This year Medicare will spend more than $530 billion. Beneficiaries will pay for about 20 percent of spending through premiums and income tax payments. Workers will pay the remaining 80 percent through payroll and income taxes. In return for transferring their income to retirees, workers expect to receive health care benefits when they retire or if they become disabled.

Executive Summary

The Patient Protection and Affordable Care Act (ACA) will fundamentally alter Medicare. If its provisions remain in place, in the long run it will dramatically reduce Medicare spending relative to recent projections. This change will lower the burden for future taxpayers, but it could also reduce access to care for future beneficiaries.

The difference the ACA makes in aggregate spending can be calculated by comparing the projections in the 2009 Medicare Trustees Report (which assumes that Medicare spending will largely keep pace with health spending for the country as a whole) with the 2010 report (which reflects the cuts required by the ACA). Over the next 75 years, the ACA reduces total Medicare spending by about 24 percent — by 43 percent, for example, in 2080, compared to projections a year ago.

The impact of these changes on individuals born in different years can be quantified. Older workers will still get more in Medicare benefits than they pay in taxes and premiums, but the size of their net benefits will decline.

- In the absence of the ACA, today’s new retirees would have received $53,500 in lifetime benefits over and above lifetime taxes and premiums paid.
- Because of the ACA, however, they will now receive about $20,700 less in net benefits.

The impact of the ACA will be even greater on younger workers. For example:

- In the absence of the ACA, individuals who are 45 years old today would have received $44,900 in net benefits at retirement.
- With the ACA reforms, however, they will pay $11,400 more in lifetime taxes and premiums than they are expected to receive in benefits.
- Their reduction in net benefits due to the ACA reforms is about $56,000.
The ACA reforms Medicare by reducing payments to providers. The reductions will adversely affect beneficiaries’ access to care and will likely lead to patients and providers exiting the Medicare program. There is no question that for Medicare to persist, per capita benefit growth must be tamed. However, another avenue to reform is possible that also enhances generational equity but without the access to care issues foreseen under the ACA. In the long run, the pay-as-you-go approach must be replaced with a funded system in which each generation of young workers saves and invests in order to pay for some its own postretirement health care needs.

Note that any reform that reduces benefits in the future will have consequences similar to those identified for younger workers. That is, any reform that reduces future benefit growth to the same path as the post-ACA path in the 2010 Trustees Report would dramatically reduce future benefits relative to the benefits forecast in the 2009 Trustees Report.

About the Authors

Dr. Courtney A. Collins is an assistant professor of economics at the Stetson School of Business at Mercer University. Her fields of specialization are public economics, economics of education and applied microeconometrics. Her current research interests include state and local pension funding, class size reduction policies and student ability tracking programs. Dr. Collins previously worked as a Graduate Student Research Associate with the Private Enterprise Research Center at Texas A&M University. She has coauthored several studies with Dr. Andrew Rettenmaier examining policy issues such as public pension liabilities and Medicare spending.

Dr. Andrew J. Rettenmaier is the Executive Associate Director at the Private Enterprise Research Center at Texas A&M University. His primary research areas are labor economics and public policy economics with an emphasis on Medicare and Social Security. Dr. Rettenmaier and the Center’s director, Thomas R. Saving, presented their Medicare reform proposal to U.S. Senate Subcommittees and to the National Bipartisan Commission on the Future of Medicare. Their proposal has also been featured in the Wall Street Journal, New England Journal of Medicine, Houston Chronicle and Dallas Morning News.

Dr. Rettenmaier is the coprincipal investigator on several research grants and also serves as the editor of the Center’s two newsletters, PERCspectives on Policy and PERCspectives. He is coauthor of a book on Medicare, The Economics of Medicare Reform (Kalamazoo, Mich.: W.E. Upjohn Institute for Employment Research, 2000) and an editor of Medicare Reform: Issues and Answers (University of Chicago Press, 1999). He is also coauthor of Diagnosis and Treatment of Medicare (Washington, D.C.: American Enterprise Institute Press, 2007). Dr. Rettenmaier is a senior fellow with the National Center for Policy Analysis.
Introduction

This year Medicare will spend more than $530 billion. Beneficiaries will pay for about 20 percent of spending through premiums and income tax payments. Workers will pay the remaining 80 percent through payroll and income taxes. In return for transferring their income to retirees, workers expect to receive health care benefits when they retire or if they become disabled.

Recent research indicates that within each generation, Medicare is progressive. This means that low-income retirees implicitly receive — in the form of Medicare benefits — a higher rate of return on their lifetime tax payments than higher income retirees. Medicare also redistributes a substantial amount of income from younger generations to older generations, and is projected to continue to do so.

The Patient Protection and Affordable Care Act (ACA) will fundamentally change Medicare if its provisions are implemented for the long term. The 2010 Medicare Trustees Report (which accounts for the effect of the ACA) estimates total Medicare spending over the next 75 years will be $13.9 trillion, or 24 percent less than total spending projected in the 2009 report.

In the early years of the forecast the spending reductions are small, but over time they grow:

- Whereas the 2009 Trustees Report projected Medicare would spend 7.2 percent of gross domestic product (GDP) in 2035, the 2010 report projects Medicare will spend only 5.5 percent of GDP in 2035.
- The 2009 report projected Medicare spending would rise to 11.2 percent of GDP by 2080 — but the 2010 report projects it will spend only 6.4 percent of GDP, or 43 percent less, that year.

These estimates indicate that current and future retirees will receive smaller transfers from current and future generations of workers, but it is difficult to evaluate the relative size of individual lifetime benefits net of premiums and taxes associated with Medicare. Whereas Social Security benefits are directly related to workers’ past earnings through the benefit formula, Medicare spending is unrelated to the contributions beneficiaries make to the program. Furthermore, Social Security benefits are indexed to the growth in wages and are adjusted for inflation, but Medicare spending per retiree has outpaced real growth in GDP or wages. As a result, every generation since Medicare began, including current retirees, has received more benefits than the taxes and premiums they have and will pay to support the program.

Discount Rates. Figures Ia, Ib, Ic and Id show the average expected lifetime Medicare spending for individuals born in different years, and thus, the generational burden of the program. This analysis takes into account lifetime payroll and income tax payments, and premium payments that have been and will be necessary to fund (on a pay-as-you-go basis) past and future Medicare expenditures. Future expenditures are projected based on the 2009 and 2010 Medicare Trustees Reports, as well as alternative estimates produced by the Office of the Actuary of the Centers for Medicare and Medicaid Services.

Estimated Lifetime Medicare Benefits, Taxes and Premium Payments before the Affordable Care Act

The generational transfers inherent in the Medicare program prior to the ACA reforms can be derived from the aggregate forecasts contained in the 2009 Trustees Report along with historical spending and tax data. The estimates based on this report provide a baseline to which other forecasts can be compared. The 2010 Trustees Report provides estimates that reflect the ACA changes and can similarly be used to derive benefits received and tax and premium payments for successive birth years. These estimates allow comparisons of pre- and post-reform expected lifetime spending, taxes and net benefits by birth year. [For details on data sources and methodology, see the Appendix, “Calculating Lifetime Benefits, Taxes and Premium Payments.”]

“The new law dramatically reduces projected Medicare spending.”

The scheduled changes under the ACA provide an opportunity to quantify the effect of legislative changes on lifetime net benefits for individuals born in different years.
The figures show the present value of average Medicare spending at 65 years of age (in 2009 dollars) using three alternative real (inflation-adjusted) discount rates: 2.9 percent, 3.6 percent and 5 percent. A discount rate converts past and future spending to its value today. The discount rate chosen makes a substantial difference in estimating the value of future spending. The higher the discount rate, the lower the present value of a dollar’s worth of future spending.

The 2.9 percent real discount rate was used in the 2009 Medicare Trustees Report. The 3.6 percent discount rate corresponds to the average yield on a 10-year Treasury bond in recent years. The 5 percent discount rate accounts for some of the inherent uncertainty beneficiaries face as they estimate future possible benefits and is comparable to the return on a portfolio of stocks and bonds.

Present Value of Lifetime Benefits at Age 65. As Figure 1a indicates, for each birth year the present value of lifetime Medicare spending at the age of 65 rises. Benefits are valued at age 65, the age at which seniors become eligible to participate in Medicare. Figure 1a shows that the
higher discount rates produce lower lifetime benefits:

- The present values of the lifetime Medicare benefits for individuals born in 1930, who are 80 years old in 2010, are $114,000, $105,000 and $89,000, based on real discount rates of 2.9 percent, 3.6 percent and 5 percent, respectively.

- For individuals born in 1940, who are 70 years old in 2010, the benefits rise to $170,000, $157,000 and $134,000.

- For individuals born 10 years later, today’s 60 year olds, the present value of expected benefits rise to $229,000, $210,000 and $178,000.

These amounts indicate the value of the transfers the average members of each birth year would receive if the forecasts in the 2009 Trustees Report were realized.

**Present Value of Lifetime Taxes and Premiums at Age 65.** Individuals born in 1910 were 55 years old when the program was enacted and they paid only modest payroll and income taxes during their working years. Figure 1b shows that the present value at age 65 of the taxes and premiums rise for later birth
How Health Reform Affects Current and Future Retirees

At the retirement age, the figure shows past payroll and income taxes accumulated at the three discount rates. The higher discount rate results in higher accumulations. However, future taxes and premiums are discounted more at the higher rates beyond 65 years old. The net result is generally higher lifetime taxes and premiums as the discount rate increases.

Present Value of Lifetime Medicare Benefits
Net of Taxes and Premiums at Age 65

The difference between lifetime benefits, taxes and premiums produces the net Medicare benefits presented in Figure Ic. The highest discount rate produces the lowest net benefits. For individuals born in 1946 and later, the cost of participating in the program exceeds its benefits when the 5 percent discount rate is used.

- For individuals born in 1930, the present values of their net lifetime Medicare benefits are $64,000, $57,000 and $36,000 at the 2.9 percent, 3.6 percent and 5 percent discount rates, respectively.
- For individuals born in 1940, net benefits using the lower two discount rates rise to $75,000 and $61,000, respectively, but decline to $23,000 using the 5 percent discount rate.
- By the 1950 birth year, net benefits decline to $51,000 and $-11,000, based on the 3.6
percent and 5 percent discount rates, respectively, but remain at $75,000 with the 2.9 percent real discount rate.

*Lifetime Money’s Worth Ratios.* Figure Id depicts the money’s worth ratios — the ratio of lifetime Medicare benefits to lifetime taxes and premium payments in support of the program. A ratio above one indicates benefits exceed tax and premium payments, while a ratio less than one indicates benefits that are smaller than taxes and premiums paid in support of the program. The horizontal axis is extended to birth year 1995 in this panel to indicate the birth cohorts that pay net taxes rather than receive net benefits. Members of the early birth-year cohorts are all net beneficiaries:

- Using the 3.6 percent real discount rate, today’s new retirees will receive 40 percent more lifetime benefits than their lifetime taxes and premiums.
- Today’s 70-year-old retirees will receive 60 percent more in benefits than they pay in taxes and premiums.
- And 75-year-old retirees will receive benefits that are twice the taxes and premiums they will pay.

As already seen in Figure Ic, at the highest discount rate, individuals born in 1946 and later are net taxpayers. With the 3.6 percent real discount rate, those born in 1980 and later are net taxpayers, and with
How Health Reform Affects Current and Future Retirees

FIGURE IIa

Medicare Total Spending Based on the 2010 Medicare Trustees Report and 2009 Alternative Estimates


the 2.9 percent rate, members of the 1992 and later birth cohorts will be net taxpayers.

The appropriate discount rate to use in government program evaluation is debatable and has produced a large literature, but for the remainder of this analysis the real 3.6 percent discount rate is used. It can be argued that this rate is preferable based on the higher uncertainty of Medicare benefits when compared to Social Security benefits.4

Comparing Lifetime Medicare Benefits, Taxes and Premium Payments under Alternative Forecasts

The lifetime benefits, taxes and premiums by birth years discussed above were estimated from the forecasts in the 2009 Medicare Trustees Report. They provide a baseline for comparing lifetime benefits and taxes derived from three other long-range forecasts of Medicare spending: the 2010 Medicare Trustee Report, the 2009 alternative long-range estimates and the 2010 alternative long-range estimates.

The 2009 alternative estimates were produced by the Office of the Actuary of the Centers for Medicare and Medicaid Services to address the concern that the “current law” estimates for Part B (physicians services) in the 2009 Trustees Report understated expected spending giv-
en that the recommended payment reductions based on the sustainable growth rate (SGR) system have been overridden by legislation in past years. The SGR recommends physician payment updates for Medicare based on U.S. per capita GDP. How future legislation will affect Part B spending is not known. Thus, the alternative estimates are not based on current law, though they incorporate projected Part B spending consistent with the growth in the Medicare Economic Index, which tracks the growth in costs physicians face.

The 2010 alternative estimates were produced by the actuary due to concerns that the long-range cost forecasts presented in the official 2010 Medicare Trustees Report might be too low. The actuary’s memorandum provides alternative long-range forecasts of Part A and Part B spending. Relative to the current law Part A forecasts in the 2010 Trustees Report, the alternative forecasts assume that the first 10 years of the productivity adjustments (reductions in hospital fees) will take place. Thereafter, the adjustments are gradually eliminated so that by the mid-2030s the rate of growth in spending per beneficiary rises to rates comparable to those used in the 2009 report.

The alternative forecasts for Medicare Part B (physicians services) are adjusted in two ways. Those components of Part B that

FIGURE IIb
Medicare Total Spending Based on the 2009 Medicare Trustees Report and 2010 Alternative Estimates

are affected by the productivity adjustments are revised for the alternative projections in the same way as the Part A spending components are adjusted. In addition, the alternative forecast assumes that physician payments are updated at the same rate as the growth in the Medicare Economic Index. This latter adjustment is similar to the adjustment used in the 2009 alternative projection. The forecast for Part D in the alternative memorandum remains unchanged from the forecast in the 2010 Trustees Report. Thus, there are four estimates of total Medicare spending as annual percentages of GDP. Figure IIa shows the highest and lowest of these estimates and Figure IIb shows all four time series. Using the highest and lowest estimates to contrast the degree to which the ACA provisions affect the generational burden of the program:

- Compared to the other forecasts, the 2010 Medicare Trustees Report (which incorporates the effects of the ACA) projects dramatically lower Medicare spending and consequently smaller increases in payroll taxes.
The 2009 alternative, which assumes Part B physician payments grow with the Medicare Economic Index, has the highest overall expected costs.

The other two estimates are intermediate between the 2010 Medicare Trustees Report and the 2009 alternative. The 2009 Trustees Report has the second highest Medicare spending estimates each year, whereas the 2010 alternative has the third highest costs.

The cost containment provisions of the ACA, if realized, would result in 14 percent lower spending as a percent of GDP by 2020 relative to the 2009 Trustees Report estimates, and 21 percent lower spending within 20 years. However, the alternative 2010 estimates are similar to the 2009 estimates.\(^7\)

Net Lifetime Benefits in the 2009 Trustees Report Compared to the 2010 Alternative Forecast. Figure III compares the present value of net lifetime Medicare spending at retirement using the 2009 alternative and the 2010 Trustees Report for five selected birth years.
The estimates of net lifetime benefits based in these two long-run forecasts depict the range of the estimates. The 2009 alternative produces the highest net lifetime benefits, and the 2010 Trustees Report produces the lowest net lifetime benefits. The beneficiaries who were born in 1925 are 85 years old in 2010; thus, the remaining lifetime spending for their birth cohort is only slightly different from one forecast to another.

Figure III shows that for the birth years considered those born in 1935 will receive the highest net benefits, the change in relative net benefits is greatest for the younger birth years, and the estimates based on the 2010 Trustees Report produce negative net benefits for the 1965 birth cohort who are 45 years old in 2010. The net change from the 2009 alternative to the 2010 Trustees Report in lifetime taxes and benefits for three selected birth years are quantified in Table I.

### Alternative Forecasts of Money’s Worth Ratios
The last comparison is between the relative money’s worth ratios and is depicted in Figure IV. Given that the present values of both lifetime benefits and lifetime taxes and premiums grow substantially for younger birth years, the ratio of these two, the money’s worth ratio, provides a measure that is more comparable across successive birth years. As expected from the previous graph, the money’s worth ratios are higher.

### Table I

<table>
<thead>
<tr>
<th></th>
<th>65 Today</th>
<th>65 in 2020</th>
<th>65 in 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009 Before ACA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits</td>
<td>$192,421</td>
<td>$254,900</td>
<td>$345,237</td>
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<tr>
<td>Taxes and Premiums</td>
<td>-132,305</td>
<td>-200,651</td>
<td>-298,362</td>
</tr>
<tr>
<td>Net Benefits</td>
<td>$ 60,116</td>
<td>$ 54,249</td>
<td>$ 46,875</td>
</tr>
<tr>
<td><strong>2010 After ACA</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefits</td>
<td>$156,833</td>
<td>$192,585</td>
<td>$240,233</td>
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<tr>
<td>Taxes and Premiums</td>
<td>-124,027</td>
<td>-181,358</td>
<td>-251,660</td>
</tr>
<tr>
<td>Net Benefits</td>
<td>$ 32,806</td>
<td>$ 11,227</td>
<td>$ -11,427</td>
</tr>
<tr>
<td>Reduction in Net Benefits due to ACA</td>
<td>$ 27,310</td>
<td>$ 43,022</td>
<td>$ 58,302</td>
</tr>
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</table>

Source: Based on the 2009 Actuary Memorandum, the 2010 Trustees Report and authors’ calculations. For details, see the Appendix.
under the 2009 alternative forecast and lower under the 2010 Trustees Report. (The money’s worth ratios based on the 2010 alternative report estimates are similar to those based on the 2009 Trustees Report.)

These comparisons indicate how the reforms in the ACA underlying the current law forecast presented in the 2010 Trustees Report affect different birth years. Importantly, though, Medicare continues to provide net benefits for the early generations at the expense of later generations.

Market Alternatives to the Affordable Care Act

For years, reformers have proposed ways to stem the growth of health care as a share of the economy. In the jargon of health care reform, this is called bending the cost (or spending) curve. The ACA will reduce Medicare’s share of the economy — at least on paper. Across all consumers though, health care’s share of the economy is projected to grow at the same rate as before and to account for the same share of the economy in future years as did the forecasts from 2009. So, while the Medicare spending curve has been bent, there is no indication that the overall health care spending curve will change.

The ACA reforms improve Medicare’s finances but impose costs on beneficiaries. The changes increase generational equity — a goal of many reformers — by reducing the burden of spending on future generations, but they improve Medicare’s finances by placing price ceilings on payments to physicians. These price controls will result in fewer health care options and lower quality of care for Medicare beneficiaries. Instead of encouraging the market to respond to patient needs, the ACA price controls will drive doctors and hospitals out of the market. Medicare beneficiaries will have less access to care, unless they are allowed to supplement Medicare’s payments. Historically, however, there have been legal restrictions that prevent both the patient and providers from negotiating payments.

Appendix
Calculating Lifetime Benefits, Taxes and Premium Payments

The analysis relates lifetime Medicare benefits to the taxes and premium payments made in support of the program for successive birth years. Tax revenues (including payroll and federal income taxes, as well as premium payments) since the inception of the program
## APPENDIX TABLE I

### Present Value at Age 65 of Expected Lifetime Medicare Benefits, Lifetime Taxes and Premiums, Net Benefits and Money’s Worth Ratios

(Dollar values in 2009$, Present Values Based on Real 3.6% Discount Rate)

### Lifetime Medicare Benefits at Age 65 in 2009$

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>1925</td>
<td>88,244</td>
<td>89,518</td>
<td>86,955</td>
<td>88,203</td>
</tr>
<tr>
<td>1935</td>
<td>128,386</td>
<td>133,379</td>
<td>121,301</td>
<td>127,725</td>
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<tr>
<td>1945</td>
<td>181,818</td>
<td>192,421</td>
<td>156,833</td>
<td>175,951</td>
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<tr>
<td>1955</td>
<td>243,945</td>
<td>254,900</td>
<td>192,585</td>
<td>231,161</td>
</tr>
<tr>
<td>1965</td>
<td>331,890</td>
<td>345,237</td>
<td>240,233</td>
<td>310,908</td>
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### Lifetime Medicare Taxes and Premiums at Age 65 in 2009$

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>32,478</td>
<td>32,734</td>
<td>32,323</td>
<td>32,566</td>
</tr>
<tr>
<td>1935</td>
<td>67,817</td>
<td>69,250</td>
<td>67,185</td>
<td>68,821</td>
</tr>
<tr>
<td>1945</td>
<td>128,332</td>
<td>132,305</td>
<td>124,027</td>
<td>129,911</td>
</tr>
<tr>
<td>1955</td>
<td>194,276</td>
<td>200,651</td>
<td>181,358</td>
<td>195,613</td>
</tr>
<tr>
<td>1965</td>
<td>287,015</td>
<td>298,362</td>
<td>251,660</td>
<td>283,039</td>
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</tbody>
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### Net Medicare Benefits at Age 65 in 2009$

<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>1925</td>
<td>55,766</td>
<td>56,784</td>
<td>54,633</td>
<td>55,637</td>
</tr>
<tr>
<td>1935</td>
<td>60,570</td>
<td>64,129</td>
<td>54,116</td>
<td>58,904</td>
</tr>
<tr>
<td>1945</td>
<td>53,486</td>
<td>60,116</td>
<td>32,805</td>
<td>46,040</td>
</tr>
<tr>
<td>1955</td>
<td>49,669</td>
<td>54,249</td>
<td>11,227</td>
<td>35,548</td>
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<tr>
<td>1965</td>
<td>44,875</td>
<td>46,874</td>
<td>-11,428</td>
<td>27,869</td>
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### Money’s Worth Ratio — Ratio of Benefits to Taxes and Premiums

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<tbody>
<tr>
<td>1925</td>
<td>2.72</td>
<td>2.73</td>
<td>2.69</td>
<td>2.71</td>
</tr>
<tr>
<td>1935</td>
<td>1.89</td>
<td>1.93</td>
<td>1.81</td>
<td>1.86</td>
</tr>
<tr>
<td>1945</td>
<td>1.42</td>
<td>1.45</td>
<td>1.26</td>
<td>1.35</td>
</tr>
<tr>
<td>1955</td>
<td>1.26</td>
<td>1.27</td>
<td>1.06</td>
<td>1.18</td>
</tr>
<tr>
<td>1965</td>
<td>1.16</td>
<td>1.16</td>
<td>0.95</td>
<td>1.10</td>
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</table>
enrollment and aggregate Medicare spending are then derived.

The aggregate annual Medicare spending forecast is restricted to aged beneficiaries and is then allocated to white, black and other men and women based on spending profile projections and population forecasts that combine the Census Bureau’s population forecasts by race, age and gender with the long-run Social Security population forecast. The spending profile forecasts are based on within-gender regressions using data from 1984 and later, or the post-Prospective Payments System period. Again the regressions include single year of age controls, race controls and a linear year control.

**Lifetime Payroll Taxes, Federal Income Taxes and Premium Payments.** Federal tax liabilities from the March CPS data for survey years 1968-2000 are calculated using the Internet TAXSIM program provided by the National Bureau for Economic Research. The CPS March Supplement provides a rich source of income data and includes detailed questions about household members’ employment, wages and other income sources from the previous year. This data on earnings and income, which is provided in an easily accessible format by Unicon’s CPS Utilities program, is used to calculate individuals’ tax liabilities with TAXSIM.

Analysis begins with the Stata do-file created by Judith Scott-Clayton for CPS survey year 2003 and adjustments are made as necessary for previous years. The original do-file reads CPS data available from Unicon, restructures the variables for TAXSIM and then calls the TAXSIM program to generate tax liabilities. Because some key variables change across time, it is necessary to make several important adjustments to the variable restructuring in years prior to 2003.

Changes are made to the variable structure beginning in the 1987 survey year to correspond with variable changes in the CPS. These changes are continued in the coding for all years prior to 1987. The changes are necessary to adjust the variables used or the coding changes to dividend income, other property income, gross Social Security income, workers’ compensation and unemployment compensation. Also, in earlier years the program was modified to adjust to a change in the child support variable.

The CPS does not report tax filing status prior to survey year 1980. In these earlier years, tax filing status is imputed to each individual using a multinomial logit regression estimated on 1980 tax data. The regressors include marital status, race, sex, age, and controls for no income and income in the top 50 percent of the distributions. Further, several recodes to the income variables and imputations of family and dependents in the survey years 1975 and earlier were necessary.

Ultimately the CPS allows for identification of relative payroll tax and federal income tax payments by age, race and sex from 1967 to 2002. Tax payments, both payroll and federal income taxes, were allocated equally within joint taxpaying units. That is, if a couple filed a joint tax return, their payroll taxes and federal income taxes are divided equally between them.

Future age-earnings profiles and age-income profiles are forecast for each group for each year in the projection horizon. The forecasts are generated using parameter estimates from regressions estimated on the historical averages by age, race and sex. The regressions include controls for race, year and interactions between age and year, age and race, year and race, and year and sex. These projected profiles combined with the age by race by sex population estimates are used to allocate the shares of aggregate Part A, Part B and Part D costs in each future year that are paid for by the respective groups. It is assumed that the program is funded on a pay-as-you-go basis and that the tax payments for each part cover the spending beneficiaries who are 65 years of age and above. In the forecast period it is again assumed the payroll and income taxes are allocated equally within joint taxpaying units.

Allocating payroll taxes by age, race and sex is accomplished by assigning the pay-as-you-go tax rate to forecasted labor earnings profiles assuming earning equalization within the joint taxpaying units and weighting by the population forecasts. The relative federal income taxes are estimated in the same way as the earnings and income profiles. Aggregate annual Part B and Part D spending net of premium payments are allocated in proportion to the federal income taxes paid by each age, sex and race group. Identical premium payments are assumed to be paid in each year across all retirees. The premiums are counted as revenues to the program. The historical premium rate applied in past years and in future years the premiums are equal to about 25 percent of Part B’s and Part D’s annual costs.
Endnotes

1. For example, see Jay Bhattacharya and Darius Lakdawalla, “Does Medicare Benefit the Poor?” *Journal of Public Economics*, January 2006, pages 277-292. These authors find that Medicare Part A is quite progressive. In the same issue of the *Journal of Public Economics*, see the article by Mark McClellan and Jonathan Skinner, “The Incidence of Medicare,” January 2006, pages 257-276. These authors come to the conclusion that the distribution of Medicare benefits by income is generally neutral in dollar terms, but that utility value of the insurance for lower income retirees increases the progressivity of the program.

2. For the oldest 20 birth years depicted — 1910 to 1929 — both their lifetime taxes and benefits can be based largely on historical data. In 2009, these beneficiaries were all 80 years of age and older. For the next 20 birth years, 1930 to 1949 (ages 60 to 79 in 2009) there are good estimates of past lifetime taxes, but the benefits are largely in the future. For workers born in 1950 and later, the estimates rely on forecasted taxes and benefits taken from the aggregate estimates in the 2009 Trustees Report.

3. Note that the historical Part B premium payments follow the schedule presented in Table V.C2 of the 2010 Trustees Report. The initial Part B premiums covered 50 percent of the costs but over time they declined to cover only 25 percent of the costs.

4. See Liqun Liu, Andrew J. Rettenmaier and Thomas R. Saving, “Valuing Intergenerational Transfers: What’s Social Security Worth?” *Private Enterprise Research Center, Working Paper No. 0801, January 2008*, for a discussion of valuing government projects with uncertain benefits and taxes. They suggest that uncertain benefits should be discounted at a rate higher than the government borrowing rate, but that uncertain tax payments should be discounted at a lower rate. Use of the 3.6 percent discount rate provides an intermediate estimate.

5. The alternative estimates are from the Office of the Actuary Memorandum, “Projected Medicare Part B Expenditures under Two Illustrative Scenarios with Alternative Physician Payment Updates,” M. Kent Clemens, Joseph M. Lizonitz and Suguna M. Murugesan, May 12, 2009. The Medicare Economic Index update scenario from Table 4 in the memorandum is used here.


7. The future annual GDP estimates differ between the 2009 and 2010 Trustees Reports. Aggregate annual Medicare spending is estimated by multiplying GDP as presented in Table VI.F6 in the 2009 Social Security Trustees by the two 2009 series from Figure 2. Similarly, the annual GDP estimates from the 2010 Social Security Trustees Reports are used to estimate aggregate Medicare spending using the two estimates for 2010.

8. See Appendix Table I for estimates based on all four forecasts: the 2009 and 2010 Medicare Trustees Reports and their respective alternatives.

9. The do-files and other documentation for TAXSIM calculations from the March CPS data are available at http://www.nber.org/~taxsim/to-taxsim/cps-unicon/.
About the NCPA

The NCPA is a nonprofit, nonpartisan organization established in 1983. Its aim is to examine public policies in areas that have a significant impact on the lives of all Americans — retirement, health care, education, taxes, the economy, the environment — and to propose innovative, market-driven solutions. The NCPA seeks to unleash the power of ideas for positive change by identifying, encouraging and aggressively marketing the best scholarly research.

Health Care Policy.

The NCPA is probably best known for developing the concept of Health Savings Accounts (HSAs), previously known as Medical Savings Accounts (MSAs). NCPA President John C. Goodman is widely acknowledged (Wall Street Journal, WebMD and the National Journal) as the “Father of HSAs.” NCPA research, public education and briefings for members of Congress and the White House staff helped lead Congress to approve a pilot MSA program for small businesses and the self-employed in 1996 and to vote in 1997 to allow Medicare beneficiaries to have MSAs. In 2003, as part of Medicare reform, Congress and the President made HSAs available to all nonseniors, potentially revolutionizing the entire health care industry. HSAs now are potentially available to 250 million nonelderly Americans.

The NCPA outlined the concept of using federal tax credits to encourage private health insurance and helped formulate bipartisan proposals in both the Senate and the House. The NCPA and BlueCross BlueShield of Texas developed a plan to use money that federal, state and local governments now spend on indigent health care to help the poor purchase health insurance. The SPN Medicaid Exchange, an initiative of the NCPA for the State Policy Network, is identifying and sharing the best ideas for health care reform with researchers and policymakers in every state.

NCPA President
John C. Goodman is called the “Father of HSAs” by The Wall Street Journal, WebMD and the National Journal.

Taxes & Economic Growth.

The NCPA helped shape the pro-growth approach to tax policy during the 1990s. A package of tax cuts designed by the NCPA and the U.S. Chamber of Commerce in 1991 became the core of the Contract with America in 1994.

Three of the five proposals (capital gains tax cut, Roth IRA and eliminating the Social Security earnings penalty) became law. A fourth proposal — rolling back the tax on Social Security benefits — passed the House of Representatives in summer 2002. The NCPA’s proposal for an across-the-board tax cut became the centerpiece of President Bush’s tax cut proposals.

NCPA research demonstrates the benefits of shifting the tax burden on work and productive investment to consumption. An NCPA study by Boston University economist Laurence Kotlikoff analyzed three versions of a consumption tax: a flat tax, a value-added tax and a national sales tax. Based on this work, Dr. Goodman wrote a full-page editorial for Forbes (“A Kinder, Gentler Flat Tax”) advocating a version of the flat tax that is both progressive and fair.

A major NCPA study, “Wealth, Inheritance and the Estate Tax,” completely undermines the claim by proponents of the estate tax that it prevents the concentration of wealth in the hands of financial dynasties. Actually, the contribution of inheritances to the distribution of wealth in the United States is surprisingly small. Senate Majority Leader Bill Frist (R-TN) and Senator Jon Kyl (R-AZ) distributed a letter to their colleagues about the study. In his letter, Sen. Frist said, “I hope this report will offer you a fresh perspective on the merits of this issue. Now is the time for us to do something about the death tax.”

Retirement Reform.

With a grant from the NCPA, economists at Texas A&M University developed a model to evaluate the future of Social Security and Medicare, working under the direction of Thomas R. Saving, who for years was one of two private-sector trustees of Social Security and Medicare.

The NCPA study, “Ten Steps to Baby Boomer Retirement,” shows that as 77 million baby boomers begin to retire, the nation’s institutions are totally unprepared. Promises made under Social Security, Medicare and Medicaid are inadequately funded. State and local institutions are not doing better — millions of government workers are discovering that their pensions are under-funded and local governments are retrenching on post-retirement health care promises.

Pension Reform.

Pension reforms signed into law include ideas to improve 401(k)s developed and proposed by the NCPA and the Brookings Institution. Among the NCPA/Brookings 401(k) reforms are automatic enrollment of employees into companies’ 401(k) plans, automatic contribution rate increases so that workers’ contributions grow with their wages, and better default investment options for workers who do not make an investment choice.
The NCPA’s online Social Security calculator allows visitors to discover their expected taxes and benefits and how much they would have accumulated had their taxes been invested privately.

**Environment & Energy.**

The NCPA’s E-Team is one of the largest collections of energy and environmental policy experts and scientists who believe that sound science, economic prosperity and protecting the environment are compatible. The team seeks to correct misinformation and promote sensible solutions to energy and environment problems. A pathbreaking 2001 NCPA study showed that the costs of the Kyoto agreement to reduce carbon emissions in developed countries would far exceed any benefits.

**Educating the next generation.**

The NCPA’s Debate Central is the most comprehensive online site for free information for 400,000 U.S. high school debaters. In 2006, the site drew more than one million hits per month. Debate Central received the prestigious Templeton Freedom Prize for Student Outreach.

**Promoting Ideas.**

NCPA studies, ideas and experts are quoted frequently in news stories nationwide. Columns written by NCPA scholars appear regularly in national publications such as the Wall Street Journal, the Washington Times, USA Today and many other major-market daily newspapers, as well as on radio talk shows, on television public affairs programs, and in public policy newsletters. According to media figures from BurrellesLuce, more than 900,000 people daily read or hear about NCPA ideas and activities somewhere in the United States.

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**About the NCPA**

The NCPA is a 501(c)(3) nonprofit public policy organization. We depend entirely on the financial support of individuals, corporations and foundations that believe in private sector solutions to public policy problems. You can contribute to our effort by mailing your donation to our Dallas headquarters at 12770 Coit Road, Suite 800, Dallas, TX 75251, or visiting our Web site at www.ncpa.org and clicking “Support Us.”