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Authors: John J. Havens, Paul G. Schervish

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Boston Metropolitan Area

John J. Havens
Paul G. Schervish

Center on Wealth and Philanthropy
Boston College
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Executive Summary

With \$12.5 billion in net worth, Ms. Abigail Johnson is the wealthiest person living in the Boston metropolitan area in 2005, according to Forbes magazine. There are ten other residents in the Boston metropolitan area on the 2005 Forbes 400 list. The combined net worth of these eleven wealthiest residents in the Boston area is \$35.25 billion dollars. Although each is individually very wealthy, their combined wealth nevertheless is only a small fraction of the total personal wealth of all the residents in the Boston metropolitan area.

The current research study, conducted by the Center on Wealth and Philanthropy at Boston College for the Boston Foundation, has used a version of its Wealth Transfer Microsimulation Model (WTMM) specially calibrated to the Boston metropolitan area to derive the following findings concerning the level and distribution of household wealth, the amount and distribution of wealth transfer, and the amount and distribution of charitable giving in the greater Boston metropolitan area.

I. Wealth and Its Distribution in the Boston Metropolitan Area

In 2001 the total wealth (net worth) of the 2 million households in the greater Boston metropolitan area amounted to just under \$1 trillion (in 2005 constant dollars). Net worth is the market value of all assets minus the value of all debt. Based on national patterns, residential property, pension plans, business, and mutual funds constituted large components of the assets, although there are not precise estimates of these components for Boston area households.

In aggregate, household wealth in the Boston area is substantially higher than in the nation. In 2001, Boston area households were \$100 thousand (25%) more wealthy, on average, than households in the nation. Averaged over all households, the average net worth per Boston area household was \$498 thousand as compared with \$397 thousand per household for the nation. Also in 2001, the wealth of the median household (the household where 50% of households are more wealthy and 50% less wealthy) in the Boston area was \$172 thousand, which is nearly twice the wealth of the median household in the nation (\$89 thousand).

There are also a larger proportion of millionaires and a smaller proportion of net debtors in the Boston area as compared with the nation. In 2001 8.5% of Boston area households as compared with 6.7% of the nation's households had net worth of at least \$1 million. In the same year, 9.4% of Boston area households as compared with 10.4% of the nation's households had debts that exceeded their assets. Moreover, 55.4% of Boston area households as compared with 66.8% of the nation's households had net worth of less than \$200,000 in 2001. Conversely, 44.6% of Boston area households as compared with 33.2% of the nation's households had net worth of at least \$200,000.

The above statistics reflect that nearly the entire distribution of household wealth in the Boston area is higher than the national distribution. Only among the very wealthy do Boston households have a slightly smaller fraction of total wealth than households in the nation: comparing only households with positive net worth, Boston area households with net worth of \$20 million or more own 12.0% of the wealth owned by households in the Boston area (an average of \$30 million per household) as compared with 12.1% of the wealth by comparable households in the nation (an average of \$39 million per household). Although the Boston metropolitan area has more than its share of millionaires, the relatively large difference in the average wealth of households with at least \$20 million in net worth implies that the wealthiest of the wealthy tend to live elsewhere.

Throughout the age distribution, Boston area households own more wealth, on average, than their counterparts in the nation. The largest difference occurs among households whose heads are between 60 through 79 years of age. In the Boston area such households had average net worth of \$875 thousand in 2001 as compared with \$638 thousand for similar households in the nation.

In terms of the share of wealth, households with younger heads and households with older heads own more wealth than their counterparts among households in the nation. Households whose heads were under 40 years of age owned 15% of the wealth in the Boston area as compared with 10% owned by comparable households in the nation. Similarly, households whose heads were age 80 or older owned 8% of the wealth in the Boston area as compared with 5% owned by comparable households in the nation.

II. Wealth Transfer and Its Distribution in the Boston Metropolitan Area

Wealth transfer refers to the disposition of a household's wealth at the death of the householders. In the case of an unmarried householder, the wealth is transferred when the householder dies. In the case of a married couple, the wealth is transferred when both of the householders have died. We use the umbrella term "final estate" to refer to the estate of the final householder decedent or equivalently the estate of a household without a surviving spouse.

A final estate has a net worth value (market value of assets owned by decedent minus debts owed by decedents at time of death). From the initial distribution of wealth, we determine the value of a final estate principally by applying assumed secular growth rates of 2%, 3%, and 4% to initial wealth of each household in the distribution. For the period

from 2001 (the base year of our data) through 2020 the aggregate value of final estates will be \$323 billion in the 2% secular growth scenario, \$387 billion in the 3% secular growth scenario, and \$454 billion in the 4% secular growth scenario. In the 55 year period from 2001 through 2055, the value of final estates will be \$1.25 trillion in the 2% secular growth scenario, \$2.27 trillion in the 3% secular growth scenario, and \$4.30 trillion in the 4% secular growth scenario. In summary there will be between \$1.25 trillion to \$4.30 trillion in wealth transfer from households currently in the Boston metropolitan area from 2001 through 2055 – depending on the secular rate of growth.

The wealth transfer will be highly concentrated among a relatively small number of final estates with net worth valued at \$1 million or more at the death of the decedent. In terms of percentages, 77% of the wealth transfer will occur from the 13% of final estates with net worth valued at \$1 million or more in the 2% scenario; 85% will occur from the 19% of final estates with net worth valued at \$1 million or more in the 3% scenario; 93% will occur from the 27% of similarly valued final estates in the 4% scenario. The heirs of most Boston households will not suddenly become wealthy when their parents pass.

The value of a final estate is distributed among estate settlement fees, taxes, charitable bequests, and bequests to heirs. If the distribution follows national historical patterns, potential charitable bequests will range from \$53 billion to \$91 billion depending on secular growth in the period from 2001 through 2020. In this period estate fees will range from \$12 billion to \$16 billion, estate taxes will range from \$68 billion to \$107 billion, and bequests to heirs will range from \$191 billion to \$239 billion again depending on secular growth.

In the entire period from 2001 through 2055, potential charitable bequests will range between \$172 billion to \$1.007 trillion depending on secular growth rates. During this same period estate fees will range from \$47 billion to \$148 billion, estate taxes will range from \$297 billion to \$1.394 trillion, and bequests to heirs will range from \$739 billion to \$1.749 trillion depending once more on secular growth.

III. Inter Vivos Charitable Giving, Charitable Bequests, and Their Distribution in the Boston Metropolitan Area

Charitable giving is divided into two categories: (1) inter vivos giving, that is giving while the donor is still living, and (2) charitable bequests, that is giving from the estate of a deceased donor. The potential value of charitable bequests has been presented in the previous section. Inter vivos giving is estimated by projecting base year inter vivos giving at the same secular rates (2%, 3%, and 4%, respectively) as used to estimate wealth transfer.

In the 2% growth scenario, aggregate inter vivos giving amounts to \$89 billion from Boston area residents in the 20 years from 2001 through 2020 and \$187 billion in the 55 years from 2001 through 2055. Combined with charitable bequests of \$53 billion in 20 years and \$172 billion in 55 years, total household giving will amount to \$141 billion in the 20 year period and \$359 billion in the 55 year period. About two thirds of total

giving in the 55 year period will be from households whose net worth is \$1 million or more when the gift or bequest is made.

In the 3% growth scenario, aggregate inter vivos giving amounts to \$97 billion from Boston area residents in the 20 years from 2001 through 2020 and \$234 billion in the 55 years from 2001 through 2055. Combined with charitable bequests of \$71 billion in the 20 years and \$412 billion in the 55 years, total household giving will amount to \$168 billion in the 20 year period and \$646 billion in the 55 year period. About 78% of total giving in the 55 year period will be from households whose net worth is \$1 million or more when the gift or bequest is made.

In the 4% growth scenario, aggregate inter vivos giving amounts to \$107 billion from Boston area residents in the 20 years from 2001 through 2020 and \$299 billion in the 55 years from 2001 through 2055. Combined with charitable bequests of \$91 billion in the 20 years and \$1.007 trillion in the 55 years, total household giving will amount to \$198 billion in the 20 year period and \$1.306 trillion in the 55 year period. Slightly less than 90% of total giving in the 55 year period will be from households whose net worth is \$1 million or more when the gift or bequest is made.

Introduction to Technical Report

In 1999 the Center on Wealth and Philanthropy (then the Social Welfare Research Institute) at Boston College released “Millionaires and the Millennium: New Estimates of the Forthcoming Wealth Transfer and the Prospects for a Golden Age of Philanthropy.” [Havens and Schervish, 1999] The Millionaires and the Millennium report contained estimates of the potential transfer of wealth from the 1998 population of households to government, heirs, charity, and estate costs in the period from 1998 through 2052. The unique Wealth Transfer Microsimulation Model (WTMM) developed and housed at the Center on Wealth and Philanthropy (CWP) generated the estimates in three growth scenarios. The scenarios were defined in terms of assumed levels of secular growth in household wealth. The low (2%) secular growth scenario implied \$41 trillion of wealth transfer (\$8 trillion to government, \$25 trillion to heirs, \$6 trillion to charity, and \$2 trillion to estate fees); the middle (3%) secular growth scenario implied \$73 trillion of wealth transfer (\$18 trillion to government, \$40 trillion to heirs, \$12 trillion to charity, and \$3 trillion to estate fees); and the high (4%) secular growth scenario implied \$136 trillion of wealth transfer (\$41 trillion to government, \$65 trillion to heirs, \$25 trillion to charity, and \$6 trillion to estate fees).

The low secular growth estimate of \$41 trillion (1998 dollars) has been widely cited since 1999. After reviewing the estimation model, the downturn in financial markets, and challenges to the \$41 trillion estimate, we released “Why the \$41 Trillion Wealth Transfer is Still Valid: A Review of Challenges and Questions” in January 2003 [Havens and Schervish, 2003]. The report reviewed the estimates and answered nine questions and challenges about the estimates. As the title implied, the report concluded that the \$41 trillion wealth transfer estimate was still valid, and re-emphasized that the bulk of the

forthcoming transfer would occur in the last 25 years of the 55-year period and would be concentrated among households at the upper end of the wealth distribution.

Since 1999, various groups have periodically expressed interest in estimates of wealth transfer at the state level. The principal impediment to developing these estimates is lack of data on the general distribution of household wealth and its specific distribution by age of head of household for geographic areas smaller than the nation. In 2004 we developed and tested a proprietary procedure to estimate these distributions for states and large metropolitan areas. Application of the procedure now allows us to apply the WTMM to produce wealth transfer estimates for states and large metropolitan areas as well as for the nation.

At the invitation of the Boston Foundation we applied a recently updated and expanded version of the WTMM to the households in the Boston metropolitan area in 2001 in order to estimate the transfer of wealth from these households during the period from 2001 through 2055. For the purposes of this report the Boston metropolitan area is defined as comprising seven counties in Massachusetts (Bristol, Essex, Middlesex, Norfolk, Plymouth, Suffolk, and Worcester) plus the town of Holland in Hampden County. This is the Massachusetts portion of the operational definition of the Consolidated Boston Metropolitan Statistical Area used by the U.S. Census in 2001.

Prior to applying the WTMM, it is necessary to first estimate the distributions of wealth and wealth by age of head of household. The procedure to estimate these distributions is based on data from the Survey of Consumer Finances (SCF) sponsored by the Board of Governors of the Federal Reserve and the demographic supplement of the Current Population Survey (CPS), jointly conducted by the Bureau of Census and the Bureau of Labor Statistics. The procedure requires that both databases share a common year. The demographic supplement of the CPS is collected in March, annually; but the most recent survey data from the SCF was collected in 2001. Consequently the most recent year for which base data is available is 2001 and that is the base year of this analysis.

This report presents and documents the wealth distributions and the estimates of wealth transfer for the Boston metropolitan area for three scenarios of secular rates of growth in household wealth: 2%, 3%, and 4% real (inflation adjusted) secular rates of growth. The estimates and all dollar figures in this report have been adjusted for inflation, which means that they are reported in terms of their purchasing power in 2005. For example, \$100,000 of household wealth in 2001 could purchase \$100,000 worth of goods and services in 2001 were the wealth liquidated and used for consumption expenditure. Due to inflation it would take \$109,091, on average, to purchase those same goods and services in 2005. The \$100,000 in 2001 dollars becomes \$109,091 in 2005 inflation adjusted dollars, which is the amount of money needed in 2005 to purchase what \$100,000 would have purchased in 2001.

The wealth distributions and wealth transfer estimates for the Boston metropolitan area are presented in the findings section of this report. How these estimates were derived is documented in the methodological appendix to this report.

Findings

This report provides three sets of estimates for households residing in the Boston metropolitan area in 2001: a baseline distribution of their current wealth, the projected wealth transfer, and a projection of their inter vivos giving during the same period from 2001 through 2055. The first set consists of the estimated distribution of household wealth and its distribution by age of head of household in 2001. This is the starting point for the simulation. The second set consists of the estimates of wealth transfer and the potential distribution of this transfer among government, heirs, charity, and estate settlement costs. The third set consists of a simple projection along trend of household inter vivos giving.

Throughout this document, household wealth is defined as household net worth, that is, the market value of all assets owned by members of the household less the value of all debt owed by members of the household. Inter vivos giving includes gifts of cash, assets, and other in-kind gifts to charitable organizations. All dollars are measured in 2005 constant (inflation adjusted) dollars. This means that all dollar values in the report represent 2005 buying power. For instance, a transfer of \$200,000 to an heir in 2055 will have the same 2005 buying power as a transfer of \$200,000 in 2005, although by 2055 the \$200,000 will have a nominal value closer to \$1,000,000 if we assume a 3% average annual inflation rate from 2005 through 2055.

Wealth Distributions

The first set of findings involves the amount and distribution of household wealth. Boston households are relatively wealthy compared with the nation. In 2001 the 2.008 million households in the Boston metropolitan area (1.89% of all households in the nation) owned an aggregate amount of \$1 trillion in wealth (2.43% of all household wealth in the nation). The average and median household wealth for Boston were \$498 thousand and \$172 thousand, which respectively represented 1.29% and 1.93% of the average (\$387 thousand) and median (\$89 thousand) household wealth in the nation.

Table 1 presents the distribution of household wealth for the Boston metropolitan area in 2001. As is the case across the nation, it shows a highly skewed distribution of wealth. At the lower end of the distribution in 2001 there were 1,102 thousand households (55% of all Boston area households) with wealth of less than \$200,000. In aggregate they owned \$61 billion of wealth (6% of all household wealth in the Boston metropolitan area). In contrast, at the upper end of the distribution there were 166 thousand households (8.3% of all Boston households) that owned wealth of \$1 million or more. In aggregate these households owned \$626 billion in wealth (62% of all household wealth in the Boston area). Even more dramatically, the 0.6% of households with wealth of \$10 million or more owned 22% of all household wealth in the Boston metropolitan area.

Although the distribution of wealth in Boston is concentrated among a small proportion of households, it is less highly concentrated than the national distribution. Table 1 indicates that for the nation there are 71,112 thousand households (67% of all U.S. households) with wealth of less than \$200,000. Their wealth averaged \$51,260 per household as compared with \$54,919 per household in the Boston area. At the other end of the spectrum, there were 7,131 thousand households nationally (6.7% of all U.S. households) with wealth of \$1 million or more. On average, their wealth was \$3.52 million as contrasted with \$3.76 million for similar households in the Boston area.

There was a smaller fraction of households in the lower end of the distribution of wealth in Boston than in the nation and a greater fraction of households in the upper end of the wealth distribution in Boston than in the nation. The average household wealth was higher in Boston than in the nation at both the lower end and the higher end of the distribution. In general Boston area households had considerably higher average wealth and higher median wealth than the nation. On every measure the Boston distribution of wealth was higher than the national distribution. Moreover, although both distributions are highly skewed, the Boston distribution is more equally distributed than the national distribution.

The last two columns of Table 1 contain the average ages of the heads of household within each net worth category for Boston and for the nation. Below \$10 million in wealth, the average ages in each net worth category are comparable between Boston and the nation. Above \$10 million, the average ages are notably older for heads of Boston households than for the heads of households nationally. This implies that the transfer of wealth from these high end households will occur sooner in Boston than for the nation.

Table 2 presents information about the distribution of wealth among households in the Boston Metropolitan area but only for households with positive net worth. It indicates that 1.8 million households had positive net worth, which in aggregate amounted to slightly more than \$1 trillion. Within each wealth category the average and aggregate household wealth are the same as presented in Table 1. The last four columns of this table contain the cumulative percentage distributions for the number of households and their aggregate net worth for Boston and the nation. The percentages in these columns are cumulated from high to low wealth categories. The table indicates that almost half (49%) the households in the Boston metropolitan area with positive net worth have net worth of \$200,000 or more as compared with slightly more than a third (37%) for the nation. In every wealth category above \$200,000 there is a greater percentage of households in Boston with wealth in that category or higher as compared with the nation. This again confirms that the distribution of household wealth in Boston is higher than the distribution for the nation.

With respect to wealth transfer, the distribution of wealth is important for two reasons. First, combined with rates of growth in household wealth, it determines the amount of wealth to be transferred at the death of the householders. Second, wealthy individuals tend to distribute a disproportionately large portion of their estates to charitable bequests. The Boston area distribution of wealth implies that very wealthy households will generate

a potentially larger value of charitable bequests relative to the rest of the nation during the period from 2001 through 2055 because their distribution of wealth is higher than the national distribution.

Table 3 presents the aggregate and average amount of household wealth in the Boston metropolitan area by the age of head of household in 2001. The table shows that in 2001 there was a slightly smaller fraction of households in the 40 to 59 age group and a larger fraction of households age 80 and older in Boston as compared with the nation. In every age group, the average household wealth is greater in Boston than in the nation. The difference is most pronounced in the 60 to 79 age group, whose average is \$875 thousand in Boston as compared with \$638 thousand for the nation.

Households whose head is under age 40 own about 15% of Boston's household wealth. The wealth of these households will not be transferred until late in or after the 55 year horizon of the wealth transfer analysis. Households age 60 or older own 44% of the wealth in the Boston area as compared with 41% nationally. Moreover, we found in Table 1 that the average age of heads of households with \$10 million or more net worth are on average older in Boston than in the nation. Both these facts imply that in Boston this wealth is likely to be transferred earlier in the 55 year period than it is nationally. One implication of the age distribution of wealth for wealth transfer is that a greater percentage of Boston's transfer of wealth in contrast to the national pattern will occur in the first 15 years and a smaller percentage in the last 15 years of the 55 year period.

Wealth Transfer Estimates

The Wealth Transfer Microsimulation Model (WTMM) estimates the number, value, and destiny (taxes, heirs, charity, and fees) of final estates in three secular growth scenarios: low (2%) secular growth, middle (3%) secular growth, and high (4%) secular growth. Before presenting these findings, we briefly summarize how the model works. (We detail the workings of the model in the Methodological Appendix.) The estimates of wealth transfer generated by the WTMM are derived from compiling the value of final estates. A final estate is an estate without a surviving spouse. The WTMM first calculates the number and value of final estates. When an unmarried person dies, the WTMM generates a final estate and transfers the wealth of the decedent to the final estate. When a married person dies, the WTMM transfers the wealth of the decedent to the decedent's spouse but does not generate a final estate; when that surviving spouse subsequently dies the WTMM generates a final estate and transfers the remaining household wealth to the final estate. After the number and value of final estates are estimated, the WTMM uses historical patterns to distribute the estate's value to government (in the form of federal and state estate taxes), heirs, charitable bequests, and estate fees (outstanding debt, burial costs, and legal/probate fees).

Low (2%) Secular Growth Scenario

Table 4 presents the detailed results of the low (2%) secular growth scenario for the Boston metropolitan area. Panel 1 presents the estimates for the 20 year period from 2001 through 2020. Panel 2 presents the corresponding estimates for the entire 55 year period from 2001 through 2055. Within each panel the columns define the value of the final estate, which is categorized by the value of household net worth when the final householder dies. The rows of the table define the number of final estates, the value in terms of net worth of final estates, estate fees, federal and state estate taxes, bequests to charity, and bequests to heirs. The total transfer and its distribution are located in the total column, which is the rightmost column in each panel.

For Boston we estimate that 1,665 thousand final estates will occur during the 55 year period from 2001 through 2055. These final estates will be valued at \$1.254 trillion (2005 dollars) at the time of death if wealth grows in the Boston area at an average annual secular rate of 2%. If historical patterns hold, \$47 billion will be distributed to estate fees, \$297 billion to government, \$172 billion to charity, and \$739 billion to heirs. The \$172 billion of potential charitable bequests constitutes 14% of the \$1.254 trillion value of final estates.

Most of the potential charitable bequests (52%) are generated by the 0.5% of final estates with net worth of \$20 million or more. This proportion (52%) is large for two reasons: (1) final estates with net worth valued at \$20 million or more account for 20% of the \$1.254 trillion in total wealth transfer in the Boston area; and (2) on average, estates of \$20 million or more give the largest fraction (38%) of their value to charity as compared with estates of lesser value.

In Boston, as in the nation, the transfer of wealth is concentrated among wealthy final estates. Most (77%) of the \$1.254 trillion of wealth transfer in the low growth scenario occurs among the 13% of final estates with net worth of \$1 million or more. These estates pay 78% of the aggregate estate fees, nearly 100% of the aggregate estate taxes, 96% of the aggregate charitable bequests, but only 63% of the aggregate bequests to heirs.

Panel 1 of Table 3 indicates that slightly more than 26% (\$323 billion out of the 55 year total \$1.254 trillion) of wealth transfer in Boston will occur before 2020. During the first 20 years from 2001 to 2020, 467 thousand final estates will occur. These 467 thousand final estates amount to 28% of final estates generated during the entire 55 year period of the simulation. The aggregate value of these estates is \$323 billion (26% of the aggregate value during the entire 55 year period) with potential aggregate charitable bequests of \$53 billion (31% of the aggregate amount during the entire period). Although the bulk of the wealth transfer in the Boston area will occur later than 2020, a disproportionately large fraction of the charitable bequest potential (as compared with national estimates) will occur before 2020.

We have seen in Table 1 that in 2001 there were 166 thousand households in the Boston

metropolitan area with at least \$1 million in net worth. During the 55 years of the low growth scenario, another 82 thousand households will become millionaires, for a total of 248 thousand households with net worth of at least a million dollars. However, the wealth of 31 thousand of these households will decline before their deaths as they draw down their assets through a combination of consumption, gifts, and health care costs after age 60. Of the 217 thousand households (248 minus 31) whose wealth remains above \$1 million before their final estates or before the year 2055, 177 thousand have final estates of \$1 million or more and 40 thousand households survive for 55 years and maintain their millionaire status in the year 2055.

Of the 1.665 million final estates, 1.031 million of the final decedents will be women, 612 thousand will be men, and 22 thousand will involve two spouses who die in the same year.

Middle (3%) Secular Growth Scenario

Table 5 presents the detailed results of the middle (3%) secular growth scenario for the Boston metropolitan area. It is formatted the same as Table 4. As in Table 4, the total transfer and its distribution are located in the total column, which is the rightmost column in each panel.

In the middle growth scenario for Boston we again estimate that 1,666 thousand final estates will occur among the 2001 population of households during the 55 year period from 2001 through 2055. These final estates will be valued at \$2.274 trillion at the time of death if wealth grows in the Boston area at an average annual secular rate of 3%. Based on historical patterns, \$82 billion will be distributed to estate fees, \$651 billion to government, \$412 billion to charity, and \$1.129 trillion to heirs. The \$412 billion of potential charitable bequests constitutes 18% of the \$2.274 trillion value of final estates – an additional 4% as compared with the low growth scenario.

Once again, most of the potential charitable bequests (65%) are generated by the 1% of final estates whose net worth is valued at \$20 million or more. This proportion (65%) is large for two reasons: (1) final estates with net worth values of \$20 million or more account for 32% of the \$2.274 trillion in total wealth transfer in the Boston area; and (2) on average, estates of \$20 million or more give the largest fraction (38%) of their value to charity as compared with estates of lesser value.

As in the nation, the transfer of wealth in the Boston metropolitan area is concentrated among wealthy final estates. Most (85%) of the \$2.274 trillion of wealth transfer in the middle (3%) growth scenario occurs among the 19% of final estates with net worth of \$1 million or more. These estates pay 85% of the aggregate estate fees, 99% of the aggregate estate taxes, 98% of the aggregate charitable bequests, and contribute 72% of the aggregate bequests to heirs.

From Panel 1 of Table 5 we find that approximately 17% (\$387 billion out of the 55 year

total \$2.274 trillion) of wealth transfer in the Boston area will occur by the end of 2020. During the first 20 years from 2001 to 2020, we again estimate that 467 thousand final estates will occur. These 467 thousand final estates amount to 28% of final estates generated during the entire 55 year period of the simulation. The aggregate value of these estates is \$387 billion (17% of the aggregate value during the entire period) with potential aggregate charitable bequests of \$71 billion (17% of the aggregate amount during the entire period). Most of the wealth transfer will occur later than 2020 – a greater percentage in the middle (3%) secular growth scenario than in the low (2%) secular growth scenario.

In 2001 there were 166 thousand households in the Boston metropolitan area with at least \$1 million in net worth. During the 55 years of the middle growth scenario, another 202 thousand households will become millionaires, for a total of 368 thousand millionaire households. However, the wealth of 35 thousand of these households will decline before their deaths as they draw down their assets through a combination of consumption, gifts, and health care costs after age 60. Of the 333 thousand households (368 minus 35) whose wealth remains above \$1 million before their final estates or before the year 2055, 252 thousand have final estates with net worth of \$1 million or more at their deaths and 81 thousand households survive for 55 years and maintain their millionaire status in the year 2055.

Of the 1,665 thousand final estates in all scenarios, 1,031 thousand of the final decedents will be women, 612 thousand will be men, and 22 thousand will involve two spouses who die in the same year.

High (4%) Secular Growth Scenario

Table 6 presents the detailed results of the high (4%) secular growth scenario for the Boston metropolitan area. Table 6 is formatted the same as Table 4 and Table 5. Once again, the total transfer and its distribution are located in the total column, which is the rightmost column in each panel.

As is the case in all three scenarios, there are still 1,665 thousand final estates in the Boston metropolitan area generated by the 2001 population of households during the 55 year period from 2001 through 2055. These final estates will be valued at \$4.297 trillion at the time of death if wealth grows in the Boston area at an average annual secular rate of 4%. If historical patterns hold, \$148 billion will be distributed to estate fees, \$1.394 trillion to government, \$1.007 trillion to charity, and \$1.748 trillion to heirs. The \$1 trillion of potential charitable bequests constitutes 32% of the \$4.297 trillion value of final estates.

Most of the potential charitable bequests (76%) are generated by the 2% of final estates with net worth of \$20 million or more. This proportion is large for two reasons: (1) final estates with net worth valued at \$20 million or more account for 49% of the \$4.297 trillion in total wealth transfer in the Boston metropolitan area; and (2) on average,

estates of \$20 million or more give the largest fraction (38%) of their value to charity as compared with estates of lesser value.

As household wealth grows at higher rates, the transfer of wealth in the Boston metropolitan area as in the nation is concentrated among wealthy final estates. Most (93%) of the \$4.297 trillion of wealth transfer in the high growth scenario occurs among the 27% of final estates whose net worth is \$1 million or more. These estates pay 92% of aggregate estate fees, nearly 100% of aggregate estate taxes, 99% of the aggregate charitable bequests, and 83% of aggregate bequests to heirs.

Panel 1 of Table 5 shows that less than 11% (\$454 billion out of the 55 year total \$4.297 trillion) of wealth transfer in the Boston area will occur on or before 2020. During the first 20 years from 2001 to 2020, we again estimate that 467 thousand final estates will occur. These 467 thousand final estates amount to 28% of final estates generated during the entire 55 year period of the simulation. The aggregate value of these estates is \$454 billion (11% of the aggregate value during the entire period) with potential aggregate charitable bequests of \$91 billion (9% of the aggregate amount during the entire period). Just as the 4% growth rate produces more wealth transfer than the other scenarios in the first 20 years, it also results in dramatically greater growth in the next 35 years. As a result, the great majority (89%) of the wealth transfer will occur later than 2020.

In 2001 there were 166 thousand households in the Boston metropolitan area with at least \$1 million in net worth. During the 55 years of the high growth scenario, another 382 thousand households will become millionaires, for a total of 548 thousand millionaire households. However, the wealth of 27 thousand of these households will decline before their deaths as they draw down their assets through a combination of consumption, gifts, and health care costs after age 60. Of the 521 thousand households (548 minus 27) whose wealth remains above \$1 million before their final estates or before the year 2055, 392 thousand have final estates of \$1 million or more and 129 thousand households survive for 55 years and maintain their millionaire status in the year 2055.

In all three scenarios, there are 1,665 thousand final estates, 1,031 thousand of the final decedents will be women, 612 thousand will be men, and 22 thousand will involve two spouses who die in the same year.

Inter Vivos Giving and Wealth Transfer by Initial Household Wealth

Tables 7, 8, and 9 present data for each of the three growth scenarios on wealth transfer and inter vivos charitable donations categorized by the initial wealth of the households in 2001. In each table the first column contains the category of wealth for Boston households at the beginning of the simulation period in 2001. This first column defines the rows of the table. The second column lists the number of households in each wealth category in 2001; the third column lists the aggregate wealth of these households in 2001; the fourth column presents the number of final estates generated by these households during the 55 years of the simulation; the fifth column presents the aggregate value of the

final estates presented in column four; the sixth column lists the number of the initial households in 2001 that survive the 55 years and still exist in 2055; the seventh column lists the aggregate wealth of these surviving households in 2055; the eighth column lists a simple projection of inter vivos contributions along trend (at the same percentage as secular growth in wealth) during the 55 year period of the simulation; the ninth column lists the estimates of potential aggregate charitable bequests projected by the WTMM during the 55 year period of the simulation; the tenth column sums the inter vivos and charitable bequests from columns eight and nine; the last two columns present the cumulative distributions of charitable giving and of households, respectively.

Table 7 presents the data for the low (2%) growth scenario. The last row indicates that there were 2.008 million households in the Boston metropolitan area in 2001 and their aggregate wealth amounted to just under \$1 trillion. These households produced 1.665 thousand final estates whose aggregate value was \$1.254 trillion. Of the 2.008 million households in 2001, 343 thousand survive in 2055 and their aggregate wealth amounts to \$281 billion. Based on the pattern of inter vivos giving in the 2001 Survey of Consumer Finances (defined in terms of household wealth and race), the WTMM projects that the 2.008 million heads of households in the Boston area in 2001 will contribute \$187 billion to charitable causes before their deaths and \$172 billion in charitable bequests during the 55 years of the simulation. The total amount of inter vivos charitable donations and charitable bequests is estimated to be \$359 billion during the 55 year period. The cumulative percentages indicate that the 8.3% of households in the Boston area that have wealth of \$1 million or more in 2001 account for 62% of the charitable giving during the 55 years of the simulation. Even more dramatically, the 0.6% of Boston area households with wealth of \$10 million or more in 2001 account for 30% of the charitable giving during the 55 year period.

Table 8 presents the data for the middle (3%) growth scenario. The last row again indicates that there were 2.008 million households in the Boston metropolitan area in 2001 and their aggregate wealth amounted to nearly \$1 trillion. These households produced 1.665 thousand final estates whose aggregate value was \$2.274 trillion. Of the 2.008 million households in 2001, 343 thousand survive in 2055 and their aggregate wealth amounts to \$779 billion. Based on the pattern of inter vivos giving in the 2001 Survey of Consumer Finances (defined in terms of household wealth and race), the WTMM projects that the 2.008 million heads of households in the Boston metropolitan area in 2001 will contribute \$234 billion to charitable causes before their deaths and \$412 billion in charitable bequests during the 55 years of the simulation. The total amount of inter vivos charitable donations and charitable bequests is estimated to be \$646 billion during the 55 year period. The cumulative percentages indicate that the 8.3% of households in the Boston area that have wealth of \$1 million or more in 2001 account for 65% of the charitable giving during the 55 years of the simulation. Even more dramatically, the 0.6% of Boston area households with wealth of \$10 million or more in 2001 account for 27% of the charitable giving during the 55 year period.

Table 9 presents the data for the high (4%) growth scenario. From the last row we find that the 2.008 million households in the Boston metropolitan area in 2001 owned

approximately \$1 trillion in aggregate wealth. These households produced 1,665 thousand final estates whose aggregate value was \$4.297 trillion. Of the 2.008 million households in 2001, 343 thousand survive in 2055 and their aggregate wealth amounts to \$2.131 trillion. Based on the pattern of inter vivos giving in the 2001 Survey of Consumer Finances (defined in terms of household wealth and race), the WTMM projects that the 2.008 million heads of households in the Boston area in 2001 will contribute \$299 billion to charitable causes before their deaths and \$1.007 trillion in charitable bequests during the 55 years of the simulation. The total amount of inter vivos charitable donations and charitable bequests is estimated to be \$1.306 trillion during the 55 year period. The cumulative percentages indicate that the 8.3% of households in the Boston area that have wealth of \$1 million or more in 2001 account for 65% of the charitable giving during the 55 years of the simulation. The 0.6% of Boston area households with wealth of \$10 million or more in 2001 account for 22% of the charitable giving during the 55 year period.

Summary of Inter Vivos Giving and Wealth Transfer Results

The major findings for each of the three secular growth scenarios are summarized in Table 10. The upper panel of this table summarizes the findings for the 20 year period from 2001 through 2055. The lower panel summarizes the corresponding findings for the 55 year period from 2001 through 2055.

The first row of the upper panel indicates that the 20 year estimate of total wealth transfer in the Boston metropolitan area ranges from \$323 billion in the 2% secular growth scenario to \$454 billion in the 4% secular growth scenario – an increase of 41%. The second row indicates a 20 year total of charitable bequests ranging from \$53 billion in the low growth scenario to \$91 billion in the high growth scenario. The third row predicts that the 20 year total of additional inter vivos giving will range from \$89 billion to \$107 billion. The fourth row of this panel indicates that the 20 year estimate of total charitable contributions rises from \$141 billion in the 2% secular growth scenario to \$198 billion in the 4% secular growth scenario – an increase of 40%. The fifth row of this table indicates the percentage of aggregate contributions made by households with \$1 million or more in wealth at the time of the contribution. As can be seen, the percentage of contributions made by millionaires rises from 68% in the 2% secular growth scenario to 76% in the 4% secular growth scenario.

The lower panel indicates that during the 55 year period, the estimates of total wealth transfer range from \$1.254 trillion in the 2% secular growth scenario to \$4.297 trillion in the 4% growth scenario – an increase of 243%. The 55 year estimate of charitable bequests ranges from \$172 billion in the low growth scenario to \$1.007 trillion in the high growth scenario – an increase of 485%. The 55 year estimate of inter vivos giving ranges from \$187 billion to \$299 billion – an increase of 60%. Combining inter vivos and bequest giving, the 55 year estimate of total charitable donations ranges from \$358 billion to \$1.306 trillion – an increase of 265%. During the 55 year period of the simulation, the percentage of total contributions made by millionaires ranges from 65%

to 90%. It is clear that millionaire households as a group possess the greatest capacity for charitable giving and based on historical patterns and projections will contribute the greatest amount of charitable giving during the next 55 years. Higher secular rates of growth in wealth increase the potential for charitable giving for these millionaires faster than for less wealthy households, and in the Boston metropolitan area the proportion of charitable giving by millionaires increases substantially as the rate of secular growth increases over the 55 year period.

There is another theme in this table: in the 20 year period inter vivos contributions predominate over charitable bequests in each of the three scenarios, but in the 55 year period charitable bequests predominate over inter vivos giving in the 3% and 4% growth scenarios. The shift in predominance reflects three trends in the data. First, although household inter vivos giving grows along trend at the same secular rate as household wealth, over time householders die and no longer make inter vivos gifts at all. Second, it is precisely when householders die that final estates are formed and charitable bequests are made. Most of these estates in the Boston area will occur after 2020, especially among wealth holders. Third, over the decades household wealth grows and there are more wealthy households. The estates of wealthy households account for the largest charitable bequests -- on average, the wealthier the estate the larger the fraction of the estate that is allocated to charity.

Discussion

In 2001 the Massachusetts portion of the Boston Consolidated Metropolitan Area contained slightly more than 2 million households. These households constituted 1.89% of all households in the nation, but their aggregate net worth constituted 2.43% of the aggregate net worth of the nation. Approximately 91.7% of the households in the Boston area had net worth less than \$1 million in 2001, but the approximately 8.3% of households with net worth of \$1 million or more owned 62% of the aggregate wealth in the Boston area. Moreover, the householders with \$1 million or more in net worth were relatively older than their counterparts nationally.

During the 55 years from 2001 through 2055, we estimate that Boston area households will transfer \$1.254 trillion and will contribute a potential \$359 billion in combined inter vivos donations and charitable bequests, if secular growth is 2%. These households will transfer \$2.274 trillion and will contribute a potential \$646 billion in combined inter vivos donations and charitable bequests, if secular growth is 3%. They will transfer \$4.297 trillion and will contribute a potential \$1.306 trillion in combined inter vivos donations and charitable bequests, if secular growth is 4%.

The data in Table 3 indicates that there are a greater proportion of young households that are wealthy and a greater proportion of older households that are wealthy as compared with the national distribution of wealth by age of head of household. The greater proportions of older households yields a higher proportion of wealth transfer in the near term 20 year period. The countervailing higher proportion of younger wealth holders

offsets this, however. This younger group will not transfer their wealth until late in the 55 year period. The younger group is actually larger and has greater sway on the aggregate wealth transfer estimates than the older group. This results in somewhat lower wealth transfer in the near term 20 year period as compared with the national estimates.

In the Boston area the wealth transfer in the first 20 years ranges from 11% to 26% of the 55 year total, depending on the scenario. In our 1999 national analysis the corresponding percentages were 13% to 29%, depending on the scenario. In terms of dollars, the estimate of wealth transfer in the Boston area during the first 20 years amounts to \$323 billion, and the estimate of combined inter vivos donations and charitable bequests amounts to \$141 billion, if secular growth is 2%. During these 20 years the wealth transfer estimate amounts to \$387 billion, and the estimate of combined inter vivos donations and charitable bequests amounts to \$168 billion, if secular growth is 3%. If secular growth is 4%, we estimate that during the first 20 years there will be \$454 billion in wealth transfer, and combined inter vivos donations and charitable bequests will amount to \$198 billion.

It is important to note that the foregoing wealth transfer findings were derived from a wealth transfer simulation analysis specifically designed for the Boston metropolitan area using the WTMM specifically calibrated for the Boston area. The results of this analysis provide different and more accurate estimates than would have been provided by simply apportioning national findings to the Boston area on the basis of the number of households in the Boston metropolitan area. Were the 1999 national estimates of wealth transfer adjusted for inflation to constant 2005 dollars and apportioned to the Boston area by population, the estimates of wealth transfer would have been \$887 billion for the low (2%) growth scenario, \$1.593 trillion for the middle (3%) growth scenario, and \$2.976 trillion for the high (4%) growth scenario. The estimates for the three scenarios derived from the more complex methodology used to produce this report are \$1.254 trillion, \$2.274 trillion, and \$4.297 trillion, which are, respectively, 41%, 43%, and 44% higher than the proportioned results. In part this is due to growth in household wealth since 1999 and in part to a different period of estimation. More importantly, the source of the better estimates is our ability to introduce more intricate estimation procedures and parameters such as updated mortality rates. But the largest source of the difference between a simple apportionment and our current approach is due to our tailoring the estimates to the Boston metropolitan area. We find that tailored estimates for states and large metropolitan areas are more accurate than interpolation based on national estimates because such tailored estimates take account of the local demographic and income characteristics of the area. Although it need not be the case that more accurate and tailored estimates will produce higher wealth transfer estimates than simple apportionment, in this case the results are higher. Also, because these estimates have been produced by working directly with the WTMM, the projection that aggregate wealth transfer for the Boston metropolitan area will be at least \$1.3 trillion and as much as \$4.3 trillion can be reported and used with greater confidence.

The findings for the Boston metropolitan area that we have documented should offer this region and its citizens a deeper hope and confidence about its philanthropic prospects.

But an even more favorable outcome may be in store for the Boston area than what our estimates already suggest. First, the estimates reported here are conservative. Second, our projections do not take into account the new and renewed efforts of charities and others, such as the Boston Foundation, to encourage greater charitable giving.

The growth rates of 2%, 3%, and 4% modeled in the wealth transfer simulation as well as the estimated growth of 2%, 3%, and 4% in inter vivos giving are both reasonable, if not conservative, by historical standards. For instance, the real annual growth in household wealth from 1950 through the first quarter of 2004 has averaged 3.37%. Moreover, this average rate of growth has endured despite the occurrence of 9 recessions over this period. From this we can conclude that the results from the 2% wealth transfer scenario—the one we tend to emphasize in our writings and presentations—is clearly conservative, that the results from the 3% scenario are historically low, and that the results from the 4% scenario are reasonable. In regard to the growth of inter vivos giving, the 2%, 3%, and 4% projections of annual average real growth also turn out to be historically low. From 1985 to 2004, data from Giving USA (Center on Philanthropy at Indiana University, 2004) indicates that average real growth in individual lifetime giving has grown at an average annual rate of 3.34%. From 1995 through 2004, the average real rate of growth in such giving has been 5.29%. Our estimates of projected inter vivos giving, we believe, are even more conservative than our projections of wealth transfer and charitable bequests.

Because our projected rates of growth in wealth, charitable bequests, and inter vivos giving are so conservative, it is reasonable to expect that total charitable giving over the next five decades will be equal to if not higher than our current estimates. But in addition to our conservative estimation strategy, there is a more important reason why charitable giving in the greater Boston area may turn out to be even more abundant.

In all scenarios, the WTMM assumes that household wealth grows in accordance with historical patterns that reflect patterns of charitable bequests and inter vivos giving. Specifically, the wealth transfer estimates assume that the relationship between household wealth, charitable bequests, and inter vivos gifts to persons and to charity do not change, on average, during the 55 year period of the simulation. In other words, all we have said so far does *not* assume that people become more charitably inclined than they have been in the past. This could all change as charities step up the quantity and, especially, the quality of their fundraising efforts, and as national and regional efforts to advance philanthropy encourage philanthropy through programs that better communicate the technical tools, effective consequences, spiritual meaning, and personal satisfaction of charitable giving. What we have in the past referred to as the prospects for a golden age of philanthropy will arise not just because of the growth in wealth. It will emerge even more profoundly and abundantly to the extent there is a growth in a dedicated and fulfilling philanthropic identity among those for whom allocating financial resources for the care of others is a high priority. As with our report on Geography and Generosity, a major implication of this report is that the Boston Foundation is well positioned because of its prominent status in the community and because of the foregoing information to take a leadership role in advancing philanthropy in its region of responsibility.

Methodological Appendix

This appendix documents the details of how the estimates were determined. It describes how the microdata file was derived, even without a reliable source of household wealth for the Boston metropolitan area. It then continues with a description of the model and how it works.

The research objective of this project is to estimate the wealth transfer from households residing in the Massachusetts portion of the Boston Consolidated Metropolitan Area in 2001 during the period from 2001 through 2055. In 2001 the Bureau of the Census defined the Massachusetts portion of the Boston Consolidated Metropolitan Area as consisting of seven counties in Massachusetts (Bristol, Essex, Middlesex, Norfolk, Plymouth, Suffolk, and Worcester) plus the town of Holland in Hampden county. Our basic research strategy was to apply the currently updated and expanded WTMM to a microdata file for the Boston area. This strategy required the development of an appropriate microdata file for Boston and calibration of the data file for use by the WTMM. Once these tasks were completed, the WTMM could be run for each of the three scenarios and results tabulated.

Survey of Consumer Finances

The WTMM was designed to use a subset of data from the Survey of Consumer Finances (SCF) as its national microdata file. The SCF is conducted every three years for the Board of Governors of the Federal Reserve [National Opinion Research Center, 1992, 1995, 1998, and 2001]. The most recent available survey was conducted in 2001. The 2004 survey is currently collecting data and will not be released until early 2006.

There are approximately 4,500 households in the 2001 survey sample: 3,000 households selected in a representative sample and 1,500 in an oversample of wealthy households, selected from IRS income tax returns. The staff of the Federal Reserve calculates weights that permit the two samples to be combined to represent the population of all households. With respect to content, the SCF contains very detailed information concerning assets owned, income earned, debt owed, inheritance expected or received, employment history, and demographic characteristics. The SCF also contains a question concerning inter vivos giving of cash and in-kind charitable donations¹. The two most important characteristics of the SCF with respect to wealth transfer are: (1) it contains sufficient detail about the full portfolio of each household to support a reliable estimate of net worth at the household level, and (2) unlike most other surveys it includes a large group of wealthy households that supports reliable estimates for this group, which gives disproportionately large amounts to charity.

¹ The SCF ignores annual donations of less than \$500 per household. At CWP we developed a method to approximate the value of contributions of less than \$500 based on data from the General Social Survey conducted by the National Opinion Research Center.

Imputation of Wealth

The key limitation to applying the WTMM to states and metropolitan areas is the lack of data concerning the distribution of net worth of households in these areas. There is partial data on state and metropolitan area assets from a variety of sources but there is no sufficiently large representative sample of households for states and metropolitan areas with a reliable comprehensive distribution of household net worth.

Early in 2004, we began to explore the possibility of using relationships among variables on the SCF to impute net worth to households in the Current Population Survey (CPS) based primarily on components of income, home ownership, and demographic characteristics. The 2001 March Supplement of the CPS is based on a sample of approximately 70,000 households, representative by state and large metropolitan areas. It contains detailed information on income, household structure, employment, and demographic characteristics, but very sparse information on wealth.

In our exploration of the feasibility of imputing wealth to households in the CPS sample, we had the ambitious objective of estimating the distribution of household wealth within states and large metropolitan areas. At the national level the goal was to estimate the national distribution of household wealth based on the imputed measure in the CPS sample. The SCF provides an independent estimate of this distribution. Using the SCF distribution as a criterion, therefore, we wanted to develop, for each household on the CPS, an imputed measure of wealth whose distribution matched the distribution of wealth from the SCF.

We began our development efforts by adapting an approach used by the Federal Reserve to predict household wealth based on components of income [Frankel and Kennickell, 1995; Kennickell, 1993, 1999, and 2001] which the Fed uses to select its high wealth oversample based on income information from IRS income tax filings. The results were promising but not sufficiently reliable, especially at very high, lower middle, and low levels of wealth. We modified some of the variables we had been using (e.g. replaced median value of housing with average value of housing), added a number of demographic characteristics (e.g., marital status, age, education, race) and developed our own proprietary procedure to impute household wealth to households in the Current Population Survey. In the process we gave more emphasis to macro level accuracy of the distribution than to micro level household accuracy of imputed wealth.

Assessment of Imputation Measure

The goal of the imputation procedure was to estimate the distribution of wealth within states and large metropolitan areas. We succeeded in the sense that the national distribution of household wealth based on the imputed measure on the CPS sample has the same mean and nearly the same standard deviation as the national distribution based on the SCF; the median and quartiles of the imputed distribution are also within a percent of their counterparts in the wealth distribution from the SCF. Moreover, the age distribution of imputed wealth is within 3 percent of the age distribution of household

wealth on the SCF. The means of the imputed wealth measure from the CPS are usually within 5 percent of the means of wealth on the SCF within categories of demographic characteristics not included in the imputation procedure. On a national basis for 2001, the imputed measure appears to have good national distributional properties in the base year.

Without going into the analytic details here, we found that the properties of the imputation degraded when applied to the 1998 CPS using the relationships among variables in the 2001 SCF. However, when using relationships among variables in the 1998 SCF the imputation regained its levels of distributional accuracy. We conclude that it is necessary that the SCF and the CPS be for the same year, since some of the relationships used in the imputation are more associational than behavioral or causal. This is the reason that the base year of the imputation and the base year of the wealth transfer analysis is 2001, the most recent vintage of SCF data.

Although the imputation reproduces the distribution of wealth nationally, there was no guarantee that it would do so for states and metropolitan areas. Clearly, since the imputed measure is derived from the income, home ownership, and demographic characteristics specific to each state and metropolitan area, a case can be made that it should be a good estimate of the wealth of these states and metropolitan areas. We looked at work on the distribution of wealth by states conducted by Barry Johnson and his colleagues at the Statistics of Income (SOI) Division of the IRS [Johnson and Schreiber, 1998]. This work used the value of estates from federal estate filings together with mortality rates and state demographic profiles from the Bureau of Census to estimate wealth in the state of filing. The rank order correlation for state wealth generated by the SOI technique and our imputed measure was near zero – the two measures were uncorrelated. However, in 1996 Robert and Jon Haveman estimated wealth at the state level based on asset and debt information collected as part of the Survey of Income and Program Participation (SIPP) [Haveman and Haveman, 1996]. The rank order correlation between the Haveman measure from 1996 and our imputed measure for 2001 was 0.67 – a fairly close relationship given the intervening years and the fact that SIPP has oversamples of low income households but no oversample of high wealth households. The Haveman measure also had near zero rank order correlation with states ranked by the SOI measure of wealth. We concluded that the SOI measure may not be an effective measure for generating the entire distribution of wealth for the entire population of a state and that our imputed measure was superior at least with respect to generating state distributions.

As a final assessment of the imputed measure we applied it to states and metropolitan areas in New England. It agreed with our perceptions of wealth in these states and metropolitan areas. This constituted a minimal criterion rather than strong evidence of regional accuracy of the measure. However, the measure passed this minimal test.

In summary our imputed measure replicates the national distribution of household wealth very closely, is based on population and household characteristics measured in the CPS for states and metropolitan areas, and closely agrees with the only other study we found

based on household survey data. We conclude the imputed measure appears to be a good measure for generating the distribution of household wealth for states and large metropolitan areas.

Calibrating the Microdata File to Boston

The process of developing the microdata file for Boston involves marrying the information from three sources: (1) the national relationships among wealth and inheritance variables from the 2001 SCF, (2) the wealth and demographic distributions for Boston from the CPS, and (3) the aggregate national wealth totals from the Flow of Funds Accounts published by the Federal Reserve.

In our estimates of wealth transfer we have reconciled the aggregate amount of household wealth derived from the SCF with an independent, more comprehensive estimate from the Flow of Funds Accounts. We assume that the Flow of Funds estimate is more accurate at the aggregate level than the survey estimate due to variations of sampling. Since very high wealth holders (households with more than \$50 million in wealth) are relatively rare, the proportion included in the sample varies from year to year, and their wealth is so large that even modest variations in the proportions of high wealth holders in the sample has an effect on the estimate of aggregate wealth derived from the survey. In 2001 we adjusted the shape of the extreme tails of the SCF wealth distribution to a weighted average shape of the distributions in 1992, 1995, 1998, and 2001 (counted twice). After this adjustment, the estimate of aggregate household wealth based on the survey estimate was within 2 percent of the estimate based on the Flow of Funds Accounts.

The imputed measure of wealth allowed us to estimate the overall distribution of household wealth for the Boston metropolitan area and breakdowns of this distribution by demographic characteristics important to the estimation of wealth transfer (i.e., age, marital status, race, and gender of not married). The imputed measure, however, is less accurate at the household level (since we had emphasized distributional accuracy over household accuracy when developing the imputation measure). In contrast, the SCF measures household wealth and household demographic characteristics at a national level, but its distributions of both household wealth and demographic characteristics do not match those for the Boston area. We wanted to calibrate the microdata file for the Boston area in such a manner that it would combine the Boston distributional properties with the household accuracy of the SCF. Since the SCF and CPS were both describing the population in 2001, we married the data from both files by mapping the SCF into the Boston distributions as derived from the CPS (with the imputed measure of wealth). The resulting file, adjusted for different sample sizes, constitutes the Boston microdata file, which was used by the WTMM to produce the estimates of wealth transfer for the Boston metropolitan area. This method of marrying the two sets of data has three beneficial properties: (1) it reestablished the accuracy of wealth in relation to demographic characteristics at the household level; (2) it maintained the distributions based on the CPS; (3) it contained all the variables (in addition to wealth) that are required by the WTMM to estimate wealth transfer.

Assessment of Calibration

The two most important distributions for the estimate of wealth transfer in the Boston metropolitan area are (1) the distribution of household wealth in the Boston area, and (2) the distribution of average household wealth by age of head. These distributions were presented in the findings section. A comparison of these distributions for Boston reveals that the distributions based on the remapped file (used to produce the wealth transfer estimates) differ by less than 0.2% from the corresponding distributions based on the CPS data for Boston. The remapped data faithfully reproduced the distributions of household wealth based on the imputed wealth measures for Boston area households in the CPS sample.

The WTMM

The Wealth Transfer Microsimulation Model (WTMM) was designed and developed at CWP (then known as the Social Welfare Research Institute) at Boston College. Updated and expanded in the past six months, the model simulates the number and value of final estates for households that existed in 2001 during a 55 year period, which in this analysis is 2001 through 2055. The model was further adapted to estimate wealth transfer in the Boston metropolitan area through the development and calibration of its microdata file and some relatively minor modifications for the smaller number of households in the Boston area as compared with the nation.

The WTMM incorporates the concept of final estate. A final estate is an estate without a surviving spouse – that is, the estate of a widowed, divorced, or never married decedent. When one of two spouses die the WTMM assumes that the wealth of the decedent is transferred to the surviving spouse. In this case a final estate occurs only when the surviving spouse dies. A final estate also occurs at the death of all other heads of household (i.e., never married, divorced, or widowed heads of household)

The WTMM assumes that household wealth grows along secular trends consistent with growth in the gross domestic product of the economy. The rates of growth define each of three scenarios (2%, 3%, and 4% rates of secular growth, respectively). A major assumption of the analysis is that there will be no sustained period of major economic downturn or upturn in the Boston metropolitan area during the 55 year period of the analysis (2001 through 2055). There will, of course, be economic cycles in the Boston area during this period. The WTMM assumes only that none of these cycles will result in a long period (5 years or more) of sustained economic depression or booming economic growth.

The WTMM does not generate births, marriages, or divorces nor does it develop new household businesses nor divest the household of old businesses in the course of the simulation. It does, of course, assume that people in the Boston area die at the 2001 national rates (by age, gender, and race) published by the National Center for Health Statistics based on data from the Center of Disease Control and Prevention.

The WTMM does assume that there are variations in the rate of growth in household wealth, depending on the age of head. These life cycle variations are due to periods of accelerated rates of accumulation, periods of distribution, variations in savings rates, variations in consumption rates, drawdown of assets at the end of their lifecycle for households of modest means, and gifting of assets predominantly among affluent and wealthy households. The WTMM assumes that for the next 55 years the pattern of life cycle variations in the rate of growth in household wealth is represented by the current pattern estimated from data from the 1992, 1995, 1998, and 2001 SCF. In particular it assumes there will be no major increase or decrease in the amounts or prevalence of inter vivos gifts (such as charitable remainder trusts) during the period.

The WTMM applies the mortality rates, secular growth rates, and life cycle variations to each household to estimate the number and value of final estates. For each final estate, its value is distributed to government, charity, heirs, and estate costs based on historical patterns. These patterns depend on the asset value of the estate. They are based primarily on data from federal estate tax filings for 1992 through 2001. The pattern indicates that as asset levels of estates increase, the proportion of the value of the estate bequeathed to charity increases substantially to an average of 38% for estates with assets of \$20 million or more. The WTMM assumes that the national historical pattern, adjusted for changes in the estate tax law, holds for the Boston area during the period of the simulation.

The expanded version of the WTMM modifies the historical proportions of the value of estates distributed to government by an adjustment based on changed estate tax liability based on current estate tax law as reflected in The Economic Growth and Tax Relief Reconciliation Act of 2001. Specifically the WTMM estimates the government share of the estate based on its asset value and the historical proportion paid in estate taxes. The WTMM then calculates the estate tax liability under estate tax provisions in effect prior to 2001 and estate tax provisions in effect for the year being simulated. The proportion of new to old tax liability is applied to the historical estimate of estate taxes paid (which reduces this amount for estates that paid estate taxes). The resulting reduction in estate taxes paid is allocated as increases to charity and heirs, proportional to the historical percentages distributed to charity and heirs for the given household. This allocation is consistent with the proposition that reductions in the estate tax will increase charitable giving [Schervish, 2001].

The expanded WTMM estimates wealth transfer by race. Because of small sample sizes, however, breakdowns of wealth transfer estimates by race are unreliable for Boston and are not contained in this report.

The expanded WTMM projects inter vivos charitable giving along secular trend. The secular trend is the same as that used for growth in household wealth in the scenario. In each year of the analysis, households that have survived in that year are assumed to make inter vivos contributions equal to their prior year contributions times the secular growth rate for the scenario.

The WTMM runs in constant (inflation adjusted) dollars for 2001. All internal calculations and all estimates are calculated in 2001 dollars. These values have been transformed to constant (inflation adjusted) 2003 dollars prior to presentation in this report. All dollar amounts in this report are constant 2003 dollars.

The WTMM for the Boston area estimates the amount of wealth transferred during the 55 year period by households residing in the Boston metropolitan area in 2001. It needs to be interpreted with respect to this group of households. We note that not all of this wealth will necessarily be transferred to charities and heirs located in Boston, some will be transferred to charities and heirs located outside the Boston area. Moreover, some households residing in Boston in 2001 may move out of the Boston area prior to the deaths of the heads of household and consequently prior to the transfer of wealth. The wealth transfer model assesses the capacity of the 2001 population of Boston to transfer wealth and its potential capacity for charitable giving.

Data and Parameters

Via its microdata file, WTMM uses the relevant demographic characteristics for Boston area households derived from the CPS. It uses distribution of wealth derived from the imputed measure of wealth, which in turn depends on the detailed income components and demographic characteristics of Boston area households as contained in the CPS. The construction of the microdata file has been described previously in this report.

In addition to the Boston area microdata file, the WTMM uses parameters based on national statistics. It uses the final mortality rates for 2001 published by the National Center for Health Statistics based on data from the Center of Disease Control and Prevention. It uses historical data from the Statistics of Income Division of the Internal Revenue Service. This data consists of average patterns (1992-2001) of distribution of estates, net of surviving spouse deductions, where the distributions are defined in terms of the percentage of the net value distributed to estate fees, charitable deductions, estate taxes, and heirs. The WTMM also uses life cycle variations in the growth of wealth calculated from the 1992, 1995, 1998, and 2001 SCF.

Scenarios

The estimates of wealth transfer and its potential for charitable giving have been calculated for three scenarios, differentiated by the rate of secular growth in household wealth. The low growth scenario assumes a 2% real (inflation adjusted) rate of secular growth and lower than average rates of life cycle savings. The middle growth scenario assumes a 3% real rate of secular growth and average rates of life cycle savings. The high growth scenario assumes a 4% real rate of secular growth and above average rates of life cycle savings

Bibliography

- Avery, Robert B. 1994. "The Pending Intergenerational Transfer." Philanthropy 8 (1):5, 28-29.
- Center on Philanthropy at Indiana University. 2005. Giving USA 2005: The Annual Report on Philanthropy for the Year 2004. Indianapolis: AAFRC Trust for Philanthropy.
- Frankel, Martin and Arthur Kennickell. 1995. "Toward the Development of an Optimal Stratification Paradigm for the Survey of Consumer Finances." Proceedings of the Section on Survey Research Methods. 1995 Annual Meetings of the American Statistical Association, Orlando, FL.
- Haveman, Robert and Jon Haveman. 1996. Unpublished calculations based on U.S. Department of Commerce, Bureau of the Census data from Survey of Income Program Participation. Washington, D.C. <http://sadrc.cfed.org/measures/meannetworth.php>
- Havens, John J. and Paul G. Schervish. 1999. "Millionaires and the Millennium: New Estimates of the Forthcoming Wealth Transfer and the Prospects for a Golden Age of Philanthropy." Center on Wealth and Philanthropy (formerly Social Welfare Research Institute), Boston College. <http://www.bc.edu/cwp>
- and Paul G. Schervish. 2003. "Why the \$41 Trillion Wealth Transfer Is Still Valid: A Review of Challenges and Questions." Center on Wealth and Philanthropy (formerly Social Welfare Research Institute), Boston College. <http://www.bc.edu/cwp>
- Johnson, Barry W. and Jacob M. Mikow. 1999. "Federal Estate Tax Returns, 1995-1997." Statistics of Income Bulletin (19)1: 69-129.
- Johnson, Barry W. and Lisa M. Schreiber. "Personal Wealth, 1998." Statistics of Income Bulletin. (22)3. Winter 2002-2003. pp. 87-115.

- Kennickell, Arthur B. 2001. "Modeling Wealth with Multiple Observations of Income: Redesign of the Sample for the 2001 Survey of Consumer Finances." Working Paper, Board of Governors of the Federal Reserve System.
<http://www.federalreserve.gov/pubs/oss/oss2/method.html>
- , 1999. "Using Income Data to Predict Wealth." Working Paper, Board of Governors of the Federal Reserve System. <http://www.federalreserve.gov/pubs/oss/oss2/method.html>
- and Douglas A. McManus. 1993. "Sampling for Household Financial Characteristics Using Frame Information on Past Income." Proceedings of the Section on Survey Research Methods. 1993 Annual Meetings of the American Statistical Association, San Francisco, CA.
- National Opinion Research Center. 2001. Survey of Consumer Finances. University of Chicago. National Opinion Research Center.
- , 1998. Survey of Consumer Finances. University of Chicago. National Opinion Research Center.
- , 1995. Survey of Consumer Finances. University of Chicago. National Opinion Research Center.
- , 1992. Survey of Consumer Finances. University of Chicago. National Opinion Research Center.
- Schervish, Paul G. "Philanthropy Can Thrive Without Estate Tax." *Chronicle of Philanthropy*. 11 January 2001. <http://philanthropy.com/premium/articles/v13/i06/06004701.htm>
- U.S. Department of Labor, Bureau of Labor Statistics and U.S. Department of Commerce, Bureau of Census. 2001. March Demographic Supplement of Current Population Survey.
<http://www.bls.census.gov/cps/ads/sdata.htm>

TABLES

BOSTON METROPOLITAN AREA

Table 1
Distribution of Household Wealth
Boston Metropolitan Area and Nation

Household Net Worth	Number of Households (thousands)		Percent of Households		Average HH Net Worth (thousands)		Aggregate HH Net Worth (millions)		Percent HH Net Worth		Average Age of Head (years)	
	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation
Negative or Zero	188.10	11,058.46	9.37%	10.38%	(\$9.41)	(\$8.64)	(\$1,770.79)	(\$95,491.64)	-	-	36.3	37.9
\$1 to \$199,999	923.89	60,053.11	46.02%	56.40%	\$68.02	\$62.29	\$62,840.33	\$3,740,666.85	6.27%	9.05%	47.6	46.8
\$200,000 to \$499,999	533.11	19,181.12	26.55%	18.01%	\$316.30	\$322.10	\$168,623.30	\$6,178,229.06	16.84%	14.95%	53.3	54.2
\$500,000 to \$999,999	196.30	9,061.98	9.78%	8.51%	\$735.54	\$695.88	\$144,385.43	\$6,306,067.31	14.42%	15.26%	55.4	56.7
\$1,000,000 to \$4,999,999	138.03	6,068.77	6.88%	5.70%	\$1,989.30	\$1,911.89	\$274,576.52	\$11,602,790.09	27.42%	28.08%	55.3	57.6
\$5,000,000 to \$9,999,999	17.15	648.11	0.85%	0.61%	\$7,871.00	\$7,132.79	\$134,983.86	\$4,622,811.45	13.48%	11.19%	55.3	56.3
\$10,000,000 to \$19,999,999	7.08	288.45	0.35%	0.27%	\$13,503.23	\$13,442.69	\$95,638.45	\$3,877,536.53	9.55%	9.38%	63.9	58.3
\$20,000,000 or More	3.98	126.50	0.20%	0.12%	\$30,270.88	\$39,450.84	\$120,460.20	\$4,990,330.29	12.03%	12.08%	68.9	60.4
ALL	2,007.64	106,486.49	100%	100%	\$497.97	\$387.12	\$999,737.30	\$41,222,939.94	100%	100%	49.5	48.8

All dollar values are in 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 2
Distribution of Household Wealth Among Households with Positive Wealth
Boston Metropolitan Area

Household Net Worth	Number of Households (thousands)	Percent of Households	Average HH Net Worth (thousands)	Aggregate HH Net Worth (millions)	Percent HH Net Worth	Cumulative Percent of HHs		Cumulative Percent of Net Worth	
	Boston	Boston	Boston	Boston	Boston	Boston	Nation	Boston	Nation
\$1 to \$199,999	923.89	50.78%	\$68.02	\$62,840.33	6.27%	100.00%	100.00%	100.00%	100.00%
\$200,000 to \$499,999	533.11	29.30%	\$316.30	\$168,623.30	16.84%	49.34%	37.07%	93.73%	90.95%
\$500,000 to \$999,999	196.30	10.79%	\$735.54	\$144,385.43	14.42%	20.00%	16.97%	76.89%	75.99%
\$1,000,000 to \$4,999,999	138.03	7.59%	\$1,989.30	\$274,576.52	27.42%	9.25%	7.47%	62.47%	60.73%
\$5,000,000 to \$9,999,999	17.15	0.94%	\$7,871.00	\$134,983.86	13.48%	1.56%	1.11%	35.06%	32.65%
\$10,000,000 to \$19,999,999	7.08	0.39%	\$13,503.23	\$95,638.45	9.55%	0.61%	0.43%	21.58%	21.46%
\$20,000,000 or More	3.98	0.22%	\$30,270.88	\$120,460.20	12.03%	0.22%	0.13%	12.03%	12.08%
ALL	1,819.54	100%	\$550.42	\$1,001,508.10	100%	-	-	-	-

All dollar values in 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 3
Distribution of Household Wealth by Age of Head
Boston Metropolitan Area and Nation

Age of Head	Number of Households (thousands)		Percent of Households		Average HH Net Worth (thousands)		Aggregate HH Net Worth (millions)		Percent HH Net Worth		Average Age of Head (years)	
	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation	Boston	Nation
Under Age 40	687.35	35,521.34	34.24%	33.36%	211.54	117.65	\$145,402.41	\$4,179,244.34	14.54%	10.14%	30.9	30.7
40 to 59 Years	757.52	42,666.62	37.73%	40.07%	543.90	475.70	\$412,014.68	\$20,296,304.85	41.21%	49.24%	48.6	48.4
60 to 79 Years	417.49	22,986.55	20.80%	21.59%	875.29	637.85	\$365,424.29	\$14,662,072.44	36.55%	35.57%	69.5	69.3
80 Years or Older	145.29	5,311.98	7.24%	4.99%	529.27	392.57	\$76,895.92	\$2,085,318.31	7.69%	5.06%	85.1	84.4
ALL	2,007.64	106,486.49	100%	100%	497.97	387.12	\$999,737.30	\$41,222,939.94	100%	100%	49.5	48.8

All dollar values are in 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 4
LOW (2%) Secular Growth Scenario
Boston Metropolitan Area

Panel 1
2001-2020

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	18,869.22 4.04%	407,155.98 87.26%	29,479 6.32%	4,329 0.93%	364 0.08%	3,126 0.67%	466,624 100.00%
Value of Estates	(\$97.78) -	\$87,686.31 27.19%	\$61,242 18.99%	\$31,786 9.86%	\$50,240 15.58%	\$91,651 28.42%	\$322,508 100.00%
	-	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Estate Fees	\$5.54 0.05%	\$3,091.75 26.62%	\$2,501 21.53%	\$1,307 11.25%	\$1,965 16.92%	\$2,747 23.64%	\$11,616 100.00%
	-	3.53%	4.08%	4.11%	3.91%	3.00%	3.60%
Estate Taxes	\$0.00 0.00%	\$183 0.27%	\$10,445 15.47%	\$10,616 15.72%	\$17,505 25.93%	\$28,770 42.61%	\$67,519 100.00%
	-	0.21%	17.06%	33.40%	34.84%	31.39%	20.94%
Bequests to Charity	\$0.00 0.00%	\$1,858 3.52%	\$4,527 8.57%	\$4,116 7.80%	\$8,915 16.89%	\$33,381 63.23%	\$52,797 100.00%
	-	2.12%	7.39%	12.95%	17.75%	36.42%	16.37%
Bequests to Heirs	\$0.00 0.00%	\$82,553 43.29%	\$43,769 22.95%	\$15,748 8.26%	\$21,855 11.46%	\$26,754 14.03%	\$190,679 100.00%
	-	94.15%	71.47%	49.54%	43.50%	29.19%	59.12%

Panel 2
2001-2055

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	71,877 4.32%	1,377,643 82.77%	171,888 10.33%	23,072 1.39%	12,454 0.75%	7,584 0.46%	1,664,519 100.00%
Value of Estates	(\$660) -	\$292,187 23.30%	\$385,409 30.73%	\$161,545 12.88%	\$165,631 13.21%	\$249,965 19.93%	\$1,254,076 100.00%
	-	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Estate Fees	\$13 0.03%	\$10,349 22.20%	\$15,786 33.87%	\$6,639 14.25%	\$6,478 13.90%	\$7,341 15.75%	\$46,606 100.00%
	-	3.54%	4.10%	4.11%	3.91%	2.94%	3.72%
Estate Taxes	\$0 0.00%	\$1,418 0.48%	\$84,540 28.46%	\$60,144 20.25%	\$66,089 22.25%	\$84,818 28.56%	\$297,009 100.00%
	-	0.49%	21.94%	37.23%	39.90%	33.93%	23.68%
Bequests to Charity	\$0 0.00%	\$6,787 3.95%	\$28,222 16.44%	\$19,596 11.41%	\$27,018 15.74%	\$90,079 52.46%	\$171,701 100.00%
	-	2.32%	7.32%	12.13%	16.31%	36.04%	13.69%
Bequests to Heirs	\$0 0.00%	\$273,633 37.01%	\$256,862 34.74%	\$75,166 10.17%	\$66,045 8.93%	\$67,727 9.16%	\$739,434 100.00%
	-	93.65%	66.65%	46.53%	39.88%	27.09%	58.96%

All dollar values are in millions of 2005 dollars.

Estimated at the Center on Wealth and Philanthropy at Boston College.

Table 5
MIDDLE (3%) Secular Growth Scenario
Boston Metropolitan Area

Panel 1
2001-2020

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	18,506.20 3.97%	403,731.65 86.52%	31,667 6.79%	4,930 1.06%	3,866 0.83%	3,922 0.84%	466,624 100.00%
Value of Estates	(\$77.00) -	\$95,789.17 24.78% 100.00%	\$70,964 18.35% 100.00%	\$35,892 9.28% 100.00%	\$53,696 13.89% 100.00%	\$130,361 33.72% 100.00%	\$386,625 100.00% 100.00%
Estate Fees	\$6.10 0.04% -	\$3,380.59 24.74% 3.53%	\$2,898 21.20% 4.08%	\$1,476 10.80% 4.11%	\$2,098 15.35% 3.91%	\$3,808 27.86% 2.92%	\$13,667 100.00% 3.54%
Estate Taxes	\$0.00 0.00% -	\$449 0.53% 0.47%	\$12,762 14.97% 17.98%	\$12,213 14.33% 34.03%	\$19,039 22.34% 35.46%	\$40,770 47.83% 31.27%	\$85,234 100.00% 22.05%
Bequests to Charity	\$0.00 0.00% -	\$2,211 3.11% 2.31%	\$5,337 7.52% 7.52%	\$4,555 6.42% 12.69%	\$9,518 13.41% 17.73%	\$49,360 69.54% 37.86%	\$70,979 100.00% 18.36%
Bequests to Heirs	\$0.00 0.00% -	\$89,749 41.39% 93.69%	\$49,967 23.04% 70.41%	\$17,648 8.14% 49.17%	\$23,041 10.63% 42.91%	\$36,423 16.80% 27.94%	\$216,827 100.00% 56.08%

Panel 2
2001-2055

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	63,223 3.80%	1,289,434 77.47%	224,217 13.47%	47,559 2.86%	21,967 1.32%	18,109 1.09%	1,664,519 100.00%
Value of Estates	(\$389) -	\$343,004 15.08% 100.00%	\$564,713 24.83% 100.00%	\$328,017 14.42% 100.00%	\$302,419 13.30% 100.00%	\$736,269 32.38% 100.00%	\$2,274,033 100.00% 100.00%
Estate Fees	\$12 0.01% -	\$12,251 14.92% 3.57%	\$23,269 28.34% 4.12%	\$13,462 16.40% 4.10%	\$11,782 14.35% 3.90%	\$21,323 25.97% 2.90%	\$82,099 100.00% 3.61%
Estate Taxes	\$0 0.00% -	\$4,768 0.73% 1.39%	\$143,012 21.96% 25.32%	\$124,600 19.13% 37.99%	\$124,129 19.06% 41.05%	\$254,781 39.12% 34.60%	\$651,290 100.00% 28.64%
Bequests to Charity	\$0 0.00% -	\$9,594 2.33% 2.80%	\$45,355 11.01% 8.03%	\$39,915 9.69% 12.17%	\$49,361 11.98% 16.32%	\$267,730 64.99% 36.36%	\$411,954 100.00% 18.12%
Bequests to Heirs	\$0 0.00% -	\$316,392 28.02% 92.24%	\$353,077 31.27% 62.52%	\$150,040 13.29% 45.74%	\$117,147 10.38% 38.74%	\$192,435 17.04% 26.14%	\$1,129,090 100.00% 49.65%

All dollar values are in millions of 2005 dollars.
 Estimated at the Center on Wealth and Philanthropy at Boston College.

Table 6
HIGH(4%) Secular Growth Scenario
Boston Metropolitan Area

Panel 1
2001-2020

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	16,957.42 3.63%	400,693.02 85.87%	34,206 7.33%	5,648 1.21%	4,348 0.93%	4,772 1.02%	466,624 100.00%
Value of Estates	(\$68.28) - -	\$96,390.21 21.25% 100.00%	\$79,264 17.47% 100.00%	\$39,791 8.77% 100.00%	\$60,394 13.31% 100.00%	\$177,842 39.21% 100.00%	\$453,613 100.00% 100.00%
Estate Fees	\$5.18 0.03% -	\$3,405.98 21.52% 3.53%	\$3,248 20.52% 4.10%	\$1,637 10.34% 4.11%	\$2,360 14.91% 3.91%	\$5,172 32.68% 2.91%	\$15,828 100.00% 3.49%
Estate Taxes	\$0.00 0.00% -	\$502 0.47% 0.52%	\$15,162 14.12% 19.13%	\$13,750 12.80% 34.56%	\$21,886 20.38% 36.24%	\$56,087 52.23% 31.54%	\$107,387 100.00% 23.67%
Bequests to Charity	\$0.00 0.00% -	\$2,266 2.48% 2.35%	\$6,176 6.76% 7.79%	\$4,996 5.47% 12.56%	\$10,550 11.55% 17.47%	\$67,336 73.73% 37.86%	\$91,324 100.00% 20.13%
Bequests to Heirs	\$0.00 0.00% -	\$90,216 37.72% 93.59%	\$54,678 22.86% 68.98%	\$19,408 8.12% 48.78%	\$25,597 10.70% 42.38%	\$49,247 20.59% 27.69%	\$239,148 100.00% 52.72%

Panel 2
2001-2055

	Neg or Zero	\$1 to \$999,999	\$1 M to \$4.9 M	\$5 M to \$9.9 M	\$10 M to \$19.9 M	\$20 M or More	Total
Number of Estates	54,832 3.29%	1,168,232 70.18%	279,249 16.78%	83,147 5.00%	40,723 2.45%	38,337 2.30%	1,664,519 100.00%
Value of Estates	(\$261) - -	\$313,519 7.30% 100.00%	\$741,425 17.26% 100.00%	\$574,841 13.38% 100.00%	\$557,968 12.99% 100.00%	\$2,109,296 49.09% 100.00%	\$4,296,788 100.00% 100.00%
Estate Fees	\$8.95 0.01% -	\$11,218 7.60% 3.58%	\$30,594 20.73% 4.13%	\$23,534 15.94% 4.09%	\$21,524 14.58% 3.86%	\$60,717 41.14% 2.88%	\$147,596 100.00% 3.44%
Estate Taxes	\$0 0.00% -	\$3,885 0.28% 1.24%	\$202,013 14.49% 27.25%	\$220,677 15.83% 38.39%	\$231,101 16.58% 41.42%	\$736,194 52.82% 34.90%	\$1,393,871 100.00% 32.44%
Bequests to Charity	\$0 0.00% -	\$9,098 0.90% 2.90%	\$63,481 6.30% 8.56%	\$70,808 7.03% 12.32%	\$94,396 9.37% 16.92%	\$769,183 76.39% 36.47%	\$1,006,965 100.00% 23.44%
Bequests to Heirs	\$0 0.00% -	\$289,317 16.55% 92.28%	\$445,337 25.47% 60.06%	\$259,823 14.86% 45.20%	\$210,948 12.06% 37.81%	\$543,203 31.06% 25.75%	\$1,748,627 100.00% 40.70%

All dollar values are in millions of 2005 dollars.

Estimated at the Center on Wealth and Philanthropy at Boston College.

Table 7
Wealth Transfer and Inter Vivos Giving by Household Wealth Category
LOW (2%) Secular Growth Scenario
Boston Area

Household Wealth Category	Number of Households	Household Wealth (Millions)	Number of Final Estates	Value of Final Estates (Millions)	Number of Surviving Households	Wealth of Surviving Households	Inter Vivos Contributions (Millions)	Charitable Bequests (Millions)	Total of Charitable Bequests and Inter Vivos Giving (Millions)	Percentage of Total Charitable Giving	Cumulative Percentage of Total Charitable Giving	Cumulative Percentage of Households
2001	2001	2001	55 Years	55 Years	2055	2055	55 Years	55 Years	55 Years	55 Years	55 Years	2001
Negative or Zero	188,098	(\$1,770.79)	120,642	\$3,303	67,456	\$3,483	\$3,807	\$234	\$4,041	1.1%	100.0%	100.0%
\$1 to \$199,999	923,890	\$62,840.33	734,542	\$114,066	189,348	\$82,973	\$38,904	\$11,336	\$50,241	14.0%	98.9%	90.6%
\$200,000 to \$499,999	533,112	\$168,623.30	475,658	\$201,354	57,454	\$63,249	\$45,267	\$8,802	\$54,069	15.1%	84.9%	44.6%
\$500,000 to \$999,999	196,299	\$144,385.43	179,369	\$150,574	16,930	\$44,282	\$20,397	\$7,448	\$27,844	7.8%	69.8%	18.1%
\$1,000,000 to \$4,999,999	138,026	\$274,576.52	127,817	\$356,980	10,210	\$48,009	\$42,225	\$34,372	\$76,596	21.4%	62.0%	8.3%
\$5,000,000 to \$9,999,999	17,150	\$134,983.86	15,929	\$164,032	1,220	\$25,178	\$11,886	\$26,640	\$38,526	10.7%	40.7%	1.4%
\$10,000,000 or More	11,062	\$216,098.65	10,562	\$263,767	500	\$14,100	\$24,376	\$82,870	\$107,245	29.9%	29.9%	0.6%
Total	2,007,637	\$999,737.30	1,664,519	\$1,254,076	343,118	\$281,274	\$186,861	\$171,701	\$358,562	100%	-	-

All dollar values are in millions of 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 8
Wealth Transfer and Inter Vivos Giving by Household Wealth Category
MIDDLE (3%) Secular Growth Scenario
Boston Area

Household Wealth Category	Number of Households	Household Wealth (Millions)	Number of Final Estates	Value of Final Estates (Millions)	Number of Surviving Households	Wealth of Surviving Households	Inter Vivos Contributions (Millions)	Charitable Bequests (Millions)	Total of Charitable Bequests and Inter Vivos Giving (Millions)	Percentage of Total Charitable Giving	Cumulative Percentage of Total Charitable Giving	Cumulative Percentage of Households
2001	2001	2001	55 Years	55 Years	2055	2055	55 Years	55 Years	55 Years	55 Years	55 Years	2001
Negative or Zero	188,098	(\$1,770.79)	120,642	\$7,233	67,456	\$8,804	\$5,021	\$612	\$5,633	0.9%	100.0%	100.0%
\$1 to \$199,999	923,890	\$62,840.33	734,542	\$224,902	189,348	\$228,892	\$50,743	\$29,000	\$79,744	12.3%	99.1%	90.6%
\$200,000 to \$499,999	533,112	\$168,623.30	475,658	\$380,833	57,454	\$174,023	\$57,703	\$33,130	\$90,833	14.1%	86.8%	44.6%
\$500,000 to \$999,999	196,299	\$144,385.43	179,369	\$282,655	16,930	\$121,254	\$25,538	\$25,471	\$51,009	7.9%	72.7%	18.1%
\$1,000,000 to \$4,999,999	138,026	\$274,576.52	127,817	\$651,359	10,210	\$128,838	\$52,600	\$91,324	\$143,924	22.3%	64.8%	8.3%
\$5,000,000 to \$9,999,999	17,150	\$134,983.86	15,929	\$311,387	1,220	\$75,461	\$14,430	\$85,363	\$99,793	15.4%	42.6%	1.4%
\$10,000,000 or More	11,062	\$216,098.65	10,562	\$415,664	500	\$42,070	\$28,253	\$147,054	\$175,307	27.1%	27.1%	0.6%
Total	2,007,637	\$999,737.30	1,664,519	\$2,274,033	343,118	\$779,342	\$234,288	\$411,954	\$646,243	100%		

All dollar values are in millions of 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 9
Wealth Transfer and Inter Vivos Giving by Household Wealth Category
HIGH (4%) Secular Growth Scenario
Boston Area

Household Wealth Category	Number of Households	Household Wealth (Millions)	Number of Final Estates	Value of Final Estates (Millions)	Number of Surviving Households	Wealth of Surviving Households	Inter Vivos Contributions (Millions)	Charitable Bequests (Millions)	Total of Charitable Bequests and Inter Vivos Giving (Millions)	Percentage of Total Charitable Giving	Cumulative Percentage of Total Charitable Giving	Cumulative Percentage of Households
	2001	2001	55 Years	55 Years	2055	2055	55 Years	55 Years	55 Years	55 Years	55 Years	2001
Negative or Zero	188,098	(\$1,770.79)	120,642	\$14,157	67,456	\$20,979	\$6,742	\$1,951	\$8,693	0.7%	100.0%	100.0%
\$1 to \$199,999	923,890	\$62,840.33	734,542	\$479,043	189,348	\$670,491	\$67,432	\$90,857	\$158,289	12.1%	99.3%	90.6%
\$200,000 to \$499,999	533,112	\$168,623.30	475,658	\$727,360	57,454	\$434,218	\$74,894	\$101,826	\$176,720	13.5%	87.2%	44.6%
\$500,000 to \$999,999	196,299	\$144,385.43	179,369	\$546,363	16,930	\$314,689	\$32,513	\$78,205	\$110,719	8.5%	73.7%	18.1%
\$1,000,000 to \$4,999,999	138,026	\$274,576.52	127,817	\$1,209,742	10,210	\$345,406	\$66,611	\$270,432	\$337,044	25.8%	65.2%	8.3%
\$5,000,000 to \$9,999,999	17,150	\$134,983.86	15,929	\$621,222	1,220	\$220,822	\$17,823	\$209,161	\$226,984	17.4%	39.4%	1.4%
\$10,000,000 or More	11,062	\$216,098.65	10,562	\$698,901	500	\$124,045	\$33,189	\$254,532	\$287,721	22.0%	22.0%	0.6%
Total	2,007,637	\$999,737.30	1,664,519	\$4,296,789	343,118	\$2,130,650	\$299,205	\$1,006,965	\$1,306,170	100%		

All dollar values are in millions of 2005 dollars.

Calculated at the Center on Wealth and Philanthropy at Boston College.

Table 10
Projections for Wealth Transfer and Charitable Contributions

20-Year Period from 2001-2020 (2005 Purchasing Power)

	Low Estimate (2% Secular Growth)* (\$2005 in Billions)	Middle Estimate (3% Secular Growth)* (\$2005 in Billions)	High Estimate (4% Secular Growth)* (\$2005 in Billions)
Total Wealth Transfer	\$322.5	\$386.6	\$453.6
Bequests to Charity**	\$52.8	\$71.0	\$91.3
Inter-Vivos Giving by Individuals***	\$88.6	\$97.1	\$106.6
Total Charitable Contributions	\$141.4	\$168.1	\$198.0
% of Total Contributed by Millionaires	68.1%	71.9%	75.7%

55-Year Period from 2001-2055 (2005 Purchasing Power)

	Low Estimate (2% Secular Growth)* (\$2005 in Billions)	Middle Estimate (3% Secular Growth)* (\$2005 in Billions)	High Estimate (4% Secular Growth)* (\$2005 in Billions)
Total Wealth Transfer	\$1,254.1	\$2,274.0	\$4,296.8
Bequests to Charity**	\$171.7	\$412.0	\$1,007.0
Inter-Vivos Giving by Individuals***	\$186.9	\$234.3	\$299.2
Total Charitable Contributions	\$358.6	\$646.2	\$1,306.2
% of Total Contributed by Millionaires	65.3%	77.7%	89.5%

*Note: This table is calculated for secular trends of 2%, 3%, and 4% in growth rates of both real personal wealth and real inter-vivos giving. The actual real growth rate in inter-vivos giving was 1.61% in the 10 years from 1985 through 1995; 10.12% in the 5 years from 1995 through 2000; and 3.34% in the 19 years from 1985 through 2004.

**Note: Bequests to charity were estimated specifically for Boston by the Center on Wealth and Philanthropy, Boston College.

***Calculated by the Center on Wealth and Philanthropy based on data from the 2001 Survey of Consumer Finances.