefits	3,094	2,056	853	455	1,000	35	714	1,583
-earnings reductions	296	849	856	1,535	1,715	814	996	878
College 70								
-retirement benefits	4,397	8,948	13,618	16,082	16,734	17,672	18,340	10,804
-dependant benefits	778	36	0	0	0	0	0	204
-survivor benefits	2,164	1,357	805	280	90	306	423	1,170
-earnings reductions	227	752	1,189	1,645	1,288	1,539	798	862
College 75								
-retirement benefits	4,517	8,856	12,438	15,341	16,810	18,266	17,009	11,363
-dependant benefits	856	73	1	0	0	0	0	186
-survivor benefits	2,838	1,628	842	435	322	560	303	1,281
-earnings reductions	294	593	1,197	1,184	1,360	1,456	726	833
College 80								
-retirement benefits	4,552	9,284	13,367	15,282	17,105	16,893	17,973	11,994
-dependant benefits	806	89	0	0	0	0	0	182
-survivor benefits	2,105	1,426	870	520	472	747	599	1,126
-earnings reductions	211	680	1,194	1,339	1,555	1,918	1,469	1,001
College 85								
-retirement benefits	4,678	8,836	13,330	14,987	16,241	16,539	17,310	12,028
-dependant benefits	865	98	0	0	0	0	0	174
-survivor benefits	2,640	1,651	1,217	493	266	501	390	1,220
-earnings reductions	357	515	1,158	1,252	1,584	1,797	1,366	991
College 90								
-retirement benefits	4,566	8,959	12,977	15,728	17,693	16,885	17,548	12,758
-dependant benefits	1,077	123	5	0	0	0	0	190
-survivor benefits	2,506	1,871	1,482	636	828	536	443	1,298
-earnings reductions	245	735	1,554	1,262	1,822	2,032	1,373	1,170
College 95								
-retirement benefits	4,572	8,690	13,019	16,028	17,264	17,735	18,176	13,154
-dependant benefits	998	118	1	0	0	0	0	161
-survivor benefits	2,708	1,593	1,216	735	876	482	415	1,191

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 85								
- taxes	125,435	311,985	517,551	718,287	924,138	1,115,623	1,305,213	537,642
-benefits	71,709	94,727	124,826	141,730	147,860	152,654	156,765	113,734
- net taxes	53,726	217,258	392,726	576,557	776,279	962,969	1,148,448	423,907
Cohort 90								
- taxes	124,999	314,452	515,599	723,610	929,393	1,120,382	1,362,227	584,052
-benefits	72,504	96,733	124,732	144,319	155,783	150,592	163,162	118,864
- net taxes	52,495	217,719	390,867	579,291	773,610	969,791	1,199,065	465,188
Cohort 95								
- taxes	127,788	312,915	514,265	724,870	927,788	1,123,483	1,440,290	627,919
-benefits	72,532	92,093	126,783	147,211	154,391	158,145	163,924	121,155
- net taxes	55,256	220,822	387,482	577,659	773,396	965,338	1,276,366	506,763
Men 45								
- taxes	84,585	235,959	337,629	431,968	488,846	510,708	503,569	290,200
-benefits	34,792	83,272	123,399	139,978	147,657	169,697	150,846	99,978
- net taxes	49,793	152,687	214,230	291,991	341,189	341,011	352,722	190,222
Men 50								
- taxes	101,648	283,670	418,689	554,283	642,906	662,703	686,201	381,479
-benefits	38,345	81,004	120,730	141,036	167,724	177,930	169,056	105,501
- net taxes	63,303	202,666	297,959	413,248	475,182	484,774	517,145	275,978
Men 55								
- taxes	111,925	310,442	488,188	675,673	804,915	842,924	860,051	467,298
-benefits	31,786	77,698	114,356	131,869	150,549	154,877	175,538	102,220
- net taxes	80,139	232,743	373,833	543,804	654,366	688,048	684,513	365,078
Men 60								
- taxes	121,432	324,714	513,360	715,382	891,490	980,033	1,016,925	513,212
-benefits	35,191	74,136	108,028	134,368	153,406	173,278	173,199	102,326
- net taxes	86,242	250,578	405,332	581,014	738,084	806,755	843,726	410,885
Men 65								
- taxes	122,398	325,892	524,482	730,864	924,215	1,044,751	1,130,343	556,958
-benefits	35,494	77,517	108,488	128,363	138,647	148,148	165,920	102,828
- net taxes	86,905	248,375	415,994	602,501	785,568	896,603	964,423	454,131

Table 9

Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45								
- taxes	75,501	227,663	340,252	434,021	493,177	513,926	516,209	222,448
-benefits	71,498	93,314	129,903	145,769	155,530	162,504	160,767	99,901
- net taxes	4,004	134,349	210,349	288,252	337,648	351,422	355,442	122,546
Cohort 50								
- taxes	93,229	268,402	418,225	553,826	641,336	668,093	683,668	292,620
-benefits	70,492	91,082	127,840	150,470	175,375	186,718	169,728	103,520
- net taxes	22,737	177,319	290,385	403,356	465,960	481,375	513,940	189,099
Cohort 55								
- taxes	108,662	293,784	487,180	671,036	803,411	838,878	856,934	354,090
-benefits	70,535	90,334	121,623	136,566	156,281	159,697	179,320	101,173
- net taxes	38,126	203,449	365,557	534,470	647,130	679,181	677,615	252,917
Cohort 60								
- taxes	117,055	308,756	511,755	707,508	880,608	968,855	1,003,078	391,536
-benefits	68,520	88,212	113,939	142,349	161,903	183,277	176,282	100,815
- net taxes	48,536	220,544	397,817	565,159	718,705	785,578	826,796	290,722
Cohort 65								
- taxes	121,565	314,265	517,543	727,218	907,109	1,031,298	1,125,592	432,644
-benefits	68,282	92,410	118,019	136,700	144,335	157,974	172,333	103,590
- net taxes	53,283	221,854	399,524	590,517	762,774	873,324	953,260	329,054
Cohort 70								
- taxes	119,377	309,089	515,957	722,050	918,714	1,063,632	1,164,010	396,609
-benefits	65,713	91,124	122,499	141,473	153,609	153,421	168,814	100,150
- net taxes	53,664	217,965	393,458	580,577	765,105	910,211	995,196	296,459
Cohort 75								
- taxes	124,955	307,563	514,782	718,648	920,738	1,065,865	1,229,230	474,992
-benefits	70,985	91,914	120,339	142,092	150,616	153,810	157,334	107,975
- net taxes	53,970	215,649	394,443	576,556	770,122	912,055	1,071,896	367,016
Cohort 80								
- taxes	120,669	310,932	515,477	723,591	917,521	1,087,238	1,274,136	512,622
-benefits	67,330	93,323	124,274	140,190	152,323	156,243	163,861	111,277
- net taxes	53,339	217,609	391,203	583,402	765,198	930,995	1,110,275	401,345

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Men 70								
- taxes	122,732	320,192	517,667	728,323	927,143	1,069,284	1,188,885	511,905
-benefits	33,921	77,527	117,460	138,632	150,262	149,680	169,637	102,218
- net taxes	88,812	242,665	400,207	589,691	776,881	919,604	1,019,248	409,687
Men 75								
- taxes	142,618	317,280	521,587	722,985	931,080	1,085,098	1,239,172	610,204
-benefits	38,199	77,253	111,766	134,047	144,404	147,831	148,878	108,179
- net taxes	104,418	240,027	409,821	588,938	786,676	937,267	1,090,294	502,026
Men 80								
- taxes	123,835	321,786	518,483	726,469	925,922	1,102,359	1,288,554	645,421
-benefits	38,090	78,720	114,648	133,267	145,735	145,046	158,502	112,544
- net taxes	85,745	243,066	403,836	593,203	780,187	957,313	1,130,052	532,877
Men 85								
- taxes	128,173	325,343	529,288	717,209	926,715	1,129,241	1,318,150	682,867
-benefits	38,020	80,338	113,879	129,270	140,366	143,238	151,755	113,173
- net taxes	90,154	245,005	415,409	587,940	786,349	986,002	1,166,395	569,694
Men 90								
- taxes	123,778	329,946	524,913	730,841	931,677	1,134,557	1,381,355	754,081
-benefits	28,463	78,322	112,649	136,992	151,109	152,320	159,338	121,315
- net taxes	95,316	251,624	412,264	593,848	780,568	982,238	1,222,017	632,766
Men 95								
- taxes	132,982	325,599	521,403	728,997	936,126	1,138,915	1,458,309	798,355
-benefits	30,371	71,562	119,816	139,033	145,142	149,457	157,743	122,843
- net taxes	102,611	254,037	401,587	589,964	790,984	989,458	1,300,566	675,512
Women 45								
- taxes	72,820	212,453	349,172	440,361	509,883	525,784	557,579	151,487
-benefits	82,332	111,725	152,024	163,660	185,897	136,005	193,235	99,821
- net taxes	-9,512	100,728	197,147	276,701	323,986	389,779	364,343	51,666
Women 50								
- taxes	90,725	247,638	417,059	552,562	634,785	688,053	676,430	203,544
-benefits	80,051	104,788	145,745	176,512	207,281	219,268	171,649	101,535
- net taxes	10,674	142,850	271,314	376,051	427,503	468,785	504,781	102,009

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Women 55								
- taxes	107,819	275,206	484,922	656,598	794,579	817,299	844,997	242,488
-benefits	80,544	104,426	137,897	151,191	189,959	185,404	193,803	100,141
- net taxes	27,275	170,780	347,025	505,407	604,620	631,895	651,194	142,347
Women 60								
- taxes	115,992	293,789	507,932	681,958	850,879	934,202	961,977	277,152
-benefits	76,621	101,413	128,025	168,244	185,118	214,274	185,434	99,394
- net taxes	39,371	192,376	379,907	513,713	665,761	719,929	776,543	177,759
Women 65								
- taxes	121,318	304,674	505,274	715,606	841,470	990,531	1,105,231	308,767
-benefits	78,006	104,694	134,874	163,251	166,160	187,750	199,816	104,349
- net taxes	43,312	199,980	370,401	552,355	675,310	802,781	905,416	204,418
Women 70								
- taxes	118,400	298,701	512,049	701,736	892,191	1,026,422	1,082,838	282,596
-benefits	74,970	103,845	134,010	150,671	164,138	178,051	166,127	98,105
- net taxes	43,430	194,856	378,039	551,065	728,053	848,371	916,711	184,491
Women 75								
- taxes	120,325	300,480	503,324	707,738	890,068	1,000,686	1,189,125	339,780
-benefits	79,580	102,603	134,777	162,327	169,035	174,072	191,445	107,772
- net taxes	40,744	197,877	368,548	545,411	721,032	826,614	997,680	232,007
Women 80								
- taxes	119,723	304,051	510,112	717,057	894,125	1,049,882	1,236,872	380,048
-benefits	76,068	102,582	141,453	155,908	170,669	183,906	177,713	110,013
- net taxes	43,655	201,470	368,658	561,149	723,457	865,975	1,059,159	270,035
Women 85								
- taxes	124,618	304,371	501,442	720,773	915,969	1,085,625	1,261,580	392,648
-benefits	81,763	102,930	139,849	170,484	171,616	173,397	173,660	114,295
- net taxes	42,855	201,441	361,593	550,289	744,352	912,228	1,087,920	278,353
Women 90								
- taxes	125,276	306,477	505,553	709,149	922,564	1,062,423	1,307,276	421,235
-benefits	82,493	106,210	137,764	158,973	169,761	143,526	174,146	116,517
- net taxes	42,783	200,267	367,789	550,175	752,803	918,897	1,133,131	304,718

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Women 95								
- taxes	126,582	306,917	506,792	717,036	910,958	1,088,988	1,392,770	468,930
-benefits	82,326	101,804	134,076	162,735	173,060	177,567	180,225	119,581
- net taxes	44,256	205,113	372,717	554,301	737,899	911,422	1,212,546	349,349
White 45								
- taxes	75,416	228,309	338,346	435,962	492,599	514,939	514,232	224,353
-benefits	73,927	93,965	130,588	144,644	156,116	162,008	159,005	101,551
- net taxes	1,490	134,344	207,758	291,318	336,483	352,931	355,227	122,802
White 50								
- taxes	93,902	267,957	417,425	554,052	643,273	664,588	686,026	296,459
-benefits	73,511	90,983	126,745	150,725	172,595	187,848	171,294	105,238
- net taxes	20,391	176,975	290,680	403,327	470,678	476,740	514,733	191,221
White 55								
- taxes	109,380	293,605	487,366	671,855	804,959	838,258	858,390	361,506
-benefits	73,273	91,217	121,489	136,144	156,106	159,984	180,474	103,313
- net taxes	36,107	202,388	365,877	535,710	648,853	678,274	677,917	258,192
White 60								
- taxes	118,090	309,306	512,058	708,411	882,518	970,410	1,006,104	401,961
-benefits	70,496	90,438	114,845	144,022	164,088	179,967	174,853	103,515
- net taxes	47,595	218,868	397,213	564,389	718,430	790,443	831,252	298,445
White 65								
- taxes	124,310	313,827	519,278	728,552	909,908	1,032,226	1,129,524	444,221
-benefits	70,533	94,355	120,427	138,662	145,931	150,673	171,717	106,312
- net taxes	53,777	219,473	398,851	589,890	763,977	881,554	957,807	337,909
White 70								
- taxes	121,781	309,710	517,099	721,659	921,528	1,063,194	1,163,602	412,513
-benefits	68,947	94,043	122,128	141,704	158,682	151,901	163,983	103,606
- net taxes	52,835	215,666	394,970	579,955	762,845	911,294	999,619	308,907
White 75								
- taxes	127,321	308,036	514,991	718,934	919,739	1,065,852	1,232,698	490,734
-benefits	73,298	94,735	120,258	141,703	152,283	152,205	158,400	110,715
- net taxes	54,023	213,301	394,733	577,231	767,456	913,647	1,074,298	380,019

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 80								
- taxes	125,348	310,145	515,963	722,362	916,436	1,091,879	1,278,962	531,185
-benefits	71,584	95,145	124,422	137,993	151,778	154,597	164,198	114,013
- net taxes	53,764	215,000	391,541	584,369	764,658	937,282	1,114,764	417,172
White 85								
- taxes	128,084	311,806	517,427	716,789	925,581	1,117,824	1,308,999	549,778
-benefits	77,259	96,915	125,837	141,655	142,751	154,398	159,483	116,397
- net taxes	50,824	214,891	391,590	575,134	782,831	963,427	1,149,516	433,381
White 90								
- taxes	131,207	313,204	516,687	725,348	928,751	1,121,556	1,364,522	603,794
-benefits	78,814	98,663	125,906	144,267	155,911	151,261	162,093	121,837
- net taxes	52,393	214,541	390,782	581,081	772,839	970,295	1,202,429	481,957
White 95								
- taxes	132,930	312,733	515,532	725,555	925,863	1,122,128	1,453,160	649,195
-benefits	77,339	93,363	127,503	146,736	156,638	158,157	164,112	123,589
- net taxes	55,591	219,370	388,030	578,819	769,225	963,971	1,289,048	525,606
Non White 45								
- taxes	76,118	224,349	352,357	414,610	503,833	492,414	542,114	209,265
-benefits	53,873	89,976	125,552	157,020	144,717	173,052	183,854	88,484
- net taxes	22,246	134,374	226,805	257,591	359,117	319,362	358,259	120,781
Non White 50								
- taxes	89,256	270,480	423,500	552,110	625,168	705,056	656,640	269,570
-benefits	52,684	91,549	135,056	148,537	198,579	174,805	151,788	93,212
- net taxes	36,573	178,931	288,444	403,572	426,590	530,252	504,852	176,358
Non White 55								
- taxes	104,623	294,653	485,922	665,456	778,763	847,423	836,461	308,989
-benefits	55,154	86,034	122,530	139,437	159,066	155,745	163,092	88,156
- net taxes	49,469	208,618	363,392	526,018	619,697	691,678	673,369	220,833
Non White 60								
- taxes	112,240	306,227	509,661	700,741	861,509	956,743	971,715	334,107
-benefits	59,327	77,971	107,665	129,818	140,049	209,043	191,095	85,936
- net taxes	52,913	228,255	401,996	570,923	721,460	747,700	780,619	248,171

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non White 65								
- taxes	109,348	315,876	506,351	718,967	886,620	1,026,056	1,090,361	376,168
-benefits	58,265	85,244	102,485	124,573	132,647	199,230	177,851	90,308
- net taxes	51,083	230,631	403,866	594,393	753,973	826,826	912,511	285,860
Non White 70								
- taxes	110,863	306,915	509,346	725,521	898,747	1,067,613	1,167,487	327,201
-benefits	54,260	80,902	124,644	139,414	117,610	167,273	210,017	85,068
- net taxes	56,602	226,013	384,701	586,107	781,137	900,341	957,470	242,133
Non White 75								
- taxes	117,273	305,845	513,905	716,952	925,632	1,065,956	1,204,092	410,180
-benefits	63,472	81,652	120,680	144,396	142,451	165,552	149,608	96,695
- net taxes	53,801	224,193	393,225	572,557	783,181	900,404	1,054,484	313,485
Non White 80								
- taxes	105,248	313,516	513,421	730,997	924,753	1,060,285	1,243,824	436,492
-benefits	53,308	87,345	123,648	153,427	155,958	165,803	161,747	100,059
- net taxes	51,940	226,170	389,773	577,570	768,795	894,482	1,082,077	336,433
Non White 85								
- taxes	115,658	312,624	518,010	725,717	917,832	1,105,664	1,280,092	488,439
-benefits	51,220	86,935	121,084	142,101	170,185	144,765	138,731	102,940
- net taxes	64,438	225,689	396,926	583,616	747,647	960,898	1,141,361	385,499
Non White 90								
- taxes	106,480	318,727	512,408	715,910	932,181	1,113,878	1,348,223	511,513
-benefits	53,681	90,126	121,291	144,553	155,228	146,880	169,678	107,938
- net taxes	52,798	228,601	391,117	571,357	776,952	966,998	1,178,545	403,575
Non White 95								
- taxes	111,085	313,411	510,546	722,872	934,937	1,128,338	1,366,444	558,218
-benefits	56,917	88,634	124,671	148,596	146,048	158,103	162,848	113,183
- net taxes	54,168	224,777	385,875	574,277	788,889	970,235	1,203,596	445,035
Non College 45								
- taxes	78,652	227,693	337,067	436,238	501,303	522,698	510,824	205,402
-benefits	69,938	93,141	127,775	142,750	159,596	163,378	173,158	94,862
- net taxes	8,714	134,552	209,292	293,488	341,707	359,320	337,666	110,540

Table 9

Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non College 50								
- taxes	95,188	268,667	418,063	559,670	646,369	685,821	675,958	268,634
-benefits	67,631	89,100	127,606	145,835	175,460	192,158	151,609	95,997
- net taxes	27,557	179,568	290,458	413,836	470,909	493,663	524,349	172,637
Non College 55								
- taxes	110,378	294,716	484,847	673,133	806,074	839,995	867,048	332,520
-benefits	67,242	88,081	117,028	130,454	161,345	162,318	186,930	95,393
- net taxes	43,136	206,635	367,819	542,679	644,729	677,677	680,118	237,127
Non College 60								
- taxes	116,755	310,681	506,540	703,158	882,012	980,213	1,021,309	355,847
-benefits	65,357	86,500	109,666	136,377	154,586	179,345	178,613	93,203
- net taxes	51,398	224,181	396,874	566,782	727,425	800,868	842,696	262,644
Non College 65								
- taxes	121,089	313,475	519,684	731,741	910,857	1,032,107	1,145,083	394,965
-benefits	62,868	88,439	112,582	130,016	139,084	160,272	171,869	94,822
- net taxes	58,221	225,036	407,102	601,725	771,772	871,835	973,213	300,143
Non College 70								
- taxes	117,702	307,093	509,039	719,097	920,569	1,081,946	1,163,522	347,753
-benefits	63,220	88,638	115,461	136,422	153,117	134,262	148,902	91,233
- net taxes	54,482	218,455	393,578	582,675	767,451	947,684	1,014,620	256,520
Non College 75								
- taxes	122,461	306,393	513,162	725,101	926,037	1,069,093	1,248,770	423,561
-benefits	66,616	87,139	120,829	138,786	142,487	132,551	143,615	98,874
- net taxes	55,845	219,254	392,333	586,315	783,549	936,542	1,105,155	324,686
Non College 80								
- taxes	119,752	309,553	515,347	725,936	910,678	1,094,187	1,273,340	461,584
-benefits	64,585	89,038	120,496	137,038	142,794	157,009	156,397	102,776
- net taxes	55,167	220,515	394,850	588,898	767,885	937,178	1,116,942	358,808
Non College 85								
- taxes	125,093	313,426	516,874	708,510	926,621	1,125,300	1,299,761	479,232
-benefits	68,349	91,509	119,255	142,532	147,916	154,486	148,185	106,070
- net taxes	56,743	221,917	397,619	565,978	778,705	970,814	1,151,576	373,162

Table 9

Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non College 90								
- taxes	124,613	311,348	513,192	722,786	928,414	1,111,028	1,373,088	510,063
-benefits	69,132	94,075	122,585	139,639	144,128	147,874	160,295	110,159
- net taxes	55,481	217,273	390,607	583,147	784,287	963,154	1,212,792	399,904
Non College 95								
- taxes	127,314	309,526	516,021	724,959	929,007	1,130,016	1,440,126	560,026
-benefits	68,835	88,839	126,073	144,555	149,279	152,107	158,943	113,035
- net taxes	58,479	220,687	389,949	580,404	779,728	977,908	1,281,183	446,991
College 45								
- taxes	65,707	227,551	345,907	430,668	482,572	508,504	518,902	263,100
-benefits	76,345	93,948	133,682	150,332	150,223	161,964	154,572	111,919
- net taxes	-10,637	133,603	212,226	280,336	332,350	346,539	364,330	151,181
College 50								
- taxes	88,418	267,591	418,497	545,892	636,260	660,524	688,325	340,070
-benefits	77,519	97,131	128,234	156,762	175,289	184,396	180,672	118,404
- net taxes	10,899	170,460	290,263	389,129	460,971	476,128	507,653	221,666
College 55								
- taxes	104,487	291,472	491,626	667,929	799,972	837,710	848,815	397,625
-benefits	78,545	95,920	130,380	145,620	149,740	156,955	173,210	112,839
- net taxes	25,942	195,552	361,246	522,309	650,231	680,755	675,605	284,786
College 60								
- taxes	117,803	303,941	520,473	712,104	878,924	959,045	990,514	458,648
-benefits	76,387	92,492	121,080	148,660	170,683	186,672	174,676	115,128
- net taxes	41,416	211,449	399,393	563,444	708,242	772,373	815,838	343,520
College 65								
- taxes	122,666	315,877	514,638	723,265	902,564	1,029,818	1,113,334	493,688
-benefits	80,791	100,523	125,396	142,542	150,702	153,770	172,624	117,795
- net taxes	41,875	215,355	389,243	580,723	751,862	876,048	940,710	375,893
College 70								
- taxes	122,540	312,182	524,396	724,572	917,621	1,054,625	1,164,234	461,989
-benefits	70,420	94,977	131,084	145,787	153,898	162,843	177,963	112,084
- net taxes	52,120	217,205	393,312	578,785	763,724	891,781	986,272	349,906

Table 9
Average Lifetime OASI Taxes, Benefits and Net Taxes Accumulated to Age 65

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
College 75								
- taxes	129,186	309,229	516,906	713,845	917,076	1,063,093	1,219,312	536,369
-benefits	78,394	98,705	119,698	144,552	156,234	172,068	164,299	118,837
- net taxes	50,792	210,524	397,209	569,292	760,842	891,024	1,055,013	417,532
College 80								
- taxes	122,174	313,160	515,647	721,300	922,108	1,082,799	1,274,730	576,094
-benefits	71,833	100,244	129,218	143,270	158,711	155,754	169,424	121,849
- net taxes	50,341	212,916	386,429	578,030	763,397	927,045	1,105,306	454,244
College 85								
- taxes	126,026	309,726	518,501	727,807	922,462	1,106,864	1,308,416	609,365
-benefits	77,503	99,778	132,639	140,949	147,822	150,996	161,805	123,146
- net taxes	48,522	209,948	385,862	586,858	774,640	955,868	1,146,611	486,220
College 90								
- taxes	125,668	319,732	519,127	724,540	930,202	1,126,779	1,356,681	674,794
-benefits	78,331	101,254	127,879	149,600	165,419	152,451	164,625	129,540
- net taxes	47,337	218,478	391,248	574,939	764,784	974,329	1,192,056	545,254
College 95								
- taxes	128,609	318,886	511,566	724,781	926,668	1,118,039	1,440,398	713,069
-benefits	78,927	97,826	127,874	149,874	159,088	163,177	167,231	131,340
- net taxes	49,682	221,060	383,692	574,907	767,580	954,862	1,273,167	581,729

Table 10
Average Lifetime OASI Net Tax Rates

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	0.43	4.63	4.34	4.24	3.86	3.26	2.05	3.46
Cohort 50	2.23	6.10	6.01	5.90	5.28	4.44	3.13	5.01
Cohort 55	3.48	7.04	7.55	7.79	7.34	6.31	3.65	6.20
Cohort 60	4.34	7.55	8.21	8.32	8.15	7.24	4.72	6.95
Cohort 65	4.69	7.54	8.21	8.58	8.57	8.03	5.24	7.23
Cohort 70	4.80	7.50	8.10	8.53	8.66	8.48	5.40	7.35
Cohort 75	4.58	7.43	8.12	8.45	8.72	8.39	5.41	7.20
Cohort 80	4.69	7.42	8.04	8.48	8.68	8.57	5.64	7.13
Cohort 85	4.54	7.38	8.04	8.48	8.82	8.88	6.50	7.56
Cohort 90	4.45	7.34	8.02	8.46	8.78	8.95	6.25	7.36
Cohort 95	4.58	7.48	7.97	8.42	8.73	8.93	6.16	7.25
Men 45	5.05	5.08	4.41	4.28	3.90	3.17	2.05	3.98
Men 50	5.88	6.68	6.17	6.03	5.39	4.46	3.22	5.51
Men 55	7.25	7.68	7.74	7.91	7.44	6.38	3.65	6.59
Men 60	7.51	8.18	8.37	8.56	8.42	7.43	4.87	7.43
Men 65	7.60	8.14	8.47	8.78	8.83	8.24	5.55	7.68
Men 70	7.71	8.06	8.22	8.61	8.79	8.56	5.62	7.80
Men 75	7.76	8.02	8.33	8.64	8.88	8.63	5.60	7.53
Men 80	7.34	8.01	8.26	8.65	8.88	8.80	5.77	7.43
Men 85	7.46	7.98	8.31	8.69	8.95	9.07	6.57	7.86
Men 90	8.16	8.08	8.32	8.61	8.87	9.07	6.39	7.64
Men 95	8.18	8.27	8.16	8.56	8.95	9.15	6.24	7.43
Women 45	-1.03	3.70	4.10	4.12	3.70	3.58	2.05	2.30
Women 50	1.07	5.21	5.61	5.56	4.82	4.34	2.89	4.01
Women 55	2.50	6.26	7.14	7.40	6.75	5.94	3.63	5.38
Women 60	3.54	6.90	7.84	7.55	7.44	6.66	4.29	6.11
Women 65	3.82	7.02	7.74	7.98	7.58	7.40	4.18	6.40
Women 70	3.92	6.95	7.83	8.25	8.24	7.96	4.73	6.51
Women 75	3.59	6.98	7.74	7.99	8.22	7.58	4.69	6.57
Women 80	3.87	7.02	7.64	8.10	8.13	8.01	5.32	6.61
Women 85	3.64	7.01	7.63	8.02	8.43	8.46	6.24	7.00
Women 90	3.62	6.93	7.68	8.15	8.51	8.44	5.84	6.85
Women 95	3.70	7.08	7.77	8.14	8.30	8.44	5.94	6.95

Table 10
Average Lifetime OASI Net Tax Rates

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	0.16	4.61	4.28	4.28	3.85	3.27	2.07	3.40
White 50	1.98	6.08	6.02	5.90	5.32	4.39	3.11	4.95
White 55	3.27	7.01	7.55	7.79	7.38	6.29	3.60	6.12
White 60	4.21	7.48	8.19	8.30	8.16	7.27	4.70	6.91
White 65	4.63	7.47	8.16	8.55	8.56	8.11	5.29	7.20
White 70	4.63	7.41	8.12	8.52	8.64	8.49	5.42	7.33
White 75	4.50	7.34	8.12	8.45	8.70	8.40	5.45	7.18
White 80	4.55	7.35	8.04	8.51	8.70	8.64	5.59	7.09
White 85	4.21	7.30	8.02	8.48	8.91	8.87	6.47	7.51
White 90	4.23	7.26	8.01	8.46	8.78	8.94	6.20	7.30
White 95	4.43	7.43	7.97	8.44	8.68	8.92	6.06	7.13
Non White 45	2.36	4.70	4.67	3.86	4.05	3.02	1.88	3.90
Non White 50	3.79	6.18	5.92	5.94	4.92	4.88	3.31	5.38
Non White 55	4.74	7.22	7.54	7.79	6.79	6.56	4.43	6.77
Non White 60	4.98	7.88	8.35	8.51	8.08	7.01	4.94	7.29
Non White 65	4.99	7.80	8.51	8.78	8.65	7.58	4.83	7.40
Non White 70	5.44	7.82	8.04	8.59	8.77	8.37	5.23	7.45
Non White 75	4.87	7.76	8.11	8.45	8.81	8.33	5.11	7.29
Non White 80	5.23	7.65	8.04	8.32	8.59	8.19	5.99	7.32
Non White 85	5.90	7.65	8.11	8.50	8.45	8.90	6.69	7.78
Non White 90	5.26	7.59	8.05	8.44	8.77	8.99	6.56	7.65
Non White 95	5.17	7.59	8.00	8.35	8.92	8.95	6.78	7.76
Non College 45	0.92	4.65	4.33	4.32	3.91	3.31	2.13	3.67
Non College 50	2.70	6.19	6.04	6.04	5.37	4.58	3.32	5.28
Non College 55	3.91	7.15	7.64	7.95	7.32	6.33	3.90	6.51
Non College 60	4.62	7.63	8.29	8.44	8.26	7.43	5.03	7.22
Non College 65	5.14	7.67	8.35	8.75	8.65	8.01	5.29	7.45
Non College 70	4.94	7.57	8.22	8.61	8.66	8.69	5.53	7.46
Non College 75	4.84	7.58	8.10	8.51	8.85	8.60	5.80	7.47
Non College 80	4.88	7.55	8.12	8.55	8.79	8.65	6.26	7.44
Non College 85	4.81	7.50	8.15	8.44	8.81	8.94	7.04	7.77
Non College 90	4.72	7.40	8.05	8.53	8.90	8.93	6.69	7.65
Non College 95	4.87	7.55	8.00	8.46	8.80	9.05	6.84	7.66
College 45	-1.15	4.53	4.34	4.12	3.78	3.23	2.02	3.14
College 50	1.07	5.82	5.96	5.72	5.20	4.37	3.02	4.63
College 55	2.41	6.79	7.38	7.55	7.37	6.29	3.47	5.73
College 60	3.66	7.36	8.09	8.20	8.02	7.08	4.52	6.60
College 65	3.66	7.28	8.02	8.44	8.48	8.08	5.20	6.96
College 70	4.55	7.40	7.96	8.46	8.66	8.37	5.34	7.23
College 75	4.17	7.22	8.14	8.41	8.62	8.21	5.22	6.96
College 80	4.37	7.21	7.93	8.41	8.62	8.52	5.26	6.85
College 85	4.08	7.18	7.87	8.52	8.83	8.82	6.22	7.37
College 90	3.99	7.24	7.98	8.38	8.67	8.96	6.04	7.11
College 95	4.09	7.35	7.93	8.37	8.67	8.83	5.77	6.90

Table 11
Average Lifetime OASI Net Tax Rates by Lifetime Earnings Decile

	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Total
Cohort 45	0.09	4.46	4.62	4.37	4.30	4.45	4.13	3.61	2.88	1.68	3.46
Cohort 50	2.15	5.78	6.33	5.99	6.02	6.05	5.61	5.13	4.20	2.81	5.01
Cohort 55	3.69	6.81	7.32	7.55	7.57	7.90	7.53	6.48	4.47	2.66	6.20
Cohort 60	4.66	7.38	7.88	8.16	8.25	8.35	8.29	7.32	5.79	3.49	6.95
Cohort 65	5.36	7.55	7.88	8.19	8.35	8.61	8.62	7.78	6.24	3.73	7.23
Cohort 70	5.08	7.26	7.80	7.94	8.20	8.36	8.54	8.71	7.37	4.23	7.35
Cohort 75	5.63	7.63	7.87	8.20	8.41	8.62	8.64	7.80	5.86	3.32	7.20
Cohort 80	5.87	7.67	8.01	8.26	8.61	8.70	8.32	7.13	5.34	3.41	7.13
Cohort 85	5.78	7.77	8.02	8.21	8.66	8.83	8.86	8.29	6.65	4.52	7.56
Cohort 90	6.16	7.75	8.11	8.40	8.69	8.94	8.48	7.47	5.80	3.81	7.36
Cohort 95	6.54	7.80	8.24	8.51	8.75	8.92	8.37	6.72	5.38	3.29	7.25
Men 45	5.33	4.95	4.59	4.32	4.50	4.31	4.14	3.39	2.71	1.58	3.98
Men 50	6.53	6.61	6.20	6.05	6.36	5.92	5.53	4.97	4.10	2.83	5.51
Men 55	7.56	7.64	7.75	7.75	7.93	7.79	7.17	5.73	4.11	2.53	6.59
Men 60	7.99	8.18	8.33	8.38	8.49	8.62	8.29	7.04	5.53	3.48	7.43
Men 65	8.03	8.20	8.44	8.52	8.78	8.90	8.63	7.27	6.08	3.93	7.68
Men 70	7.86	8.14	8.05	8.37	8.37	8.66	8.74	8.63	7.06	4.21	7.80
Men 75	7.95	8.16	8.40	8.56	8.76	8.86	8.50	7.29	5.66	3.18	7.53
Men 80	7.90	8.13	8.37	8.69	8.84	8.88	8.10	6.87	5.19	3.30	7.43
Men 85	7.89	8.33	8.37	8.83	8.90	9.05	8.92	7.70	6.32	4.33	7.86
Men 90	8.11	8.34	8.59	8.79	8.96	8.97	8.25	6.86	5.68	3.92	7.64
Men 95	8.17	8.31	8.62	8.92	9.14	8.96	7.72	6.33	5.01	3.14	7.43
Women 45	-5.31	0.76	2.57	3.49	4.01	4.04	4.28	3.89	3.37	1.92	2.30
Women 50	-1.99	2.97	4.53	5.17	5.73	5.60	5.58	5.42	4.35	2.76	4.01
Women 55	-0.24	4.48	5.59	6.23	6.76	7.02	7.22	7.44	6.09	3.19	5.38
Women 60	1.69	5.54	6.48	7.11	7.41	7.85	7.78	7.47	6.26	3.51	6.11
Women 65	2.80	5.94	6.76	7.44	7.48	7.83	7.81	7.96	6.71	3.33	6.40
Women 70	2.14	6.05	6.51	7.05	7.35	7.57	7.99	8.21	7.93	4.27	6.51
Women 75	3.17	6.27	7.23	7.15	7.65	7.84	7.95	8.24	6.59	3.66	6.57
Women 80	3.85	6.48	7.37	7.45	7.89	8.13	8.12	7.60	5.61	3.65	6.61
Women 85	3.72	6.50	7.32	7.54	7.68	7.82	8.34	8.52	7.69	4.92	7.00
Women 90	4.14	6.76	7.35	7.53	7.90	8.15	8.54	7.91	6.65	3.62	6.85
Women 95	4.74	7.18	7.41	7.92	8.10	8.32	8.41	7.65	6.03	3.72	6.95

Table 11
Average Lifetime OASI Net Tax Rates by Lifetime Earnings Decile

	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Total
White 45	-0.11	4.44	4.59	4.23	4.28	4.42	4.18	3.52	2.86	1.64	3.40
White 50	1.94	5.79	6.28	6.02	6.01	6.08	5.55	5.02	4.12	2.73	4.95
White 55	3.56	6.85	7.36	7.61	7.59	7.82	7.48	6.15	4.25	2.59	6.12
White 60	4.64	7.36	7.89	8.15	8.26	8.40	8.23	7.16	5.67	3.34	6.91
White 65	5.29	7.61	7.80	8.21	8.32	8.67	8 55	7.71	6.13	3.74	7.20
White 70	5.03	7.23	7.82	7.90	8.32	8.40	8 58	8.66	7.23	4.11	7.33
White 75	5.60	7.62	7.93	8.25	8.42	8.65	8.55	7.67	5.79	3.32	7.18
White 80	5.85	7.60	8.15	8.40	8.58	8.73	8.23	6.90	5.20	3.31	7.09
White 85	5.58	7.85	8.02	8.22	8.69	8.92	8.89	8.11	6.44	4.39	7.51
White 90	6.08	7.77	8.14	8.50	8.73	8 93	8.27	7.18	5.70	3.67	7.30
White 95	6.53	7.82	8.28	8.58	8.83	8.89	7.91	6.32	5.00	3.15	7.13
Non White 45	1.71	4.75	4.94	4.44	4.69	5.10	4.31	3.84	3.38	1.92	3.90
Non White 50	3.55	5.69	6.31	6.42	5.74	6.03	6.10	5.51	4.97	3.49	5.38
Non White 55	4.13	7.02	7.38	7.56	6.93	8.02	7.56	7.87	6.79	4.43	6.77
Non White 60	4.70	7.52	7.90	8.07	8.32	8.21	8.59	8.18	6.88	4.68	7.29
Non White 65	5.62	7.59	7.87	8.21	8.33	8.63	8.75	8.39	6.82	3.90	7.40
Non White 70	5.23	7.60	7.45	8.15	7.70	8.39	7.95	8.74	8.34	5.00	7.45
Non White 75	5.63	7.64	7.86	8.01	8.16	8.48	8.73	8.48	6.71	3.37	7.29
Non White 80	5.99	7.68	7.90	8.04	7.95	8.69	8.26	7.98	6.58	4.23	7.32
Non White 85	6.84	7.57	7.81	8.24	8.31	8.54	8.63	8.82	7.74	5.32	7.78
Non White 90	6.49	7.69	7.69	8.47	8.35	8.59	9.07	8.59	7.05	4.54	7.65
Non White 95	6.70	7.73	7.97	8.32	8.32	8.94	8.94	8.53	7.30	4.87	7.76
Non College 45	-0.32	4.33	4.78	4.53	4.24	4.36	4.61	4.16	3.75	2.31	3.67
Non College 50	1.93	5.75	6.26	6.31	5.89	6.15	6.17	5.72	5.19	3.43	5.28
Non College 55	3.65	6.69	7.37	7.46	7.66	7.78	7.94	7.45	5.72	3.41	6.51
Non College 60	4.48	7.17	7.71	8.01	8.28	8.36	8.50	8.27	7.02	4.41	7.22
Non College 65	5.32	7.44	7.90	8.09	8.52	8.42	8.85	8.52	7.16	4.31	7.45
Non College 70	4.66	7.21	7.39	8.05	8.04	8.45	8.40	8.58	8.65	5.24	7.46
Non College 75	5.45	7.50	7.76	7.95	8.28	8.45	8.71	8.76	7.45	4.38	7.47
Non College 80	5.68	7.66	7.79	8.23	8.43	8.70	8.73	8.12	6.63	4.48	7.44
Non College 85	5.54	7.55	8.10	8.19	8.33	8.53	8.78	9.00	8.11	5.60	7.77
Non College 90	5.92	7.54	7.80	8.26	8.42	8.81	8.93	8.66	7.37	4.83	7.65
Non College 95	6.34	7.74	7.94	8.34	8.56	8.84	8.98	8.35	6.65	4.84	7.66

Table 11
Average Lifetime OASI Net Tax Rates by Lifetime Earnings Decile

	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Total
College 45	0.46	4.91	4.25	4.28	4.15	3.88	3.29	2.75	2.19	1.27	3.14
College 50	2.08	6.21	5.99	5.89	5.87	5.31	4.76	4.30	3.64	2.30	4.63
College 55	3.64	7.04	7.43	7.31	7.68	7.49	6.35	4.97	3.32	2.11	5.73
College 60	5.00	7.65	8.02	8.14	8.31	8.09	7.25	6.02	4.74	2.89	6.60
College 65	5.36	7.54	7.90	8.19	8.46	8.53	8.15	6.59	5.53	3.42	6.96
College 70	5.58	7.49	7.68	7.98	8.25	8.56	8.67	8.07	6.30	3.80	7.23
College 75	5.89	7.58	8.13	8.34	8.53	8.53	8.06	6.82	4.99	2.78	6.96
College 80	6.08	7.70	8.13	8.46	8.60	8.52	7.58	6.04	4.45	2.96	6.85
College 85	6.09	7.80	7.90	8.71	8.79	8.89	8.48	7.13	5.74	4.15	7.37
College 90	6.45	7.95	8.29	8.62	8.87	8.52	7.57	6.31	5.20	3.36	7.11
College 95	6.72	8.01	8.40	8.67	8.86	8.49	7.09	5.73	4.20	2.82	6.90

Table 12
Average Age-65 Equivalent Wealth Tax Rates

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	5.30	59.01	61.82	66.41	68.46	68.38	68.86	55.09
Cohort 50	24.39	66.06	69.43	72.83	72.65	72.05	75.17	64.62
Cohort 55	35.09	69.25	75.04	79.65	80.55	80.96	79.07	71.43
Cohort 60	41.46	71.43	77.74	79.88	81.61	81.08	82.43	74.25
Cohort 65	43.83	70.59	77.20	81.20	84.09	84.68	84.69	76.06
Cohort 70	44.95	70.52	76.26	80.41	83.28	85.58	85.50	74.75
Cohort 75	43.19	70.12	76.62	80.23	83.64	85.57	87.20	77.27
Cohort 80	44.20	69.99	75.89	80.63	83.40	85.63	87.14	78.29
Cohort 85	42.83	69.64	75.88	80.27	84.00	86.32	87.99	78.85
Cohort 90	42.00	69.24	75.81	80.06	83.24	86.56	88.02	79.65
Cohort 95	43.24	70.57	75.35	79.69	83.36	85.92	88.62	80.71
Men 45	58.87	64.71	63.45	67.60	69.79	66.77	70.04	65.55
Men 50	62.28	71.44	71.16	74.56	73.91	73.15	75.36	72.34
Men 55	71.60	74.97	76.58	80.48	81.30	81.63	79.59	78.13
Men 60	71.02	77.17	78.96	81.22	82.79	82.32	82.97	80.06
Men 65	71.00	76.21	79.32	82.44	85.00	85.82	85.32	81.54
Men 70	72.36	75.79	77.31	80.97	83.79	86.00	85.73	80.03
Men 75	73.22	75.65	78.57	81.46	84.49	86.38	87.99	82.27
Men 80	69.24	75.54	77.89	81.66	84.26	86.84	87.70	82.56
Men 85	70.34	75.31	78.48	81.98	84.85	87.32	88.49	83.43
Men 90	77.01	76.26	78.54	81.26	83.78	86.57	88.47	83.91
Men 95	77.16	78.02	77.02	80.93	84.50	86.88	89.18	84.61
Women 45	-13.06	47.41	56.46	62.83	63.54	74.13	65.34	34.11
Women 50	11.77	57.68	65.05	68.06	67.35	68.13	74.62	50.12
Women 55	25.30	62.06	71.56	76.97	76.09	77.31	77.06	58.70
Women 60	33.94	65.48	74.79	75.33	78.24	77.06	80.72	64.14
Women 65	35.70	65.64	73.31	77.19	80.25	81.05	81.92	66.20
Women 70	36.68	65.23	73.83	78.53	81.60	82.65	84.66	65.28
Women 75	33.86	65.85	73.22	77.06	81.01	82.60	83.90	68.28
Women 80	36.46	66.26	72.27	78.26	80.91	82.48	85.63	71.05
Women 85	34.39	66.18	72.11	76.35	81.26	84.03	86.23	70.89
Women 90	34.15	65.34	72.75	77.58	81.60	86.49	86.68	72.34
Women 95	34.96	66.83	73.54	77.30	81.00	83.69	87.06	74.50

Table 12
Average Age-65 Equivalent Wealth Tax Rates

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	1.98	58.84	61.40	66.82	68.31	68.54	69.08	54.74
White 50	21.72	66.05	69.64	72.80	73.17	71.73	75.03	64.50
White 55	33.01	68.93	75.07	79.74	80.61	80.91	78.98	71.42
White 60	40.30	70.76	77.57	79.67	81.41	81.45	82.62	74.25
White 65	43.26	69.93	76.81	80.97	83.96	85.40	84.80	76.07
White 70	43.38	69.63	76.38	80.36	82.78	85.71	85.91	74.88
White 75	42.43	69.25	76.65	80.29	83.44	85.72	87.15	77.44
White 80	42.89	69.32	75.89	80.90	83.44	85.84	87.16	78.54
White 85	39.68	68.92	75.68	80.24	84.58	86.19	87.82	78.83
White 90	39.93	68.50	75.63	80.11	83.21	86.51	88.12	79.82
White 95	41.82	70.15	75.27	79.78	83.08	85.91	88.71	80.96
Non White 45	29.23	59.89	64.37	62.13	71.28	64.86	66.09	57.72
Non White 50	40.98	66.15	68.11	73.10	68.24	75.21	76.88	65.42
Non White 55	47.28	70.80	74.78	79.05	79.57	81.62	80.50	71.47
Non White 60	47.14	74.54	78.88	81.47	83.74	78.15	80.33	74.28
Non White 65	46.72	73.01	79.76	82.67	85.04	80.58	83.69	75.99
Non White 70	51.06	73.64	75.53	80.78	86.91	84.33	82.01	74.00
Non White 75	45.88	73.30	76.52	79.86	84.61	84.47	87.58	76.43
Non White 80	49.35	72.14	75.92	79.01	83.14	84.36	87.00	77.08
Non White 85	55.71	72.19	76.63	80.42	81.46	86.91	89.16	78.92
Non White 90	49.59	71.72	76.33	79.81	83.35	86.81	87.41	78.90
Non White 95	48.76	71.72	75.58	79.44	84.38	85.99	88.08	79.72
Non College 45	11.08	59.09	62.09	67.28	68.16	68.74	66.10	53.82
Non College 50	28.95	66.84	69.48	73.94	72.85	71.98	77.57	64.26
Non College 55	39.08	70.11	75.86	80.62	79.98	80.68	78.44	71.31
Non College 60	44.02	72.16	78.35	80.61	82.47	81.70	82.51	73.81
Non College 65	48.08	71.79	78.34	82.23	84.73	84.47	84.99	75.99
Non College 70	46.29	71.14	77.32	81.03	83.37	87.59	87.20	73.77
Non College 75	45.60	71.56	76.45	80.86	84.61	87.60	88.50	76.66
Non College 80	46.07	71.24	76.62	81.12	84.32	85.65	87.72	77.73
Non College 85	45.36	70.80	76.93	79.88	84.04	86.27	88.60	77.87
Non College 90	44.52	69.78	76.11	80.68	84.48	86.69	88.33	78.40
Non College 95	45.93	71.30	75.57	80.06	83.93	86.54	88.96	79.82
College 45	-16.19	58.71	61.35	65.09	68.87	68.15	70.21	57.46
College 50	12.33	63.70	69.36	71.28	72.45	72.08	73.75	65.18
College 55	24.83	67.09	73.48	78.20	81.28	81.26	79.59	71.62
College 60	35.16	69.57	76.74	79.12	80.58	80.54	82.37	74.90
College 65	34.14	68.18	75.63	80.29	83.30	85.07	84.49	76.14
College 70	42.53	69.58	75.00	79.88	83.23	84.56	84.71	75.74
College 75	39.32	68.08	76.84	79.75	82.96	83.81	86.53	77.84
College 80	41.20	67.99	74.94	80.14	82.79	85.62	86.71	78.85
College 85	38.50	67.79	74.42	80.63	83.98	86.36	87.63	79.79
College 90	37.67	68.33	75.37	79.35	82.22	86.47	87.87	80.80
College 95	38.63	69.32	75.00	79.32	82.83	85.41	88.39	81.58

Table 13
Average Lifetime OASI Net Tax Rates Assuming a 14.6% Tax Rate Starting in 1998

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	0.81	5.07	4.84	4.84	4.46	3.8	2.39	3.93
Cohort 50	2.85	6.8	6.83	6.84	6.25	5.27	3.71	5.78
Cohort 55	4.45	8.18	8.81	9.16	8.76	7.55	4.39	7.33
Cohort 60	5.76	9.22	10.03	10.19	10.02	8.9	5.79	8.55
Cohort 65	6.72	9.91	10.71	11.18	11.02	10.37	6.69	9.43
Cohort 70	7.57	10.66	11.36	11.83	11.91	11.59	7.26	10.29
Cohort 75	8.21	11.19	11.92	12.27	12.5	11.96	7.65	10.54
Cohort 80	8.68	11.41	12.03	12.45	12.61	12.35	8.09	10.57
Cohort 85	8.54	11.38	12.03	12.47	12.79	12.76	9.28	11.17
Cohort 90	8.45	11.34	12.01	12.45	12.75	12.85	8.93	10.85
Cohort 95	8.58	11.47	11.97	12.4	12.68	12.85	8.78	10.64
Men 45	5.49	5.54	4.88	4.86	4.49	3.71	2.38	4.45
Men 50	6.59	7.42	6.96	6.96	6.36	5.29	3.82	6.31
Men 55	8.32	8.89	8.97	9.29	8.87	7.62	4.4	7.74
Men 60	9.12	9.94	10.22	10.47	10.33	9.11	5.97	9.08
Men 65	9.83	10.67	11.06	11.44	11.36	10.6	7.08	9.95
Men 70	10.71	11.35	11.55	11.96	12.09	11.68	7.55	10.82
Men 75	11.51	11.82	12.15	12.49	12.71	12.27	7.91	10.84
Men 80	11.34	12.01	12.26	12.64	12.86	12.62	8.25	10.82
Men 85	11.46	11.98	12.31	12.69	12.93	12.99	9.38	11.42
Men 90	12.16	12.07	12.32	12.61	12.86	13.02	9.12	11.08
Men 95	12.18	12.27	12.16	12.55	12.94	13.12	8.88	10.74
Women 45	-0.66	4.13	4.69	4.75	4.35	4.15	2.42	2.77
Women 50	1.65	5.86	6.49	6.5	5.78	5.23	3.44	4.74
Women 55	3.44	7.31	8.45	8.76	8.1	7.16	4.39	6.47
Women 60	4.92	8.48	9.57	9.28	9.21	8.25	5.27	7.61
Women 65	5.79	9.24	10.07	10.35	9.73	9.68	5.37	8.47
Women 70	6.61	9.97	10.93	11.37	11.33	10.98	6.36	9.33
Women 75	7.18	10.71	11.51	11.72	11.87	10.91	6.7	9.98
Women 80	7.86	11.02	11.63	12.01	11.92	11.67	7.66	10.12
Women 85	7.64	11.01	11.63	11.98	12.34	12.26	8.96	10.73
Women 90	7.62	10.93	11.66	12.11	12.44	12.13	8.39	10.42
Women 95	7.7	11.08	11.76	12.12	12.16	12.25	8.51	10.47

Table 13
Average Lifetime OASI Net Tax Rates Assuming a 14.6% Tax Rate Starting in 1998

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	0.55	5.07	4.78	4.88	4.45	3.82	2.41	3.88
White 50	2.61	6.78	6.83	6.83	6.29	5.23	3.7	5.73
White 55	4.24	8.15	8.81	9.16	8.8	7.53	4.34	7.25
White 60	5.62	9.14	10.01	10.17	10.04	8.92	5.76	8.49
White 65	6.67	9.81	10.65	11.14	11.01	10.45	6.75	9.39
White 70	7.35	10.55	11.38	11.82	11.91	11.6	7.28	10.26
White 75	8.09	11.09	11.91	12.28	12.47	11.96	7.7	10.5
White 80	8.54	11.34	12.03	12.47	12.63	12.43	8.01	10.5
White 85	8.2	11.3	12.01	12.47	12.89	12.76	9.25	11.11
White 90	8.23	11.26	12.01	12.45	12.76	12.84	8.86	10.75
White 95	8.43	11.43	11.96	12.43	12.62	12.84	8.64	10.45
Non White 45	2.7	5.11	5.23	4.38	4.61	3.52	2.2	4.36
Non White 50	4.37	6.88	6.79	6.85	5.89	5.78	3.87	6.16
Non White 55	5.72	8.35	8.83	9.2	8.11	7.85	5.28	7.95
Non White 60	6.5	9.59	10.15	10.34	9.89	8.75	6.12	8.95
Non White 65	7	10.29	11.05	11.39	11.07	9.91	6.17	9.67
Non White 70	8.39	11.05	11.26	11.9	11.91	11.51	7.1	10.47
Non White 75	8.61	11.56	11.95	12.24	12.63	11.98	7.28	10.75
Non White 80	9.23	11.64	12.03	12.29	12.49	11.85	8.59	10.91
Non White 85	9.9	11.65	12.11	12.49	12.37	12.77	9.52	11.5
Non White 90	9.26	11.59	12.03	12.43	12.74	12.9	9.4	11.31
Non White 95	9.17	11.58	11.99	12.32	12.91	12.88	9.69	11.43
Non College 45	1.34	5.1	4.84	4.93	4.55	3.87	2.49	4.16
Non College 50	3.37	6.9	6.89	7	6.36	5.47	3.9	6.08
Non College 55	4.97	8.3	8.92	9.36	8.74	7.58	4.71	7.69
Non College 60	6.15	9.35	10.1	10.3	10.12	9.11	6.17	8.89
Non College 65	7.28	10.1	10.86	11.36	11.1	10.35	6.75	9.73
Non College 70	7.84	10.75	11.47	11.88	11.87	11.74	7.37	10.49
Non College 75	8.5	11.36	11.89	12.3	12.68	12.17	8.17	10.97
Non College 80	8.88	11.54	12.11	12.53	12.72	12.46	8.95	11.05
Non College 85	8.8	11.5	12.15	12.43	12.77	12.85	10.04	11.54
Non College 90	8.72	11.4	12.04	12.52	12.88	12.82	9.55	11.34
Non College 95	8.87	11.55	12	12.45	12.75	12.99	9.75	11.28
College 45	-0.86	4.99	4.84	4.7	4.35	3.76	2.35	3.59
College 50	1.58	6.5	6.73	6.61	6.14	5.19	3.6	5.38
College 55	3.17	7.89	8.6	8.88	8.78	7.52	4.17	6.78
College 60	4.83	8.89	9.91	10.07	9.9	8.73	5.54	8.11
College 65	5.44	9.53	10.5	11.02	10.92	10.42	6.66	9.06
College 70	7.08	10.52	11.24	11.78	11.93	11.51	7.21	10.11
College 75	7.74	10.95	11.95	12.25	12.37	11.78	7.4	10.17
College 80	8.37	11.2	11.93	12.37	12.54	12.27	7.54	10.13
College 85	8.08	11.18	11.87	12.51	12.8	12.67	8.89	10.85
College 90	7.99	11.24	11.97	12.36	12.65	12.86	8.64	10.44
College 95	8.08	11.35	11.92	12.36	12.62	12.73	8.23	10.09

Table 14
Average Lifetime OASI Net Tax Rates Assuming a 25% Reduction in Social Security Benefits Starting in 1998
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	2.29	5.43	5.00	4.78	4.30	3.64	2.28	4.16
Cohort 50	3.89	6.88	6.67	6.45	5.78	4.87	3.39	5.68
Cohort 55	5.04	7.82	8.18	8.29	7.78	6.68	3.89	6.81
Cohort 60	5.85	8.30	8.80	8.85	8.61	7.66	4.97	7.56
Cohort 65	6.19	8.33	8.82	9.08	8.98	8.40	5.47	7.80
Cohort 70	6.27	8.29	8.73	9.05	9.09	8.83	5.63	7.97
Cohort 75	6.09	8.23	8.73	8.97	9.14	8.74	5.61	7.73
Cohort 80	6.16	8.21	8.68	8.99	9.12	8.93	5.85	7.62
Cohort 85	6.05	8.18	8.67	9.00	9.24	9.23	6.72	8.06
Cohort 90	5.99	8.15	8.66	8.98	9.22	9.29	6.46	7.83
Cohort 95	6.08	8.26	8.63	8.95	9.17	9.29	6.35	7.68
Men 45	5.93	5.77	5.04	4.79	4.32	3.57	2.27	4.50
Men 50	6.76	7.35	6.79	6.54	5.87	4.87	3.48	6.03
Men 55	7.97	8.32	8.33	8.39	7.87	6.74	3.89	7.06
Men 60	8.28	8.78	8.93	9.05	8.85	7.83	5.12	7.89
Men 65	8.37	8.78	9.02	9.24	9.22	8.58	5.78	8.11
Men 70	8.44	8.70	8.83	9.12	9.22	8.90	5.86	8.29
Men 75	8.47	8.67	8.90	9.13	9.29	8.97	5.79	7.93
Men 80	8.15	8.66	8.84	9.13	9.30	9.13	5.97	7.82
Men 85	8.24	8.64	8.88	9.16	9.35	9.40	6.79	8.25
Men 90	8.77	8.71	8.89	9.11	9.30	9.42	6.60	8.01
Men 95	8.78	8.85	8.77	9.07	9.36	9.49	6.43	7.77
Women 45	1.14	4.73	4.88	4.73	4.23	3.89	2.32	3.40
Women 50	2.97	6.16	6.37	6.21	5.40	4.85	3.14	4.99
Women 55	4.27	7.21	7.85	7.96	7.28	6.38	3.90	6.31
Women 60	5.24	7.81	8.50	8.17	7.95	7.15	4.54	6.95
Women 65	5.53	7.93	8.45	8.56	8.04	7.84	4.41	7.22
Women 70	5.61	7.87	8.52	8.81	8.71	8.38	4.94	7.37
Women 75	5.35	7.88	8.45	8.58	8.70	7.98	4.91	7.33
Women 80	5.55	7.91	8.37	8.67	8.61	8.43	5.54	7.28
Women 85	5.38	7.91	8.37	8.64	8.91	8.86	6.48	7.72
Women 90	5.37	7.84	8.40	8.73	8.99	8.77	6.07	7.50
Women 95	5.43	7.96	8.47	8.74	8.78	8.85	6.16	7.54

Table 14

Average Lifetime OASI Net Tax Rates Assuming a 25% Reduction in Social Security Benefits Starting in 1998

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	2.09	5.42	4.96	4.81	4.29	3.65	2.30	4.10
White 50	3.70	6.86	6.68	6.45	5.81	4.83	3.37	5.63
White 55	4.88	7.79	8.18	8.28	7.82	6.67	3.84	6.73
White 60	5.76	8.25	8.79	8.83	8.62	7.68	4.95	7.50
White 65	6.14	8.28	8.78	9.06	8.97	8.46	5.52	7.77
White 70	6.14	8.22	8.74	9.04	9.09	8.84	5.64	7.94
White 75	6.03	8.16	8.73	8.97	9.13	8.75	5.65	7.70
White 80	6.06	8.16	8.68	9.01	9.13	8.99	5.80	7.58
White 85	5.80	8.12	8.66	9.00	9.32	9.23	6.69	8.01
White 90	5.82	8.10	8.66	8.99	9.22	9.29	6.41	7.76
White 95	5.97	8.23	8.62	8.98	9.12	9.29	6.26	7.55
Non White 45	3.71	5.49	5.31	4.45	4.45	3.43	2.12	4.61
Non White 50	5.09	6.97	6.62	6.48	5.49	5.29	3.55	6.08
Non White 55	5.97	7.96	8.17	8.31	7.23	6.93	4.70	7.43
Non White 60	6.33	8.55	8.91	9.00	8.47	7.50	5.24	7.92
Non White 65	6.41	8.52	9.05	9.24	9.03	8.04	5.06	7.98
Non White 70	6.73	8.53	8.69	9.10	9.10	8.76	5.52	8.10
Non White 75	6.30	8.47	8.74	8.98	9.21	8.71	5.30	7.86
Non White 80	6.57	8.38	8.67	8.87	9.03	8.57	6.22	7.87
Non White 85	7.07	8.39	8.73	9.02	8.93	9.24	6.89	8.30
Non White 90	6.59	8.34	8.67	8.98	9.21	9.33	6.80	8.16
Non White 95	6.53	8.34	8.64	8.89	9.34	9.31	7.01	8.25
Non College 45	2.73	5.46	4.99	4.85	4.37	3.69	2.40	4.46
Non College 50	4.29	6.95	6.70	6.57	5.87	5.03	3.56	6.00
Non College 55	5.39	7.90	8.25	8.43	7.78	6.71	4.17	7.16
Non College 60	6.07	8.36	8.86	8.95	8.70	7.85	5.30	7.86
Non College 65	6.52	8.42	8.92	9.22	9.04	8.37	5.52	8.04
Non College 70	6.37	8.34	8.83	9.11	9.09	8.99	5.73	8.13
Non College 75	6.28	8.34	8.72	9.01	9.26	8.90	5.99	8.04
Non College 80	6.31	8.31	8.74	9.05	9.20	9.01	6.48	7.97
Non College 85	6.25	8.27	8.76	8.97	9.23	9.30	7.27	8.32
Non College 90	6.19	8.20	8.68	9.04	9.31	9.27	6.91	8.18
Non College 95	6.30	8.31	8.65	8.99	9.22	9.40	7.06	8.14
College 45	0.88	5.33	5.02	4.67	4.21	3.61	2.23	3.72
College 50	2.91	6.64	6.62	6.29	5.69	4.80	3.29	5.25
College 55	4.17	7.62	8.05	8.08	7.79	6.65	3.69	6.30
College 60	5.32	8.15	8.71	8.74	8.50	7.51	4.76	7.16
College 65	5.43	8.13	8.67	8.96	8.90	8.44	5.44	7.51
College 70	6.08	8.21	8.63	8.99	9.10	8.75	5.58	7.81
College 75	5.78	8.07	8.75	8.94	9.06	8.61	5.42	7.45
College 80	5.93	8.05	8.60	8.93	9.06	8.88	5.46	7.31
College 85	5.71	8.04	8.55	9.03	9.25	9.17	6.43	7.83
College 90	5.64	8.08	8.63	8.92	9.14	9.31	6.25	7.54
College 95	5.71	8.16	8.59	8.92	9.12	9.21	5.96	7.29

Table 15
Percentage Reduction in Variance of Lifetime Income

	Total	College	Non College
Total	10.88	9.35	13.29
Cohort 45	5.65	4.53	7.28
Cohort 50	8.37	7.06	10.11
Cohort 55	8.93	7.22	11.11
Cohort 60	10.72	9.04	12.78
Cohort 65	11.00	9.75	12.35
Cohort 70	11.76	10.65	13.31
Cohort 75	10.18	8.71	12.91
Cohort 80	10.64	9.15	13.28
Cohort 85	13.34	11.92	15.71
Cohort 90	11.43	10.04	13.96
Cohort 95	10.24	8.48	13.99
Total	4.17	7.99	12.88
Men 45	4.02	2.98	5.81
Men 50	6.99	5.52	8.86
Men 55	6.93	5.40	8.80
Men 60	9.22	7.13	11.80
Men 65	10.49	8.63	12.55
Men 70	10.76	9.16	13.30
Men 75	8.73	6.89	12.68
Men 80	9.39	7.43	13.97
Men 85	11.64	9.92	14.51
Men 90	10.36	8.80	12.78
Men 95	8.77	6.82	13.45
Total	11.08	10.05	12.38
Women 45	6.71	6.09	7.32
Women 50	8.27	6.94	9.85
Women 55	10.59	8.16	13.47
Women 60	10.70	9.50	11.93
Women 65	9.52	8.86	10.06
Women 70	11.20	11.05	11.16
Women 75	10.98	10.53	11.45
Women 80	11.24	11.08	11.36
Women 85	14.65	13.59	16.07
Women 90	11.15	9.71	14.12
Women 95	11.31	10.12	13.26

Table 15
Percentage Reduction in Variance of Lifetime Income

		Total	College	Non College
Total		10.88	9.35	13.29
Total		10.62	9.10	13.06
White	45	5.68	4.55	7.32
White	50	8.26	6.97	9.99
White	55	8.67	7.05	10.80
White	60	10.44	8.78	12.52
White	65	11.09	10.02	12.23
White	70	11.63	10.60	12.98
White	75	10.08	8.69	12.48
White	80	10.34	8.82	13.28
White	85	13.09	11.56	15.84
White	90	11.10	9.78	13.46
White	95	9.80	8.12	13.60
Total		12.77	11.23	14.98
Non White	45	5.43	4.38	7.00
Non White	50	9.60	8.16	11.31
Non White	55	13.04	10.70	15.11
Non White	60	13.67	12.09	15.41
Non White	65	10.34	7.96	13.05
Non White	70	12.43	10.82	16.77
Non White	75	10.61	8.71	16.53
Non White	80	12.54	11.95	13.13
Non White	85	14.94	14.68	15.12
Non White	90	13.51	11.62	17.83
Non White	95	13.77	11.94	16.52

Table 16 Internal Rates of Return

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Non White 45	4.40	2.55	2.10	1.70	1.55	1.45	1.60	2.25
Non White 50	3.80	2.55	1.75	1.90	1.70	1.40	0.80	1.75
Non White 55	3.80	1.90	1.50	1.65	1.35	0.90	0.30	1.30
Non White 60	3.55	2.05	1.20	1.05	0.80	0.65	0.20	1.00
Non White 65	3.70	1.90	1.30	1.15	0.65	0.50	0.05	0.80
Non White 70	3.45	1.75	1.55	1.15	1.10	1.00	0.30	1.05
Non White 75	3.80	2.20	1.20	1.25	1.10	0.70	0.00	0.75
Non White 80	3.55	2.15	1.65	1.25	1.00	1.05	0.05	0.70
Non White 85	3.45	1.60	1.70	1.20	1.10		-0.05	0.45
Non White 90	3.60	2.10	1.25	1.40	1.40	1.05	-0.05	0.40
Non White 95	3.75	2.00	1.65	1.25	1.05	1.00	-0.20	0.30
Non College 45	4.75	2.85	2.20	2.10	1.70	1.40	1.10	2.50
Non College 50	4.25	2.60	1.75	1.50	1.45	1.20	0.70	1.80
Non College 55	3.95	2.40	1.60	1.25	1.05	0.90	0.25	1.30
Non College 60	3.80	2.30	1.55	1.10	0.85	0.60	0.15	1.05
Non College 65	3.60	2.20	1.60	1.25	0.85	0.70	-0.10	0.75
Non College 70	3.75	2.25	1.70	1.30	0.80	0.80	0.10	1.05
Non College 75	3.75	2.30	1.60	1.15	1.10	0.90	-0.10	0.70
Non College 80	3.65	2.40	1.60	1.30	1.10	0.80	-0.20	0.55
Non College 85	3.80	2.50	1.75	1.20	0.90	0.85	-0.15	0.55
Non College 90	3.75	2.45	1.70	1.25	1.25	1.00	-0.20	0.45
Non College 95	3.75	2.30	1.65	1.25	1.10	1.05	-0.30	0.30
College 45	4.95	3.20	1.90	1.90	1.90	1.55	1.00	2.15
College 50	4.70	2.95	1.80	1.60	1.40	1.30	0.85	1.70
College 55	4.45	2.70	1.80	1.30	1.15	1.00	0.30	1.25
College 60	4.05	2.50	1.70	1.30	1.00	0.95	0.25	1.00
College 65	4.20	2.75	1.85	1.45	1.10	1.05	0.10	0.90
College 70	3.90	2.45	1.80	1.35	1.20	1.05	0.15	0.85
College 75	4.00	2.60	1.85	1.45	1.20	0.80	-0.10	0.60
College 80	3.90	2.70	2.00	1.50	1.20	1.00	-0.15	0.50
College 85	4.15	2.70	2.00	1.50	1.45	0.95	-0.30	0.35
College 90	4.05	2.70	1.80	1.60	1.40	1.05	-0.35	0.20
College 95	4.00	2.70	2.05	1.50	1.20	1.00	-0.45	0.05

Table 16 Internal Rates of Return

Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	4.90	2.95	2.15	2.10	1.80	1.45	1.05	2.40
Cohort 50	4.40	2.70	1.75	1.55	1.40	1.25	0.75	1.80
Cohort 55	4.10	2.45	1.65	1.25	1.05	0.95	0.75	1.25
Cohort 60	3.90	2.35	1.60	1.20	0.85	0.75	0.20	1.05
Cohort 65	3.80	2.40	1.75	1.35	1.00	0.95	0.00	0.80
Cohort 70	3.80	2.30	1.75	1.30	1.00	0.90	0.10	0.95
Cohort 75	3.85	2.45	1.70	1.25	1.15	0.90	-0.10	0.65
Cohort 80	3.80	2.50	1.80	1.35	1.15	0.90	-0.15	0.55
Cohort 85	3.90	2.55	1.80	1.25	1.05	0.90	-0.20	0.45
Cohort 90	3.85	2.55	1.70	1.35	1.30	1.05	-0.25	0.30
Cohort 95	3.85	2.45	1.80	1.35	1.10	1.05	-0.35	0.15
Men 45	2.60	1.90	1.70	1.85	1.70	1.35	0.90	1.40
Men 50	2.60	1.75	1.10	1.20	1.30	1.05	0.55	0.85
Men 55	1.90	1.00	0.90	0.90	0.80	0.65	0.10	0.30
Men 60	1.25	1.10	0.40	0.35	0.50	0.50	-0.05	0.10
Men 65	-1.00	1.20	0.50	0.70	0.50	0.65	-0.30	-0.15
Men 70	0.80	0.95	0.85	0.85	0.50	0.75	-0.10	0.05
Men 75	-0.70	0.95	1.10	0.65	0.65	0.50	-0.05	-0.30
Men 80	0.30	1.55	9.00	0.70	0.60	0.65	-0.45	-0.30
Men 85	1.00	1.45	1.15	0.60	0.45	0.50	-0.60	-0.45
Men 90	-1.60	-0.55	0.30	0.60	0.75	0.60	-0.65	-0.60
Men 95	-2.05	0.30	0.35	0.65	0.45	0.50	-0.75	-0.70
Women 45	5.30	3.50	2.80	2.55	2.10	1.90	1.45	3.70
Women 50	4.70	3.10	2.35	2.00	2.00	1.60	1.25	2.95
Women 55	4.35	2.85	2.25	1.80	1.55	1.25	0.75	2.45
Women 60	4.15	2.65	2.05	1.70	1.35	1.25	0.70	2.15
Women 65	4.10	2.80	2.05	1.60	1.25	1.30	0.70	2.00
Women 70	4.05	2.65	2.05	1.70	1.40	1.15	0.60	2.05
Women 75	4.15	2.70	2.05	1.75	1.55	1.35	0.55	1.80
Women 80	4.05	2.80	2.00	1.75	1.60	1.20	0.35	1.55
Women 85	4.15	2.75	2.10	1.60	1.60	1.45	0.45	1.55
Women 90	4.15	2.75	2.05	1.80	1.55	1.30	0.30	1.45
Women 95	4.10	2.70	2.05	1.60	1.45	1.25	0.20	1.40
White 45	4.95	2.95	2.15	2.15	1.80	1.45	1.05	2.40
White 50	4.45	2.70	1.75	1.50	1.35	1.20	0.75	1.80
White 55	4.15	2.55	1.70	1.20	1.10	0.95	0.95	1.25
White 60	3.95	2.45	1.65	1.20	0.90	0.80	0.20	1.05
White 65	3.80	2.50	1.70	1.40	1.00	0.85	0.00	0.85
White 70	3.85	2.40	1.80	1.35	0.95	0.90	0.05	0.95
White 75	3.85	2.50	1.85	1.25	1.20	0.90	-0.15	0.65
White 80	3.80	2.60	1.80	1.40	1.20	0.85	-0.20	0.50
White 85	4.00	2.70	1.85	1.30	1.05	0.90	-0.25	0.45
White 90	3.95	2.65	1.80	1.35	1.30	1.00	-0.30	0.30
White 95	3.85	2.55	1.85	1.35	1.15	1.05	-0.45	0.15

Appendix Table 1
Average Lifetime OASI Net Tax Rates
discounted at 3%
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	-11.86	0.33	2.08	2.21	2.93	2.93	1.98	1.16
Cohort 50	-8.63	1.46	3.66	3.60	4.42	4.05	3.05	2.62
Cohort 55	-7.23	2.36	4.61	5.16	5.62	6.05	3.88	3.83
Cohort 60	-6.11	2.96	5.00	5.73	6.24	6.32	4.62	4.52
Cohort 65	-4.90	2.51	4.85	5.70	6.07	6.92	5.16	4.88
Cohort 70	-5.00	2.93	4.75	5.52	6.06	6.57	5.49	4.83
Cohort 75	-5.97	2.76	4.62	5.59	5.96	6.61	5.42	5.02
Cohort 80	-4.49	2.31	4.56	5.47	6.04	6.64	5.38	5.06
Cohort 85	-5.93	2.10	4.75	5.26	5.90	6.94	6.16	5.46
Cohort 90	-5.58	2.31	4.44	5.12	6.16	6.59	5.87	5.40
Cohort 95	-5.50	2.48	4.71	5.27	5.94	6.46	5.76	5.43
Men 45	0.71	3.05	2.60	2.38	3.16	3.00	2.05	2.49
Men 50	1.65	4.18	4.18	3.96	4.83	4.25	3.22	3.84
Men 55	3.60	5.26	5.28	5.56	5.94	6.20	4.02	4.91
Men 60	3.90	5.97	5.87	6.03	6.64	6.76	4.86	5.62
Men 65	4.50	5.59	5.79	6.21	6.57	7.19	5.50	5.93
Men 70	4.86	5.46	5.68	5.81	6.25	6.73	5.75	5.88
Men 75	6.60	5.00	5.76	6.23	6.24	7.03	5.65	5.90
Men 80	4.55	5.12	5.47	5.99	6.33	7.04	5.61	5.83
Men 85	3.97	4.79	5.84	6.05	6.23	7.49	6.31	6.29
Men 90	6.34	5.99	5.56	5.87	6.60	6.90	6.07	6.15
Men 95	7.28	5.71	6.11	5.74	6.28	6.83	5.93	6.03
Women 45	-14.55	-2.13	0.50	1.66	2.22	2.67	1.75	-1.82
Women 50	-10.98	-0.49	2.38	2.73	3.41	3.37	2.50	0.18
Women 55	-9.03	0.70	3.20	4.29	4.86	5.51	3.25	1.55
Women 60	-8.22	1.59	3.68	4.99	5.15	4.88	3.96	2.51
Women 65	-7.15	0.99	3.87	4.73	4.68	6.01	4.04	2.89
Women 70	-7.31	1.62	3.55	4.83	5.52	6.01	4.57	2.83
Women 75	-8.56	1.69	3.52	4.52	5.30	5.51	4.59	3.29
Women 80	-6.71	1.17	3.83	4.55	5.26	5.83	4.78	3.69
Women 85	-8.88	1.18	3.89	4.26	4.99	5.81	5.69	3.93
Women 90	-8.47	1.28	3.68	4.37	5.40	5.74	5.29	4.03
Women 95	-7.89	1.53	3.88	4.79	5.37	5.74	5.34	4.39

Appendix Table 1
Average Lifetime OASI Net Tax Rates
discounted at 3%
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	-12.33	0.12	2.04	2.13	3.03	2.90	2.01	1.11
White 50	-9.30	1.38	3.68	3.67	4.45	4.01	3.04	2.59
White 55	-7.56	2.07	4.67	5.11	5.63	6.07	3.84	3.79
White 60	-6.60	2.77	4.92	5.69	6.21	6.28	4.62	4.48
White 65	-4.96	2.12	4.77	5.61	5.98	6.92	5.20	4.85
White 70	-5.47	2.59	4.66	5.55	6.11	6.59	5.49	4.83
White 75	-5.93	2.28	4.63	5.53	5.97	6.65	5.40	5.01
White 80	-4.83	1.98	4.49	5.43	6.16	6.65	5.35	5.05
White 85	-6.70	1.57	4.72	5.23	5.89	6.95	6.13	5.42
White 90	-6.42	1.92	4.40	5.10	6.11	6.60	5.82	5.36
White 95	-5.73	2.08	4.68	5.22	5.93	6.48	5.65	5.35
Non White 45	-7.67	1.32	2.34	2.77	2.26	3.20	1.40	1.54
Non White 50	-4.01	1.88	3.54	3.17	4.24	4.34	3.13	2.85
Non White 55	-5.03	3.77	4.29	5.47	5.55	5.89	4.40	4.20
Non White 60	-3.37	3.81	5.39	5.99	6.48	6.68	4.64	4.79
Non White 65	-4.55	4.18	5.14	6.17	6.84	6.89	4.88	5.05
Non White 70	-2.93	4.12	5.05	5.35	5.69	6.44	5.48	4.81
Non White 75	-6.10	4.42	4.56	5.82	5.91	6.35	5.50	5.05
Non White 80	-3.13	3.52	4.78	5.64	5.42	6.59	5.52	5.11
Non White 85	-2.67	4.20	4.85	5.36	5.98	6.88	6.30	5.66
Non White 90	-2.54	3.76	4.57	5.19	6.31	6.51	6.17	5.58
Non White 95	-4.59	3.73	4.80	5.40	5.94	6.41	6.38	5.77
Non College 45	-10.69	0.65	1.96	2.31	3.04	2.90	2.15	1.05
Non College 50	-7.34	1.90	3.67	3.62	4.48	4.26	3.33	2.71
Non College 55	-5.91	2.66	4.78	5.21	5.88	6.23	4.13	4.03
Non College 60	-5.21	3.17	5.10	5.92	6.51	6.39	5.02	4.67
Non College 65	-3.52	3.16	5.07	5.94	6.34	7.26	5.45	5.08
Non College 70	-4.21	3.19	4.90	5.85	6.28	6.48	5.79	4.82
Non College 75	-5.20	3.25	4.94	5.55	5.90	6.62	6.00	5.17
Non College 80	-3.28	2.77	4.72	5.60	6.22	6.69	5.83	5.27
Non College 85	-4.97	2.43	5.05	5.52	6.06	6.83	6.57	5.54
Non College 90	-4.43	2.53	4.63	5.22	6.24	6.94	6.31	5.53
Non College 95	-4.75	2.98	4.92	5.26	6.01	6.57	6.36	5.68
College 45	-15.48	-0.93	2.52	2.06	2.75	2.97	1.87	1.32
College 50	-11.72	0.15	3.62	3.58	4.33	3.71	2.87	2.51
College 55	-10.16	1.59	4.16	5.08	5.17	5.78	3.66	3.55
College 60	-8.17	2.45	4.72	5.40	5.90	6.25	4.32	4.32
College 65	-8.03	1.17	4.45	5.34	5.77	6.58	4.91	4.65
College 70	-6.44	2.49	4.51	5.06	5.87	6.64	5.35	4.84
College 75	-7.10	1.97	4.18	5.65	6.01	6.61	5.07	4.88
College 80	-6.27	1.55	4.31	5.30	5.85	6.59	5.09	4.88
College 85	-7.48	1.58	4.25	4.85	5.71	7.02	5.91	5.39
College 90	-7.25	1.89	4.15	4.97	6.06	6.19	5.63	5.30
College 95	-6.69	1.58	4.39	5.28	5.84	6.36	5.39	5.21

Appendix Table 2
Average Lifetime OASI Net Tax Rates
discounted at 7%
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
Cohort 45	4.76	5.35	4.68	3.79	3.09	2.33	1.69	4.39
Cohort 50	6.19	7.19	6.50	5.47	4.39	3.68	2.43	6.03
Cohort 55	7.31	8.68	8.54	7.53	5.93	4.88	3.16	7.34
Cohort 60	8.00	9.28	9.40	8.65	7.23	6.09	4.06	8.21
Cohort 65	8.30	9.37	9.59	9.22	8.11	7.00	4.68	8.49
Cohort 70	8.31	9.30	9.57	9.48	8.24	7.36	4.63	8.68
Cohort 75	8.25	9.27	9.51	9.48	8.66	7.55	4.84	8.37
Cohort 80	8.22	9.22	9.51	9.51	8.87	7.82	5.17	8.26
Cohort 85	8.18	9.25	9.52	9.67	9.26	8.00	5.84	8.68
Cohort 90	8.17	9.21	9.54	9.67	9.27	8.38	5.73	8.43
Cohort 95	8.26	9.20	9.51	9.65	9.53	8.71	5.64	8.25
Men 45	6.71	5.40	4.68	3.75	3.05	2.31	1.57	4.52
Men 50	7.77	7.33	6.56	5.51	4.38	3.67	2.49	6.17
Men 55	8.73	8.85	8.63	7.59	5.93	4.95	3.11	7.40
Men 60	9.19	9.39	9.53	8.91	7.36	6.14	4.23	8.39
Men 65	9.25	9.52	9.70	9.47	8.15	7.08	4.99	8.65
Men 70	9.21	9.40	9.61	9.58	8.49	7.50	4.80	8.86
Men 75	9.16	9.41	9.60	9.60	8.88	7.59	4.94	8.45
Men 80	9.05	9.35	9.60	9.70	9.01	7.93	5.21	8.34
Men 85	9.08	9.40	9.62	9.77	9.37	8.05	5.87	8.74
Men 90	9.31	9.38	9.62	9.75	9.48	8.48	5.91	8.49
Men 95	9.37	9.37	9.58	9.82	9.69	8.85	5.64	8.23
Women 45	3.78	5.21	4.67	3.91	3.26	2.40	2.03	4.11
Women 50	5.45	6.88	6.36	5.28	4.42	3.70	2.30	5.74
Women 55	6.73	8.36	8.28	7.23	5.94	4.53	3.36	7.21
Women 60	7.58	9.07	8.99	8.02	6.79	5.91	3.56	7.90
Women 65	7.89	9.15	9.25	8.47	7.92	6.63	3.83	8.21
Women 70	7.89	9.13	9.44	9.11	7.36	6.77	4.19	8.36
Women 75	7.84	9.09	9.29	9.11	7.65	7.34	4.55	8.24
Women 80	7.89	9.07	9.30	9.05	8.54	7.41	5.08	8.14
Women 85	7.84	9.10	9.29	9.42	8.87	7.86	5.71	8.57
Women 90	7.84	9.06	9.37	9.41	8.72	8.18	5.15	8.31
Women 95	7.93	9.07	9.39	9.36	9.07	8.31	5.63	8.29

Appendix Table 2
Average Lifetime OASI Net Tax Rates
discounted at 7%
Lifetime Labor Earnings in 1997 Dollars

	0-200k	200k-400k	400k-600k	600k-800k	800k-1m	1m-1.2m	1.2m+	Total
White 45	4.63	5.32	4.70	3.78	3.13	2.34	1.65	4.33
White 50	6.07	7.18	6.51	5.46	4.37	3.68	2.44	5.97
White 55	7.22	8.67	8.54	7.55	5.92	4.89	3.15	7.25
White 60	7.93	9.26	9.40	8.69	7.27	6.09	4.03	8.16
White 65	8.26	9.35	9.57	9.24	8.14	7.03	4.79	8.47
White 70	8.23	9.29	9.57	9.49	8.33	7.34	4.61	8.65
White 75	8.21	9.25	9.50	9.49	8.65	7.56	4.89	8.35
White 80	8.17	9.21	9.52	9.52	8.92	7.80	5.15	8.21
White 85	8.03	9.24	9.53	9.70	9.33	8.00	5.79	8.63
White 90	8.12	9.20	9.54	9.66	9.27	8.39	5.73	8.36
White 95	8.22	9.20	9.51	9.65	9.59	8.76	5.58	8.12
Non White 45	5.52	5.55	4.47	3.80	2.43	2.14	2.02	4.88
Non White 50	6.85	7.24	6.48	5.54	4.52	3.63	2.31	6.46
Non White 55	7.74	8.74	8.55	7.30	6.11	4.83	3.40	7.98
Non White 60	8.32	9.36	9.41	8.26	6.76	6.08	4.59	8.58
Non White 65	8.46	9.43	9.71	9.15	7.89	6.82	3.47	8.65
Non White 70	8.57	9.33	9.57	9.42	7.36	7.53	4.86	8.82
Non White 75	8.38	9.31	9.56	9.42	8.72	7.41	4.54	8.48
Non White 80	8.38	9.27	9.40	9.41	8.64	7.93	5.36	8.52
Non White 85	8.72	9.28	9.48	9.51	8.91	8.01	6.19	8.89
Non White 90	8.34	9.24	9.51	9.72	9.29	8.36	5.71	8.74
Non White 95	8.40	9.22	9.51	9.67	9.25	8.45	6.18	8.81
Non College 45	5.02	5.36	4.73	3.92	2.96	2.21	1.87	4.74
Non College 50	6.48	7.20	6.60	5.65	4.32	3.81	2.55	6.39
Non College 55	7.47	8.72	8.65	7.51	5.94	4.81	3.47	7.69
Non College 60	8.10	9.30	9.45	8.86	7.34	6.24	4.17	8.52
Non College 65	8.40	9.43	9.64	9.28	8.38	7.12	4.64	8.73
Non College 70	8.32	9.35	9.63	9.53	8.57	7.75	4.28	8.85
Non College 75	8.30	9.30	9.52	9.60	8.84	7.84	5.47	8.69
Non College 80	8.22	9.26	9.57	9.51	9.03	8.03	5.73	8.61
Non College 85	8.23	9.29	9.53	9.68	9.32	8.20	6.09	8.94
Non College 90	8.21	9.22	9.58	9.71	9.34	8.58	6.00	8.78
Non College 95	8.35	9.23	9.53	9.71	9.54	8.98	6.42	8.72
College 45	3.89	5.33	4.60	3.67	3.19	2.37	1.63	3.85
College 50	5.42	7.16	6.37	5.34	4.42	3.59	2.37	5.53
College 55	6.90	8.60	8.39	7.56	5.92	4.94	2.96	6.80
College 60	7.77	9.24	9.34	8.42	7.14	5.97	4.00	7.80
College 65	8.08	9.27	9.53	9.15	7.89	6.92	4.70	8.21
College 70	8.29	9.23	9.52	9.46	8.02	7.19	4.79	8.52
College 75	8.17	9.22	9.50	9.38	8.55	7.44	4.52	8.10
College 80	8.21	9.17	9.45	9.50	8.75	7.61	4.90	7.94
College 85	8.10	9.19	9.52	9.65	9.20	7.88	5.74	8.44
College 90	8.08	9.19	9.49	9.64	9.23	8.27	5.62	8.12
College 95	8.10	9.17	9.50	9.59	9.52	8.52	5.24	7.84