

An Intergenerational Solution to Shortfalls in Retirement Savings

Robert W. Moreschi, Ph.D., RFC[®]
Department of Economics & Business
Virginia Military Institute
Lexington, VA 24450
540-464-7081
Fax 540-464-7005
moreschirw@vmi.edu

ABSTRACT

Many persons depend to a large extent on Social Security to fund their retirement. Yet according to the Social Security Administration (SS Advisory 2008), the average beneficiary age 62-64 receives benefits equal to only 50% of income. Some 40% of those over age 80 depend on Social Security for 90% of their total income. Furthermore, without significant changes in anticipated revenues or expenses, Social Security will likely become insolvent within the next three decades. This of course could leave many retirees in difficult financial situations.

Given current economic conditions, secular trends in employee benefit plans, and long-term government financing shortfalls, individuals in the future are likely going to have to become more self-sufficient in funding their own retirement. The current economic environment increases the chances that any changes in Social Security will decrease benefits. The long-term trend in employee benefits is more defined contribution plans at the expense of defined benefit plans. Research suggests many people underfund their defined contribution plan and invest too conservatively. The foreseeable trend in government financing is larger deficits, not smaller. The Federal Government's budget is likely to be under stress for many years, making it unlikely that Social Security benefits will expand. Benefits are more likely to contract for future retirees. To the extent that any of these trends continue, then individuals will have more responsibility to fund their retirement going forward, no less. In such an environment, time will be a key ingredient for individuals to successfully fund their retirement goals.

In this paper, we examine the idea of a funding mechanism to start infants on a path to retirement security that simultaneously could be used to reduce some of the Social Security Administration's unfunded obligations to future retirees. Historically, the wealthy have had the means and access to structure trust agreements to allow assets to be placed in benefit of a minor. Typically, the goal is to allow the assets to grow while the beneficiary is a minor and then allow some or complete access once the minor becomes of legal age. Because of the unique structure of each trust, the cost is usually prohibitive to all but the well-to-do. Suppose a generic trust document could be created. A "one size fits all" legal document would result in lower cost of purchase, due to its commodity-like structure. Instead of trusts costing thousands of dollars, acquisition costs could be much lower. This is already true for many other kinds of legal documents, such as wills and powers of attorney. These trusts could be developed by private firms or as part of a government "Social Security" program. The key difference with traditional trusts for minors is that the assets would not be available to the beneficiary until normal retirement age.

Based on our simulations, under reasonable rates of return we find that initial funding of up to \$2000 per child could alleviate a great degree of retirement funding uncertainty and shortfall. The power of compounding over 50+ years drives a solution to a very long-term problem.

INTRODUCTION

For the past 70+ years the US retirement system has been founded on three pillars: Social Security, employer-provided retirement plans, and private savings. What was once considered a three-legged stool with a solid foundation is not seen as wobbly at best. A broad spectrum of societal changes (demographic, economic, and cultural) are undermining this foundation and making retirement security more challenging for many Americans. While some retirement experts call for “tweaking” the existing system, others look for more dramatic changes in the funding elements for retirement income. Regardless, the key long-term problem is the risk that future retirees will have inadequate retirement income (Scholz, et al. 2006). This paper, while reviewing the current state of retirement funding in the US, focuses on a novel approach to solving the retirement funding crisis for future generations.

THE TRADITIONAL FOUNDATION

Social Security

Social Security, enacted in the US in 1935, is the main source of retirement funding for a large segment of current retirees. Its importance spans a wide range, from a low of just under 20% of the annual income for those in the highest income quintile to over 80% of the annual income for those in the lowest income quintile (US Census Bureau, 2007). For the average retiree age 62-64, Social Security provides some 50% of income. Those age 70-74 on average receive about 62% of their income from Social Security while the corresponding percentage is 74% for those older than age 80 (Working for Retirement Security, 2008).

It is widely documented that the Social Security Trust Fund is in some peril, at least over the long-term (Sloan, 2009). The size of the Trust Fund has grown steadily since the “fix” in 1983 (Greenspan Commission, 1983) and now stands at \$2.5 trillion, with a projection to rise to \$4 trillion. The problem is that in the not too distant future the annual cash flow of Social Security will become negative, even as the Trust Fund grows. The annual excess of tax revenues over expenditures is invested in US Treasuries and the only way for Social Security to cover its cash flow deficits (when annual expenditures exceed annual tax revenue) will be to redeem US Treasury IOU’s. But the only way the Treasury will have the funds to make good on Social Security obligations will be to sell new debt to investors. The Treasury will simply replace debt owed to Social Security with debt owed to the investing public (Sloan, 2009).

How has Social Security fallen into this predicament? A combination of factors, including more generous benefits, falling birth rates, aging population, longer life expectancy, wage rate growth slower than forecast, and a falling average retirement age (Retirement Security, 2005).

While many solutions to Social Security have been proposed, those are not the focus of this paper. Rather, the above is to point out that a growing problem exists and it may seriously affect the retirement plans of current and future retirees.

Employment-Based Plans

Employer sponsored retirement plans are the second leg of the stool. Until some 15 years ago, the defined benefit plan (pension) was the more common form of employee benefit plan. For example, in 1980, of those employees with an employer retirement plan, 62% had a traditional pension plan, 16% had a defined contribution plan, while 22% had both types of plans. In 2005, the statistics reversed, as 10% had a pension plan, 62% had a defined contribution plan, and 27% had both plans. Once often overlooked problem is that over this time period, only some 50% of full-time employees had any type of employer sponsored retirement plan (Working for Retirement Security, 2008).

Where employees remained with one employer for an entire career, this means of funding retirement income was an efficient and beneficial mode. But, in an era of greater labor mobility, meaning less time with any single employer, coupled with the desire of many firms to reduce or eliminate the obligations of a pension plan, means that many employers have eliminated this benefit (Ghilarducci, 2007). Instead, the trend for the past 20 years has been to substitute defined-contribution plans (such as a 401(k)) for defined benefit plans. Defined contribution plans have the benefit of giving control to the employee at the cost of income guarantees. As a funding vehicle for retirement, while the defined contribution plan has some generous features, the ability to access funds prior to retirement defeats the goal of adequate retirement income (Ghilarducci, 2007). Also, Schieber (2007) found that in a sample of private 401(k) plans of workers age 50-64, approximately 9% had a zero balance, 40% had accumulated less than half of their annual pay, and 37% had accumulated double their annual pay, and only 9% had accumulated at least quadruple their annual pay. To replace 40% of pre-retirement salary at age 62 requires accumulated savings of approximately five times annual pay (Working for Retirement Security, 2008).

Private Efforts

Private savings is the third stool of the retirement income foundation. Household savings rates have rebounded in the past 12 months from the historic lows of the previous few years. From a peak of over 10% in the mid 1970's to early 1980's, the household savings rate steadily fell to near 0% by 2006 (Farrell, et al., 2008). The financial crisis of 2008 seems to have spurred the rebound in private savings. Many researchers noted that rising equity and real estate values caused wealth to rise at the same time that savings was declining. Even with this rebound, saving rates remain too low relative to the retirement income gap, and too few households save at an adequate rate (Helman, et al., 2008).

THE ELEPHANT IN THE ROOM: HEALTH CARE

When considering the ability of the average retiree to fund retirement expenses, health care and associated costs must be part of the equation. The current health insurance debate has highlighted many of the unsustainable trends in health care expenditures. As noted in a report of the US Centers of Medicare and Medicaid Services (National Health Expenditure Projections, 2008) in 1960 health care spending grew from 5% of GDP to 17% of GDP in 2008. That

represents an annual rate of growth 2.5% faster than the rate of growth of GDP in the same period. Current expenditures of some \$2.4 trillion are expected to almost double by 2018, representing a 70% increase per capita.

This rate of growth is not sustainable. Extrapolating this historic rate of growth means that near the end of the 21st century health care spending would equal almost the entire GDP of the US. According to the Congressional Budget Office (CBO, 2009), using a rate of growth of health care expenditures 0.8% faster than GDP growth results in health care expenditures doubling to 31% of GDP by 2035 and 46% of GDP by 2080. Those long-term predictions are notoriously difficult and subject to error, the best estimates agree that without fundamental changes, health care expenditures will continue to consume more of the country's resources.

For retirees, the above trend is similar. From 1997 to 2005, according to a study from the Kaiser Family Foundation (2009):

the median annual out-of-pocket health care expenses of Medicare beneficiaries – including premiums and supplemental insurance – grew by 64% from \$1,670 to \$2,740. Over the same period, their median income grew by only 25%, from \$12,000 to \$15,000.

Of course, this burden is not distributed equally. In 2005 25% of all Medicare recipients spent about one-third of their income on health care expenditures. At the current grow rates in expenditures and income, those 25% will be spending 50% of their income on health care.

The US Centers of Medicare and Medicaid Services (Foster and Clemens, 2008) looked at the costs of Medicare Supplemental Medical Insurance (Part B) and Prescription Drug coverage (Part D). The authors found that in 2008 these two combined costs equaled about 25% of the average Social Security benefit. At the current rate of growth, that will rise to 40% by 2030 and 67% by 2080. Munnell, et al., (2008) estimated that an average couple retiring in 2010 would need to have saved just over \$200,000 in order to provide the income stream necessary to fund their share of health care expenses.

It is not just retirees who are paying more for health care. In the ten years from 1999 to 2008, all health related expenditures for the average worker receiving employer-sponsored insurance doubled (Survey of Employer ... 2000-2008). Using data from the US Bureau of Labor and the US Bureau of the Census, in the same period the average worker's wages rose 34%, family income rose 29%, and the aggregate increase in the price level rose 29%.

ADEQUATE RETIREMENT FUNDING

Putting together sources of retirement income with health care costs does not paint a pleasant scenario. Research addressing the adequacy of retirement funding comes to a similar conclusion that some significant share of the population is not prepared nor has the resources to maintain a standard of living comparable to when they were employed. Scholz, et al., 2006, found that fewer than 20% of individuals close to retirement have less than their "optimal

target” amount. Farrell, et al., 2008, believe that closer to two-thirds or retirees will not be able to use their sources of retirement income to replace 80% of their pre-retirement income.

While Social Security and other sources of retirement income are under some degree of stress, the resources being devoted to health care continuing to increase. The problems in health care addressed previously do not even consider the additional problem of rising longevity and long-term care costs. While neither Social Security nor health care funding is on a sustainable path, and their non-sustainability is the source of US near to intermediate-term problems, the goal of this paper is not to address the current crisis but to consider a solution to the long-term lack of retirement income that many current workers are likely to confront if current trends continue.

A SOLUTION TO A CRISIS

The retirement funding shortfall resulting from the precarious status of Social Security and escalating health care costs is really a two-part problem. Or rather, a problem that differentially affects two distinct groups. One group is composed of current workers and recent retirees. This is the group for which patching the current system is imperative. The second group is made up of youth, from teens to newborns. For this group, a patch may not be the best long-term solution.

Current Workforce and Retirees

For current workers and retirees, making sure the current system remains viable is important. While certainly a 30 year old can do more and has the time to augment his/her self-funding, those near or in retirement do not have that possibility. Even with time for the younger of this group to provide more for their own retirement, the simple fact is that most of this cohort does not have enough time to be able to overcome the funding shortfall that will ensue if Social Security were to fail. Given the lack of time, it is conceivable that the best solution for this group is for their to be some combination of modifications to the existing system: raise the retirement age for full benefits, increase the FICA tax rate, lift some or all of the cap on Social Security wages subject to the tax, and slow the rate of growth in benefits. While this approach would likely make the system solvent for the foreseeable future, it may not be the best solution those who are significantly younger.

Children and Infants

Only three factors ultimately matter when considering the amount of savings necessary to adequately fund retirement. Those are:

- contributions
- returns
- time

The future value of any investment account will increase with larger contributions, higher assumed investment return, or longer time until the funds are needed. In the case of retirement, many individuals, especially in light of the market downturn in 2008, have had to

consider delaying their retirement date. But, if we think about adequately funding the retirement of those who are currently a long way from that date, we can also look at the time element from the beginning of the calculation. That is, what happens if the accumulation starts earlier than the typical timing of sometime during one's work years?

Without looking at calculations, any student of time value principles knows that starting the accumulation phase sooner means greater future value or alternatively for a given future value less contributions need be made.

The below example illustrates this principle. Results assume payments are made at the beginning of each period, the investment return is a constant 8.0% per year, and taxes are ignored.

Table 1: Investment Amount Required for a Certain Future Value

Age at Start	Deposit per year	# of Deposits	Total of Deposits	Value at age 62
0	\$1,000.00	5	\$5,000.00	\$509,295.00
25	\$2,322.00	37	\$85,914.00	\$509,295.00
30	\$3,514.00	32	\$112,448.00	\$509,295.00
35	\$5,399.00	27	\$145,773.00	\$509,295.00
40	\$8,503.00	22	\$187,066.00	\$509,295.00
45	\$13,972.00	17	\$237,524.00	\$509,295.00
50	\$24,849.00	12	\$298,188.00	\$509,295.00

Beginning at birth, five annual payments of \$1,000.00 are deposited into an account. At a constant 8.0% per year, with the fifth deposit, the annuity has grown to \$6336.00. Taking this annuity as a lump sum and investing it for 57 years at 8.0% per year results in a future value of \$509,295.

As is expected, starting early has obvious advantages over starting late. But is this enough to fund projected future retirement expenses? Not necessarily. As outlined in *Working for Retirement Security, 2008*, for a worker to retire at age 62 and replace 40% of his or her pre-retirement income during retirement would need to accumulate about five times this annual income amount. The more than half million dollars accumulated would likely provide this figure (in current dollars) to a large percentage of retirees. For those that fell short, this would provide a nice supplement to other means of retirement income. The amount of \$509,295 is not a magic figure, simply the result of the given assumptions.

HOW TO FUND THIS RETIREMENT INCOME

The numbers in table 1 look promising, but of course a logical question is to wonder where the average worker would come up with these investment dollars. More pointedly, where will an infant find \$1,000.00 per year for five years?

The wealthy have always had the means and the tools to fund a newborn's future funding needs. The vehicle is a trust. Trusts come in many shapes and forms and in fact a common type of trust is a Uniform Gift to Minor Account (UGMA). The problem for retirement funding for a UGMA is that the beneficiary gains complete access to the account at the age of consent (18 in most states). Thus as a retirement funding vehicle it is lacking. To protect invasion of assets until the donor so chooses, irrevocable trusts are the vehicle of choice. Historically, the problem for all but the most well-to-do is that using the services of an attorney (normally necessary) is expensive, with costs easily running to the thousands of dollars.

Like UGMA's, suppose the government set up a standardized irrevocable trust that did not allow invasion of the funds until at least age 59 and a half (consistent with other retirement accounts and the absence of a penalty for early withdrawal). There already exists one such "commodity" trust product, named KissTrust¹. The provider has structured an irrevocable trust available at a modest price while also providing custodial services. With an irrevocable trust, anyone with the means and desire could fund the future retirement needs of another.

Of course, the "catch" is how to come up with the investment dollars if one finds that one's own retirement is underfunded? For some, a parent or grandparent may have the financial wherewithal to fund an irrevocable trust for a child or grandchild. Private funding could be in an amount sufficient to fund merely a portion of the amount necessary to fund 100% of retirement expenses. Conversely, even modest amounts that provide partial support makes the acute problems of retirement funding less extreme.

A possible solution to a lack of private resources comes from the Ghilarducci (2007) proposal of a "Guaranteed Retirement Account (GRA)." GRA's as proposed are a personal retirement savings account that are funded with a 5.0% contribution from each worker. This cost is offset with a refundable \$600.00 tax credit. The tax credit is intended to replace the tax breaks currently granted to defined contribution plans and other tax-deferred accounts, such as IRA's. These tax breaks are worth more than \$100 billion per year and would be offset by the cost of the refundable tax credit. Thus the Ghilarducci plan is designed to be tax revenue neutral.

Suppose that instead of funding a public pension program for adult workers, the federal government was to fund a retirement account of each newborn US citizen. If we assume the contribution is \$1,000.00 per year for five years (\$5,000.00 in total per newborn, as in table 1),

¹ Full disclosure – the author has provided consulting services to KissTrust for which he was compensated. The use of an irrevocable trust is not predicated on using any service offered by KissTrust.

then at an 8.0% per year investment return, each account is worth over \$500,000.00 at age 62. What would be the cost of this contribution? Using estimated data from 2008 (Flag Counter, 2009), the U.S. birth rate was 14.18 births per 1,000 of population. The estimated infant mortality rate in 2008 was 6.26 deaths per 1,000 of population. That nets to 7.92 newborns per 1,000 of population. Based on a population of 300 million, that results in 2.376 million newborns per year. The first year cost to fund the trust is therefore \$2.376 billion and the annual cost at the five year mark is \$11.88 billion. Notwithstanding the current budget deficits facing the federal government, the running rate cost of this program is not significantly more than a handful of earmarks!

Structurally, the government could make the contribution directly or offer up to a \$1,000.00 annual tax credit. Like the GRA, the federal government could make use of its existing infrastructure using the Social Security Administration and the Thrift Savings Plan to manage assets. Unlike the GRA, given the length of investment horizon, an ultra-conservative asset allocation with a guaranteed return is not necessary. However, to keep the accounts “on track” it may be preferable to use an allocation of “lifestyle” funds that automatically adjust an account’s asset allocation based on the number of years to the maturity of the trust. Of course, this does not solve the retirement funding problems for today’s current workers and retirees. That will require a different fix. But, long-term, a program of irrevocable trust accounts for every newborn would greatly reduce the probability of future retirees living in poverty.

CONCLUSION

That Social Security and Medicare have near-term and long-term funding shortfalls is well documented. The same can be said of private sources of retirement funding. The means to modify public and private savings programs to help current retirees and those already in the workforce are not addressed in this paper. What is addressed is a program to solve the very long-term retirement funding deficiencies facing our society. Using a program that begins contributions at birth, the benefit of compound interest for a long length of time helps to solve the retirement funding crisis. The federal government would need to structure the irrevocable trust vehicle. Implementation would either be left to private individuals or through public funding. The administrative cost of a public program ought to be modest, using the existing infrastructure of the Social Security Administration and the Thrift Savings Plan. The dollar outlay based on current birth rates, while significant at a \$12 billion running rate, is small relative to the entire federal budget and in relation to the over \$100 billion annual cost to the treasury of allowable tax breaks for tax-deferred retirement plans.

REFERENCES

- Center for Retirement Research at Boston College. (June 2006). *Retirements at Risk: A New National Retirement Risk Index*.
- Farrell, Diana, Eric Beinhocker, Ezra Greenberg, Suruchi Shukla, Jonathan Ablett, and Geoffrey Greene. (June 2008). *Talkin' 'bout My Generation: The Economic Impact of Aging US Baby Boomers*. McKinsey Global Institute.
- Foster, Richard, and Kent Clemens. (March 2008). *Additional Information Regarding Comparisons of Beneficiary Income and Out-of-Pocket Costs for Medicare supplementary Medical Insurance*. US Centers for Medicare and Medicaid Services. Available at <http://www.cms.hhs.gov/ReportsTrustFunds/downloads/Beneficiary.pdf>
- Ghilarducci, Teresa. (November 2007). *Guaranteed Retirement Accounts: Toward Retirement Income Security*. Economic Policy Institute.
- Helman, Ruth, Jack VanDerhei, and Craig Copeland. (April 2008). *The 2008 Retirement Confidence Survey: Americans Much More Worried about Retirement, health Costs a Big Concern*. Employee Benefit Research Institute Issue Brief.
- <http://flagcounter.com/factbook/us>. Reviewed on September 22, 2009.
- Munnell, Alicia H., Anthony Webb, and Francesca Golub-Sass. (August 2007). *Is There Really A Retirement Savings Crisis? An NRRRI Analysis*. Center for Retirement Research at Boston College.
- Munnell, Alicia H., Mauricio Soto, Anthony Webb, Francesca Golub-Sass, and Dan Muldoon. (February 2008). *Health Care Costs Drive Up the National Retirement Index*. Center for Retirement Research at Boston College Issue in Brief.
- Neuman, Tricia, Juliette Cubanski, and Anthony Damico. (February 2009). *Revisiting 'Skin in the Game' Among Medicare Beneficiaries: An Updated Analysis of the Increasing Financial Burden of Health Care Spending From 1997 to 2005*. Kaiser Family Foundation.
- Schieber, Sylvester J. (2007). *Pension Aspirations and Realizations: A Perspective on Yesterday, Today, and Tomorrow*. Watson Wyatt Worldwide, Washington D.C.
- Scholz, John Karl, Ananth Seshadri, and Surachai Khitatrakun. (2006). *Are Americans Saving "Optimally" for Retirement?* Journal of Political Economy.

- Sloan, Allan. *The Next Great Bailout: Social Security*.
<http://www.money.cnn.com/2009/07/29/news/economy/fixing.social.security.fortune/index.htm>. Viewed September 9, 2009.
- Social Security Advisory Board. (March 2005). *Retirement Security: The Unfolding of a Predictable Surprise*.
- Social Security Advisory Board. (September 2008). *Working for Retirement Security*.
- Social Security Advisory Board. (September 2009). *The Unsustainable Cost of Health Care*. Pre-Publication Release.
- The Henry J. Kaiser Family Foundation. *Survey of Employer Sponsored Health Benefits 2000-2008*.
- U.S. Bureau of Labor Statistics. *Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 2000-2008*.
- U.S. Bureau of Labor Statistics. *Seasonally Adjusted Data from the Current Employment Statistics Survey, 2000-2008 (April to April)*.
- U.S. Bureau of the Census. *Current Population Survey*. (2008).
- U.S. Centers for Medicare and Medicaid Services, Office of the Actuary. *National Health Expenditure Projections 2008-2018*. Available at
<http://www.cms.hhs.gov/NationalHealthExpendData/downloads/proj2008.pdf>
- U.S. Congressional Budget Office. *Long Term Budget Outlook*. (2009).
- U.S. Population Statistics. <http://www.flagcounter.com/factbook.us>.