SOCIAL SECURITY’S INVESTMENT SHORTFALL: $8 TRILLION PLUS

-AND THE WAY FORWARD

Plus How the US Government’s Financial Deficit Reporting = 64 Madoffs

Nils H. Hakansson
Sylvan C. Coleman Professor of Finance and Accounting, Emeritus
University of California, Berkeley
hakansso@haas.berkeley.edu 925 933-5543

July 7, 2011
Latest revision December 8, 2011

The author would like to thank Minder Cheng and Richard Grinold for helpful comments and Kris Beltran, Ben Fredrickson, and Nils A. Hakansson for research assistance.
ABSTRACT

While most nations’ public pension plans have long invested in equities, the Social Security System of the United States stands virtually alone in limiting its investments to non-marketable US Treasury Bonds. This paper traces on a monthly basis what would have happened if a balanced approach combining passive investments in marketable long-term government bonds and stocks from its beginning in 1937 had been employed instead. Under conservative assumptions, the Social Security Trust Fund, other things being equal, would have been $7.6 trillion larger at the end of 2010, with an ending balance of $10.2 trillion. But other things would not be equal: the cumulative wealth effect would have given a positive push not only to the Trust Fund but to economic growth. In addition, the Unified Budget of the United States, which since 1970 has understated the country’s fiscal deficits by $4.15 trillion, would probably never have been born or met an early death. Not surprisingly, the invested Trust Fund’s economies of scale, miniscule fees, low administrative costs, and other efficiencies could not be duplicated by privatized accounts, which also suffer from huge productivity losses and in many instances are subject to moral hazard. To rescue the Social Security System from being a political football, it needs to be made independent, with a status similar to that of the Federal Reserve System.
I. INTRODUCTION

This study is about one of the world’s largest investment funds, the Trust Fund of the Social Security System of the United States. Hundreds of millions of people have made contributions to it over three quarters of a century. A very large number of the people who have paid into it have also received, or are receiving, retirement benefits, disability payments, or the proceeds from life insurance sent to their next of kin; the others who have made and are making contributions can expect these same types of benefits in the future.

As of December 21, 2010, The Social Security Trust Fund had assets of $2.609 trillion in the form of non-marketable Special Issue Government Bonds and no debts. Of this amount, total inflows to the Trust Fund in the form of payroll taxes exceed benefit payments in the amount of $1.144 trillion. Consequently, the Trust fund’s accumulation of earnings, in the form of interest income, over its 74 years of existence, adds up to only $1.465 trillion; adjusted for inflation, it is a much smaller number. As of this writing, the Social Security Trust Fund has never invested a penny in stocks.

This is the more than remarkable because many, if not most, nations do make stock investments in their public pension funds or social security programs. A recent study by Yermo (2008) covering eight OECD countries (Canada, France, Ireland, Japan, Korea, New Zealand, Norway, and Sweden) showed that in 2006 five of the eight kept more than half of their reserve fund investments in equities. Canada diversified its social security investments from purely government bonds in 1998 and many countries did so much earlier. The Social Security Trust Fund, located in what is often viewed as the most capitalistic nation on earth, is clearly way behind the curve.

While many have advocated investing a portion of Social Security funds in the stock market or privatizing Social Security in part or in full, these concepts have attained no serious traction. The illustrate how important stock investments are for the future of Social Security, and in boosting future US and global economic growth, this paper will examine what would have happened if stocks had been included in the Social Security Trust Fund from its beginning in 1937.

In this vein, a central purpose of this paper is to show that if the Social Security Trust Fund had pursued a simple, passive strategy of investments in marketable long-term government bonds and the stocks of large companies, its earnings and assets at the end of 2010, other things being equal, would have been $7.595 trillion larger. In other words, the Social Security Trust Fund would have ended 2010 as by far the world’s largest investment fund with assets of $10.204 trillion, dwarfing the recently expanded Federal Reserve System’s balance sheet by a factor of roughly four. This translates to about $32,900 per capita for the invested fund while the corresponding number for the existing Trust Fund is only somewhat more than $8,400. In 2010, the actual Trust Fund grew by only $.069 trillion while the invested fund, despite negative net inflows of $36.8 billion, would have grown by $1.18 trillion, or more than 17 times as much.
But other things would clearly not be equal. The increased demand for marketable bonds and stocks would in most years have resulted in a positive wealth effect. When people and economic agents feel wealthier, they become more willing to invest in financial, physical, intangible, and intellectual assets and property – and to spend more on consumption. This in turn results in a positive influence on government revenues. The combined effect of all these ingredients can only be what everyone seems to beg for - greater economic growth. In today’s global markets, one nation’s wealth effect spills across borders. Thus, a Social Security Trust Fund invested in marketable Treasury bonds and a passive portfolio of global stocks would in the long term boost not only US but global economic growth.

The above cannot avoid raising the obvious question. Where has the leadership of the American business community and the US government been in the last 75 years? Does it not believe in the stock market? Does it not appreciate the purchasing power that an efficient retirement plan, life insurance plan, and disability plan combination invested in bonds and stocks brings to the American people? The substantial long-run outperformance of stocks over bonds has been recognized for centuries.

To save and invest for retirement and in life insurance and disability insurance plans is to provide for a personal safety net. This can be accomplished via a multitude of avenues. People can save for retirement as individuals or via corporate or group plans or a national plan or some combination. Life insurance and disability insurance can be purchased individually or as a member of a group or of a national plan.

The central objective of companies or funds receiving retirement contributions or life insurance or disability insurance premiums is to invest their inflows to make them grow – and to do so in a compounding manner. This way, when the time for benefits arrives the payments to the beneficiary will be many times larger than his or her inputs.

And how is this compounding growth of contributions achieved? Almost universally it is executed via investments in government and corporate bonds and in common and preferred stocks, with smaller allocations to alternative assets such as real estate, infrastructure, and commodities. Historically, investments have been in domestic securities but recently a trend towards diversification into global bonds and stocks has emerged. The point to be stressed then is that whether one looks at individuals’ retirement plans, the pension funds of corporations, universities, foundations, and other not-for-profit entities, or the pension funds of local and state governments and its sub-entities, a portfolio of stocks and bonds is the principal asset held.

Investing Social Security funds in stocks strikes many people as risky and imprudent. Over short periods stocks can indeed be quite risky. If you look at the 18-year period 1992-2009, for example, the S&P 500 total return stock index did indeed lose ground when compared to long-term US Treasury Bonds. This was also the case for the 30-year period October 1, 1981 through September 30, 2011, the first such 30-year period since 1831-1861 (Eddings and Applegate 2011). To make the case for including stocks, it is necessary to look at long periods, such as the period spanning an individual’s typical working life and retirement, over which stocks outperform bonds by several multiples. That is why this study examined the full 74-year period
1937 through 2010 - over which large company US stocks outperformed long-term US Treasury Bonds by a factor of 23.8 (Morningstar 2011).

The economic reason why stocks outperform bonds over long periods is due to what is generally referred to as the risk premium. Since stocks are typically riskier than bonds, investors will demand higher returns, on average, when they purchase stocks than when they acquire bonds, as compensation for their higher risk, fully realizing that the realized returns for stocks over short periods may well be lower.

Dimson, Marsh, and Staunton (2002, 2011) calculated the realized risk premia of equities over long-term government bonds and over Treasury bills for sixteen countries for the 101 years 1900-2000 and for nineteen nations for the 111 years 1900-2010. Over the 1900-2011 period, the annualized realized equity risk premium over long-term government bonds for the 19-country World Index was 3.8%. Australia had the highest equity premium, 5.9%, and Denmark the lowest, 2.0%. The equity risk premium for the United States was 4.4% which is slightly lower than the 4.6% equity risk premium for the 74-year Social Security period 1937-2010 (Morningstar 2011).

The designers of the Security System did indeed have the wisdom of creating a Trust Fund in which the excess if inflows over benefit payments would earn income. This income took the form of interest since all investments were in Special Issue Government Bonds. The crucial step of separating Social Security’s financing from other governmental cash flows was thus established at the System’s beginning. Unfortunately, this clear-cut separation became partially obscured in 1970 with the introduction of the Unified Budget concept.

The principal finding is a simple reminder of the power of compounding over long time periods, say 60 years, roughly the beginning of a person’s Social Security contributions to the end of that same person’s receipts of Social Security benefits. Even small differences in average compound returns generate very large differences over an active life-time. The same is true for even modest differences in annual fees.

Chapter II gives a very brief overview of the Social Security System. Chapter III then looks at how Social Security constitutes the minimal safety net portion of an individual’s personal safety net and provides a short summary of how Friedrich Hayek sees the minimal safety net. The System’s principal shortcomings are then identified in Chapter IV, including how the Unified Budget concept has severely understated the US Government’s financial deficits since 1970 by reducing the reported deficits by the surpluses of its various trust funds.

The monthly evolution of the Social Security Trust Fund is given in Chapter V under the assumption of a 50-50 starting division between passive investments in marketable long-term government bonds and large company stocks, with due respect given to transaction costs, market impact, mean reversion, the opportunity to invest in international stocks beginning in 1973, and the use of (roll-over) short-term borrowing when net inflows are negative. Various countries experience with privatized social security accounts are summarized in Chapter VI along with how such accounts affect economic efficiency, moral hazard, and productivity losses. Chapter VII then argues that the Social Security System needs to be independent, much like the Federal...
Reserve System, and professionally managed, with concluding comments provided in Chapter VIII.

II. SOCIAL SECURITY: A VERY BRIEF OVERVIEW

The Social Security System of the United States, a child of the Great Depression, dates its birth to 1935. It was controversial then and has remained so to varying degrees ever since. The requirement since 1983 to make 75-year projections of its financial prospects, where demographic changes in the age distribution of the population play a key role, have generated sobering, and in some quarters nearly hysterical, reactions about its sustainability. It is not my intent to review these issues in any detail. Many careful studies of the problems facing Social Security have concluded that they can be solved by relatively minor adjustments. An especially cogent analysis in this vein is provided by Peter Diamond and Peter Orzag in their book Saving Social Security – A Balanced Approach (2004). Their adjustments to revenues and benefits are based on three components: improvements in life expectancy, changes in earnings inequality, and what they call the legacy debt that arose from the early recipients’ relatively large benefits.

The theme of this inquiry is that the Social Security system currently in place, while generally comparing favorably to similar systems in other nations, has three serious flaws or shortcomings, each of which could be easily corrected. Payroll taxes are in essence mandatory contributions to, or investments in, a retirement plan and two insurance policies and should therefore be labeled as such. Second, since stocks outperform bonds over long periods and Social Security presumably has no termination date, passive equity investments belong in the Social Security Trust Fund. Finally, Social Security’s financial flows need to be removed from the Unified Budget of the United States – ideally, the entire Social Security System should be granted a formally independent status similar to that of the Federal Reserve System. In addition, the Unified Budget concept itself needs to be dropped so that the public and the world can get a valid picture of the finances of the United States government.

As noted, the American Social Security System was established in 1935. Disability insurance was added to the program by the Eisenhower administration in 1957 (to the consternation of many in his party). In addition to retirement and disability benefits, Social Security provides benefits to survivors of deceased and disabled breadwinners such as spouses and in some cases children and even parents. The aggregate of these provisions constitute what is generally referred to as a social safety net. Thus, Social Security can be divided into three distinct mandatory components: a retirement plan, a life insurance policy, and a disability insurance policy, of which the latter two are often overlooked. Coverage is essentially universal, with state and local government employees the primary groups among the roughly 4 million presently outside the system. By early 2011, 54 million beneficiaries, or more than one for every six Americans, were receiving monthly checks from Social Security: 37.5 million retirees, 6.4 million survivors, and 10.2 million disabled. Social Security is partially redistributive in that lower income individuals receive higher benefits relative to their contributions than higher earners but not universally so, as shown by Brown, Coronado and Fullerton (2009).

---

Social Security began with a payroll tax of 2% applied up to $3,000 of income. It has since risen to 6.2% (for both employee and employer) in 2010 up to a maximum of $106,800 of annual income. (In 2011 the employee’s contribution was temporarily lowered to 4.2%.) The surplus of inflows over benefit payments has from the beginning been placed in a Trust Fund and invested in Treasury securities (called Special Issue Government Bonds), the interest on which also is credited to the Trust Fund. As of December 31, 2010, its balance had grown to $2.61 trillion. There were periods in the seventies and early eighties when benefit payments exceeded inflows. This caused the Trust Fund to borrow $17.5 billion in fiscal year 1983, an amount that was repaid in fiscal years 1985 and 1986 (although interest payments continued until 1991). This was apparently the trigger which caused President Reagan to form the Greenspan Commission to make adjustments to some of the payroll tax and benefit parameters, adaptations which still are in effect. It is perhaps noteworthy that the three actuaries hired by President Roosevelt’s Committee on Economic Security predicted in 1934 that the proportion of Americans over 65 would grow from the then 5.4 percent to 12.65 percent in 1990 – the actual figure for that year, as noted by Lowenstein (2005, p. 45), turned out to be 12.49 percent!

While Social Security has always enjoyed strong public support, many conservatives have riled against it, from the very beginning. A suit filed by a shareholder claiming that the payroll tax was unconstitutional went all the way to the Supreme Court, where Justice Benjamin Cardozo ruled in 1937 that “The conception of the spending power advocated by Hamilton…has prevailed over that of Madison” (Lowenstein 2005, p.45). The list of critics and opponents is familiar: Ronald Reagan during the two decades or so before he became president, Barry Goldwater, Milton Friedman (1962, Ch. XI), and various individuals and institutions leaning right. Many others, Peter Peterson among them (see e.g. Peterson 2010), have advocated reform. Some have proposed that Social Security be made voluntary or wholly or partially privatized. These issues will be discussed in Chapter VI.

As a minimal safety net, Social Security was designed to be supplemented with additional private retirement and insurance benefits. In 2008, according to the Social Security Administration (April 2010), Social Security provided the sole source of income for 22.2% of beneficiaries aged 65 and older (Table 9.A1), which represents some 5.6 million Americans (Table 5.A5). And for 63.9% of the 25 million elderly beneficiary Americans in that age group, Social Security provided the majority of their income. For the 29 million Americans 65 and older, Social Security provided more than a third, 36.5%, of their total income (Table 10.1). Even for retired upper middle-class families, the $2,000 to $4,500 monthly payment is no doubt welcome. Social Security, then, is the source of a highly significant portion of elderly Americans’ purchasing power.

The above data are especially significant when viewed in light of the private resources available for retirement funding. According to the Government Accountability Office, half of American households with someone aged 55 to 64 had financial assets of $72,400 or less in 2007 – before the recession – a year in which the median family working income was $54,600 Bucks (2009) – as reported in Jeszeck (2010).

Initial retiree benefits have been indexed to wage inflation, which has tended to be higher than price inflation, to which subsequent benefit payments are indexed. Alan Greenspan, among
others, have advocated that all benefits be based on price inflation alone, as a way of lowering benefits in dealing with recent pessimistic 75-year projections for the Trust Fund. An editorial in *The Financial Times* (2005) strongly disagrees, arguing that “indexing benefits to prices rather than wages produces a generation of elderly people in dire poverty. When that happens, government aid will be needed.”

The administrative expenses of the Social Security System are remarkably low, especially when compared to privatized plans, as also by noted Krugman (2004). In fiscal year 1990, administrative expenses were .78% when measured against contributions and .92% if measured against benefit payments. In fiscal year 2009, the corresponding numbers were .86% and .90%. Measured against historical assets, annual administrative expenses are only .25%.

**III. SAFETY NETS: INSURANCE POLICIES AND RETIREMENT PLANS**

The reason for purchasing an insurance policy is to protect oneself or an economic entity from the prospect of future loss. With respect to home, auto, or other property insurance no loss may occur. But if there is damage or destruction, the insured receives a payout in some form as compensation in accordance with the terms of the policy. What the insurance policy provides is a safety net that may or may not end up being needed. The same is true for disability insurance, discontinued term life insurance, long-term care insurance, liability insurance, unemployment insurance, as well as event insurance written to protect against terrorist attacks for example.

Other insurance policies do provide assured payouts. Whole life insurance is an example because it contains a savings element. Health insurance is virtually certain to provide benefits. Credit default insurance (or swap) purchased to protect against a borrower’s ability to repay can be sold or held. The bottom line is that the only reason for insurance of all types to exist is to provide a safety net to the insured.

Retirement plans are also for all intents and purposes safety nets because they provide a means to cover living expenses after an individual’s work-related earnings activities terminate. The two main varieties are defined benefit plans, which are group-based, and defined contribution plans in which benefits are governed by the individual’s own payments into the plan. Most government retirement schemes are of the defined benefit variety while IRAs, Keoghs, and 401(k) and 403(b) plans belong in the second category. Early corporate pension plans typically began as defined benefit plans but recent years have witnessed a strong trend toward the defined contribution variety.

Safety nets can be divided into two distinct categories, voluntary and mandatory. The bulk of the insurance policies and retirement or pension plans in existence are voluntary as befits a free society. But mandatory schemes exist in virtually all countries. The US and a number of other nations mandate a minimum of automobile insurance coverage. In many nations health insurance is mandatory. And developed nations have mandatory pension schemes financed through taxes designed to provide a minimum safety net upon retirement; some of these will be discussed in Chapter VI. Social Security, then, needs to be viewed as a mandatory retirement plan, life

---

2 Author’s calculations from Office of Management and Budget, 2010, Table, 1.13
insurance policy, and disability insurance policy combined and designed to provide a minimal safety net, the role of which is to underlie a generally deeper, and broader, individually selected safety net.

**Social Security Is a Mandatory Minimal Safety Net, Not an Entitlement**

Social Security is often referred to as an entitlement. But this is not technically correct since benefits do not flow from general, unspecified tax revenues. In contrast, Social Security is based on a designated tax applied to individuals and employers which enters a trust fund invested in interest-earning Treasury securities and which is the sole source of benefit payments. Those who paid into the trust fund are also, along with their family members, the sole beneficiaries of benefits, just as in private plans. The structure of Social Security, in other words, is like that of any other triplet combination of a defined benefit retirement plan, life insurance policy, and disability insurance policy. In contrast to private plans, Social Security is partially redistributive in that lower earners receive higher benefits relative to their contributions than higher earners. But the triplet of inflation-indexed, life-time annuity features of the Social Security System, combining, as it does, a retirement plan, life insurance, and disability insurance, would be difficult to duplicate in the much smaller pools of private insurers.

While one half of the contributions of the employed are by law paid by their employers, economists would argue that even the employers’ portion can be viewed as contributed by the employees. This is because, if the employees paid the employers’ share directly, then, in equilibrium, the employees would demand the value of those contributions in the form of higher wages. In other words, employees are giving up higher wages, roughly equal to, and in exchange for, the payroll taxes paid by employers (net of the employers’ income tax deduction only if the employees were to receive a corresponding tax deduction - like the self-employed already do).

Genuine entitlements are based on the whims of fiscal policy. Medicare is in part an entitlement because only Part A (hospitalization) is funded by a designated tax. What Congress allocates to Parts B and D also goes into a trust fund. The bottom line then is that Social Security should not be viewed as an entitlement but as a fully self-funded retirement and dual insurance plan. (The notion that there are unfunded liabilities associated with Social Security assumes a highly predictable future incapable of being adapted to.) The fact that Congress designates Social Security’s administrative budget does not conflict with the above statement because the administrative expenses in question are paid by the Social Security Trust Fund.

**Friedrich Hayek’s View on Minimal Safety Nets**

In Friedrich Hayek’s treatise *The Constitution of Liberty* (1960), Chapter 19 is devoted to, and titled, “Social Security.”³ Two main themes emerge in his analysis. The first is that “the whole apparatus of ‘social security’ can probably be accepted by the most consistent defenders of liberty.” “Such a program … would involve some coercion, but only coercion intended to forestall greater coercion of the individual in the interest of others; and the argument for it rests

---

³ This chapter also deals with ‘social insurance’ for health, unemployment, and industrial accidents, topics which are beyond the scope of this study.
as much on the desire of individuals to protect themselves against the consequences of the extreme misery of their fellows as on any wish to force individuals to provide more effectively for their own needs.” (p.286). He adds that “‘Social insurance’ thus from the beginning meant not merely compulsory insurance but compulsory membership in a unitary organization controlled by the state. The chief justification for this decision, at one time widely contested but now usually recognized as irrevocable, was the presumed greater efficiency and administrative convenience (i.e. economy) of such a unitary organization.” (p. 287).

The second theme is that “A monopolistic government service… will be in a position… to redistribute income among persons or groups as seems desirable.” (p. 288). “No system of monopolistic compulsory insurance”, he argues, has resisted becoming “… an instrument for the compulsory redistribution of income.” (p. 289). But he also recognizes that redistributions are not an inevitable result. Redistributions in a social security scheme “… can be prevented only if, from the outset, the distinction is clearly made between benefits for which the recipient has fully paid, to which he therefore has a moral as well as a legal right, and those based on need and therefore dependent on proof of need.” (p. 293).

From the above it appears that Hayek, an icon among conservatives, accepts the concept of a minimal safety net based on mandatory contributions. The same appears to hold for Adam Smith as well, whose concern for the less fortunate was prominent, as reflected in both An Inquiry Into the Nature and Causes of the Wealth of Nations (1776) and The Theory of Moral Sentiments (the sixth and final edition was published in 1790). But Hayek is clearly troubled by the way many countries have pursued income redistribution schemes, in the name of “social security,” purely as a means to politically reward the many.

4 In Wealth of Nations, Smith described political economy as having “two distinct objects: first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the public services.” (author’s italics.) (Smith 1991, p. 320.)

The opening paragraph of The Theory of Moral Sentiments is instructive: “How selfish soever man may be supposed, there is evidently some principle in his nature, which interests him in the fortune of others and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. Of this kind is pity or compassion, the emotion which we feel for the misery of others, when we either see it or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrow of others, is a matter of fact too obvious to require any instance to prove it; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous and humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most ardent violator of the laws of society, is not altogether without it.” (Smith 2009, p. 13.)

Adam Smith was remarkable in many other ways too: he was a genuine globalist, highly critical of the East India Company, believed that observed inequalities among people and nations reflected disparities that were not natural but socially generated, and defended such public services as free education.
The US Social Security System, as noted earlier, is partially redistributive in that high wage earners receive lower benefits relative to their contributions than low wage earners. But the middle class, then, presumably is not subject to redistribution but receiving benefits for which it has “fully paid”, satisfying Hayek’s criteria for a satisfactory social security system. The redistribution that occurs in the US Social Security System is that the upper middle class and high income earners partially subsidize low income earners. But Hayek also states that “It is true, of course, that even the provision of a uniform minimum for all those who cannot provide for themselves involves some redistribution of income” (p. 303), which suggests that he views a modest degree of redistribution as inevitable. But the penalty suffered by the higher wage earners in the Social Security System, with its low administrative expenses (less than 1% as noted in Chapter II), can also be argued to be mitigated due to the national size of the pool compared to what it would be in much smaller private pools of participants – at least if the Social Security Trust Fund is properly invested…

The Minimal Safety Net… Needs Tailored Private Add-Ons

While a surprising number of Americans rely entirely on Social Security for their retirement benefits, as noted in Chapter II, virtually everyone aspires to a lifestyle well above that provided by the minimal safety net. Despite the availability of a multitude of tax-deferred retirement plans at both the individual level and through corporations and other organizations, personal savings rates among Americans have been negative for some time, turning positive only recently. It is not surprising, then, as also observed in Chapter II, that the median level of financial assets of American households with someone aged 55 to 64 was only $72,400 in 2007 (Bucks 2009). How much of a lifetime annuity will $75,000 buy at age 65? Not much more than $400 per month…

The Employee Benefit Research Institute of Washington, D.C. (2010) reported that the proportion of workers very confident of having enough funds for a comfortable retirement was only 16%. 27% said they had less than $1,000 in savings and 54% had less than $25,000 excluding the value of their primary home and the value of any defined benefit plans. Clearly, the private portion of the personal safety net has a huge gap to fill for a large majority of Americans.

A thorough discussion of the interactions and relations between the various categories of safety nets in a global context may be found in Bertocchi, Schwartz, and Ziemba (2010, esp. Ch. 3).

IV. SHORTCOMINGS OF SOCIAL SECURITY

Despite being viewed as the most successful of the government’s many programs, Social Security suffers from three serious shortcomings. First, contributions are labeled, and thought of, as a tax rather than as mandatory retirement/insurance contributions which is what they are. Since the contributed funds are invested in Treasury securities, they have all the properties of what we call savings or investments which, like pension funds and personal retirement accounts, are expected to grow over time. In addition, the mindset is often affected by the words used. “Taxes” tend to generate negative reactions while the word “investment” tends to elicit positive connotations.
Second, Social Security contributions have only been invested in U. S. Treasury securities with no allocation to common stocks. Stocks, of course, are thought of as “risky” while Treasuries are viewed as “safe”. But it is not quite as simple as that. Over a one year period, a stock portfolio is indeed quite risky while a position in 52-week Treasury Bills is perfectly safe. But over a 50 to 60 year period, a broad-based stock portfolio is likely to be worth three or more times a portfolio invested in Treasuries. There is no period of this length in US history that a broad-based portfolio of stocks has underperformed a portfolio of Treasury holdings. A portfolio combining Treasuries and stocks would therefore seem worthy of consideration.

Third, the very identity of Social Security and its Trust Fund has been obscured by the adoption of the Unified Budget in 1970. In this framework, inflows to the Social Security Trust Fund, as well as to the government’s other trust funds, are treated as income and their outflows as expenditures. Since the various trust funds’ net inflows have been on the order of $100 billion to over $200 billion a year since 1989, the US government’s operational deficits (surpluses) have been understated (overstated) by these amounts per year. In other words, the US government has presented a false picture of, and a positive spin on, its finances over the most recent four decades.

I will now address these three shortcomings in more detail.

**Payroll Taxes vs. Mandatory Contributions**

Social Security is for all intents and purposes a defined benefit plan combined with two insurance policies. It is slightly redistributive in that lower income individuals receive somewhat greater benefits relative to their contributions than higher income persons. This is in contrast to a defined contribution plan where the individual’s own contributions are the sole or primary determinant of that individual’s benefits. Defined benefit plans were the norm for corporate pension plans for many years but in recent years many have been converted to the defined contribution type of offering, especially the 401(k) variety. The idea is to make each individual take responsibility for his or her own retirement investments. The results have not been encouraging since participation is voluntary and about half of employees have not signed up. As noted, the 2010 Retirement Confidence Survey of the Employee Benefit Research Institute of Washington, D.C. (2010) found that 27% of workers have less than $1,000 in savings, and that, apart from the value of their primary home and any defined benefit plans, 54% had less than $25,000 in savings and investments. Even so, how one allocates one’s resources between the present and the future, at least beyond a minimum of savings, is an individual matter in a free society and a deeply held belief.

Pensions have a long history. When Henry VIII broke away from the Catholic Church, he found it necessary to offer pensions to the monks and abbesses in order to prevent a revolt when the monasteries were dissolved (Cohen, 2005 p. 2). The first national pension plan was instituted by Chancellor Bismarck in 1889. By the end of roughly the first third of the twentieth century, all modern nations had followed suit. Today, many countries’ pension plans are seriously under-funded and will have difficulty meeting their obligations without taking drastic steps to increase either taxes, contributions, or investment results and/or reduce benefits. The US Social Security
System is in somewhat better shape than those of other nations. But many American local, state, corporate, and, as noted, individual pension plans are also in poor condition.

In the post-Reagan era in the United States, the word “taxes” has taken on an increasingly negative connotation. They have become further associated with government waste and carelessness and an unequal sharing of the tax burden via tax-avoidance by the not-so few and redistributions in reverse. It is easy to lose track of where the payroll tax actually ends up and whether anything will come of it for those paying it in light of the doomsday scenarios displayed in some of the media and in Washington concerning the future of Social Security. Since 1983 there has been a requirement to make projections 75 years into the future of Social Security’s finances. Demographic projections make it possible to estimate the number of people paying in, and the number of individuals receiving benefits, within reasonable bounds. But when it comes to estimating the associated cash flows, changes in the economy are much harder to predict, and the more so the more distant the period. And possible changes in the parameters governing contributions and benefits add additional uncertainty to any projections.

Recent point projections, in other words projections which do not reflect a range of likelihoods, point to benefit payments exceeding inflows about 2017 and the trust fund being exhausted about 2045. This scenario has invigorated the system’s enemies to push for cuts in benefit and alarmed much of the public, especially in the present context of current and projected huge fiscal deficits.

Since Social Security was intended to operate separately from, and not under the umbrella of, fiscal policy, what is called ”payroll tax” is in fact a mandatory triplet combining a retirement contribution and two insurance premiums. It should therefore be designated as such. A simple abbreviation is preferable, such as SSC for Social Security Contribution. The old designation OASDI (Old Age, Survivors, and Disability Insurance) seems somewhat dated.

Some economists have argued that in the absence of Social Security or a mandatory savings program people would save on their own. That appears to be true in China where individuals have been saving 40% or so of their income and there is not much of a safety net. Recall that for some 20% of American retirees, Social Security provides their only income and that for some two-thirds it represents the majority of their income, permitting a lifestyle which can only be described as modest at best. And that generation had a higher savings rate than the current working generation which has been more or less dissaving. A comfortable retirement lifestyle demands substantial private savings which for large numbers of pre-retirement Americans are conspicuously absent. Even conservative economists (e.g. Prescott 2004a, 2004b) have come out in favor of mandatory savings schemes.

**Not Investing in Stocks and Marketable Treasuries**

Investing a portion of retirement contributions and insurance premiums in stocks is commonplace. Corporate, not-for-profit, state, local, and many foreign government pension plans, along with most insurance companies, do it. So do most individuals. Social Security, in fact, is conspicuous because it is *not* investing in stocks. It is certainly not a new idea; numerous
individuals have argued that Social Security should join the mainstream e.g. O’Neill (2005). The Canadian Public Pension Plan has already done so.⁵

Some have advocated placing the whole Social Security Trust Fund in stocks since stocks do earn higher returns than bonds over long periods. But stocks represent only one piece of the securities market where bonds also constitute a very large component. Investing in the “market”, therefore, really requires taking positions in both stocks and bonds. Stocks and bonds also provide indirect access to holdings in commodities, real estate, and other natural resources since many corporations are engaged in, and owners of, such assets. And bonds can outperform stocks over fairly long periods. For example, over the 10-year period 2000–2009, long-term government bonds had a total compound annual return of 7.7% while the S&P 500 stock index lost money at a total annual compound annual rate of 0.9%. In other words, from the beginning of 2000 to the beginning of 2010, the long-term government bond portfolio was up 109.8% while the stock portfolio dropped 9.1% in value – and this over a period when inflation crept up 28.3%. Even over the 18-year period 1992–2009, long-term government bonds beat the S&P 500 index by a compound total annual return of 7.8% vs. 7.7%. But over the 1980-2009 and longer periods, stocks beat bonds handsomely.

For a long-term perspective, it is instructive to review the performance of US stocks and bonds from the beginning of 1937 – when the Social Security System received its first contributions – through the end of 2010, a 74-year period, as reflected in Table 1. What the table reminds us is

Table 1 about here

that, even though long-term government bonds outperformed large US stocks over the period 1992-2009 - and also in the first few years - large US stocks beat long-term government bonds over the full 74-year period by a factor of 23.8 ($1,260/ $53). Even fairly small differences in average annual compound returns produce huge differences in the end result. This is an example of the invisible but majestic power of compounding over long time periods…

The biggest surprise is why progressive government officials and the business community have not been more forceful in advocating equity investments by the Social Security Trust Fund in particular Is it not obvious that the ratio of fund inputs to longer-run fund outputs is greater when stocks are part of the investment pool? If equities had been part of the mix from the beginning, or even later, current talk about unfunded liabilities (for Social Security anyway) would be replaced by discussions about whether to increase benefits or reduce contributions or both. And didn’t the opponents of Social Security in the 1930’s (mostly capitalists) see any value in having old people with money to spend, money that had grown with interest, dividends, and appreciation? Alan Greenspan is quoted among those opposed. The apparent reason for this negativity toward stock investments by Social Security is that they are viewed by many as socialism, the idea that the “government” would own stocks. If the Social Security Trust Fund is seen as too close to the government, the simple solution is to give the whole system independent status. This is the topic of Chapter 7.

---

⁵ Auerbach (2004) has pointed out that the government has an implicit position in the American equity market via its claim to future tax revenues.
Trapped by the Unified Budget

The concept of a Unified Budget for the United States was initiated by President Lyndon Johnson who did not have the opportunity to implement it before he left office. But President Nixon did adopt it beginning with his first budget, that of 1970.

From 1789 through June 30, 1969, The United States reflected its finances through what was called the Administrative Budget. This framework recorded total government receipts and outlays by fiscal year, excluding all cash flows into and out of trust funds, with the difference marked as surplus or deficit. What the Unified Budget did was to include the cash receipts and outlays of the trust funds in calculating the deficit or surplus. The difference is large indeed, as shown in Table 2. For 1970 the Unified Budget deficit was $2.8 billion while the Administrative Budget (Federal Funds) deficit was $13.2 billion. The 2008 reported deficit was $458.6 billion when the real (Federal Funds) deficit was $724.6 billion. The 2009 reported deficit was $1.41 trillion while the actual deficit was $1.54 trillion. The corresponding numbers for 2010 were $1.29 trillion and $1.42 trillion, respectively. Remember those four years of “surpluses” under President Clinton? Well, there was only one, a measly $1.6 billion in 2000; this was the first genuine surplus since 1960.

There are more than 150 trust funds with assets of more than $4 trillion at the end of fiscal year 2010, of which a little more than half belongs to the Social Security Trust Fund. Some of these trust funds go back nearly 100 years. Most of their receipts flow from dedicated taxes. The trust funds of the United States government have recorded surpluses every year since 1963 – the 2008 trust fund surplus was $266.1 billion, that of 2010 was $123.3 billion.

The problem with the Unified Budget framework, as noted by numerous individuals (see e.g. Adkins 1996, Gokhale and Smetter 2003, Johnston 2004, Nataraj and Shoven 2004, Jenkins, Jr. 2005, Rattner 2007, Shilling 2008), is that it implicitly views the net inflows form the trust funds as available for current government expenditures and tax cuts when they clearly are not. The government has acted as if the concept of a trust fund, dedicated to statutory benefits, was meaningless. Would the public have accepted deficits averaging $212 billion a year greater than reported since 1999? Is this the kind of deceptive financial reporting one should expect from a modern democratic nation?

US Government Financial Deficit Reporting = 64 Madoffs

Since the trust funds of the United States government have run surpluses every year that the Unified Budget has been in existence, the US government, by adhering to the Unified Budget concept, has engaged in deceptive reporting with respect to its financial performance for the last 41 years. Adding up the 41 years of trust fund surpluses, or equivalently the increase in the trust fund balances over the 1970-2010 period in Table 2, we obtain the sum of $4.149 trillion, as shown in Table 2. A recent estimate of Madoff’s embezzlement comes to $65 billion which divided into $4.149 trillion equals 63.8.
V. IF SOCIAL SECURITY FUNDS HAD BEEN INVESTED IN MARKETABLE BONDS 
AND STOCKS… WITH OTHER THINGS BEING EQUAL

Pension funds, insurance plans, and individual investors of funds for retirement share a long-
term perspective in making their placement decisions. Most if not all of their allocations of 
capital are invested in stocks and bonds. This is true in countries outside the United States as 
well although in varying proportions. Historically, British funds have tended to put the highest 
proportion into equities while Japan has exhibited among the highest allocations to bonds.

The Investment Strategy

This Chapter will address where the Social Security Trust Fund would be if the difference 
between inflows and outflows had been invested in stocks and bonds instead of interest-bearing 
US Treasury Special Purpose Bonds from the beginning in 1937 to the end of 2010, a 74-year 
period.

At the beginning of each month, 50% of the previous month’s net inflows are invested in long-
term US Treasury bonds and 50% in the stocks of large US companies and added to previous 
investments of the same type. The total monthly returns (appreciation or depreciation plus 
dividends or interest) for both of these categories have been tabulated by Morningstar-Ibbotson 
(Morningstar 2011) since 1926 and have been widely used and accepted as a valid total return 
measure and as a benchmark by the investment industry.

Over time the variable return structures of the two portfolio categories will cause the portfolio 
mix between bonds and stocks to vary, quite often considerably. One solution is to rebalance by 
selling off portions of one category and investing the proceeds in the second category. This 
requires a certain amount of second-guessing since a possible later reversal would give rise to 
unnecessary trading. Another approach is to place all new funds in the second category when the 
first category reaches a pre-specified maximum portfolio proportion.

Since the Social Security Trust Fund presumably is perpetual, the second approach above was 
adopted for the present analysis. Whenever stocks (bonds) constitute 80% or more of the total 
portfolio, all new funds are invested in bonds (stocks). This approach also captures the 
possibility of benefiting from mean reversion, the empirically observed phenomenon that 
prolonged periods of high, or low, returns in an investment category are typically followed by a 
reversal. It also saves transaction costs since there are no sales of securities.

Net inflows in any month may of course be, and have been, negative. When this is the case, a 
given month’s deficit is assumed to be borrowed at the beginning of that month based on a 30-
day loan at a rate .10 % above the 30-day Treasury Bill rate (1.2% annualized) provided by the 
same Morningstar-Ibbotson data base. When necessary, any debt is rolled over each month to the 
new 30-day borrowing rate. Both of the above timing assumptions for investments and 
borrowing will of course tend to understate realized Trust Fund returns.
In the second half of the previous century, investments in the stocks of other countries began to enter American equity portfolios. It therefore seems reasonable that the present model should join the main stream. Thus, beginning in 1970, when the EAFE data base became available reporting the total returns for a number of countries in Europe, Australia, and the Far East, the present model assumes that new allocations to stocks are invested in the EAFE+Canada index, for which the monthly total returns have been tabulated by MSCI/Barra. When parity between the domestic and international stock portfolios is reached, the two portfolios will receive equal allocations of new stock investments.

**Commissions and Market Impact Costs**

From 1937 through 1972, new investments are assumed to be subject to commission and market impact costs of 2% for stocks and 1% for Treasury Bonds, with these costs dropping to 1% and .5%, respectively, in 1973. International stock commissions are assumed to be 3% beginning in 1970, falling to 2% in 1973. Further reductions are assumed with the advent of index funds: to .8% for US stocks, .5% for Treasury Bonds, and 1.5% for international stocks in the 1980s; to .6%, .3%, and 1%, respectively, in the 1990s, and to .4%, .2%, and .8%, respectively, beginning in 2000. The above rates are on the high side and therefore tend to introduce a conservative bias. Index fund tracking errors are assumed to be small enough to be ignored or to be offset by securities lending fees received from short sellers.

The above strategy is clearly passive, actually doubly so since there are no sales of bonds or stocks. It is well-known that some 80% of active investors (individuals, mutual funds, pension funds, hedge funds, private equity, and others) under-perform passive index-based strategies over longer periods. This is partly because of the negative compounding effect of their fees but it also reflects the generally unmet challenges of market timing. While passive investing, with its essentially negligible fees, has gained a substantial following in recent years, most active investors are not aware of how their long-term net-of-fees returns compare to the returns of a net-of-fees passive strategy. (Why, you may ask, don’t investors know their long-term compound returns? Because investors themselves are either unable to do the calculations or unwilling to

---

6 The 80% under-performance number is a (probably understated) guess estimate since no comprehensive study has, to my knowledge, been made. French (2008) found that investors underperformed a passive market portfolio over the period 1980-2006 by .67% per year via trading costs, fees, and expenses. Dichev (2007), measuring returns from investors’ portfolios, which reflect their market timing ability, found annualized underperformance of 1.3% for NYSE/AMEX stocks from 1926 to 2002, 5.3% for NASDAQ stocks from 1973 to 2002, and 1.5% for 19 major international stock exchanges from 1973 to 2004. Studying 66,465 households with accounts at a large discount broker, Barber and Odean (2000) found that the average household underperformed the market by 1.5% per year during 1991 to 1996 - and that those who traded most frequently lost out by 6.5% annually. In a separate study, the same authors (2001) also documented that single men, trading 67% more frequently than unmarried women, underperformed them by 1.4% per year.

At the institutional level, a study by Busse, Goyal, and Wahal (2010) of 4,617 active domestic equity institutional products managed by 1,448 investment management firms between 1991 and 2008 found little evidence of superior performance – before fees – and only modest evidence of persistence in performance. Willoughby (2010) reported that of the 248 funds with (the top) five-star rating from Morningstar on December 31, 1999, only four had retained that rating on December 31, 2009, that 87 had no stars, and that the rest had fallen below the midpoint on average.
face the facts, and investment advisors are not stepping forward... Mutual funds and others do compare their returns to chosen benchmarks but do not report individual investors’ long-term returns vs. a passive strategy over their holding periods which is not only relevant but would be easy to do with current technology.)

**Cash Flows Available to Invest**

Beginning in 1987, monthly data are available for the inflows to, and the outflows from, the Social Security Trust Fund; from 1937 through 1986, only annual numbers are available. Inflows consist of payroll tax receipts, taxes on benefits, and interest income from the Trust Fund securities. Since the investment strategy we are examining uses a different approach, the interest income shown for each period in the data file must be subtracted in order to obtain the actual inflows from which the outflows, benefit payments and administrative expenses, are subtracted in order to generate the net inflows available for investment.7 Similarly, the interest expense incurred in fiscal years 1983 through 1991 must be subtracted in order to obtain the funds spent on benefit payments and administrative expenses for those years.8

In order to obtain monthly net inflows for 1937-1986, the annual net inflow numbers calculated above were divided by twelve. This is clearly an approximation but appears justified by the argument that it seems unreasonable to wait a whole year to invest a full year’s worth of net inflows. In addition, the market impact alone of such an approach would be sufficient to motivate the employment of much smaller monthly investments.

There were periods when net inflows were negative, often for long stretches, as shown in Figure 1. Inflows did not cover outflows in fiscal years 1958 through 1966 except for 1964, nor in the 12-year period 1973-84. From 1987 through 1998, there were occasional monthly gaps, especially in August and in the October-November time-frame. Negative inflows reappeared in August 2008 and became a regular feature in May 2009, with the exception of January and April 2010, most likely as a consequence of the 2008-09 recession. The net outflow for fiscal year 2010 was $36.8 billion. Under the investment strategy examined, negative cash flows, as noted above, give rise to short-term borrowing on a roll-over basis.

**Tracking Errors and Securities Lending Fees**

Index funds do not exactly duplicate the total return (appreciation or depreciation plus reinvested dividends) of the index in which it is investing but is subject to what is called a tracking error.7

---

7 According to the Social Security Historian’s Office, taxes began to be collected in January 1937 (DeWitt 2007) even though the first beneficiary retirement payment did not happen until January 1940 (Diamond and Orzag 2004, p.14). But outlays for administrative expenses were of course present from the beginning.

8 Beginning in 1977, the fiscal year ends at the end of September; previously the fiscal year ended in June. The July-September 1976 period is usually referred to as the transition quarter, or TQ for short.
This is due to the need to reinvest dividends and to make portfolio changes due to the occasional substitution of securities in the index itself. Tracking errors typically amount to only a few basis points of return per year. But since index funds typically lend some of their securities to short sellers for a fee, index funds generally outperform the index slightly since the securities lending fees collected are about the size of the tracking error for bond index funds and generally exceed the tracking error for stock index funds, and often multiple times for the S&P500 Index Fund employed in this study.

The First 19 Years

The monthly evolution of the Social Security Trust Fund based on the investment strategy described above, implemented with the preceding parameter assumptions, was generated via an 888 (74x12) by 37 spreadsheet.

The spreadsheet shows that from 1937 through July 1955, the investment strategy gave stocks and Treasury bonds equal allocations of new investment funds. We also observe that the bond portfolio outperformed the stock portfolio through December 1942, with bonds reaching a maximum 62.79% proportion of the total portfolio at the end of March, 1938. But in the next 18 years, stocks grossly outperformed Treasury Bonds; by the end of November 1955, stocks composed 81% of the total portfolio, as shown in Figure 2, in effect shifting new investments entirely into bonds.

Figure 2 about here

Comparing the invested Trust Fund to the historical Trust Fund, we observe that the latter beat the former in the first six fiscal years (ending in June 1942), with the invested Trust Fund having reached only 90% of the historical Trust Fund’s value. But by the end of the nineteenth fiscal year (ending in June 1956), as reflected in Figure 3, the invested Trust Fund was worth 2.64 times as much as the historical Trust Fund.

Figure 3 about here

55 Years of No New Investments in US Stocks

The last investment in US stocks that the strategy made was in November, 1955. Thus, for the next 55 years through 2010, the stock portfolio was for practical purposes left alone, to grow by itself, from $.046 trillion to $7.344 trillion, multiplying its value nearly 160 times. Its maximum value, as a proportion of the total portfolio, was 116.53% as of the end July, 1982. (Figure 2). But by the end of 2010, the fraction of the total portfolio composed of US stocks was down to 71.97% - recall that all new investments since that time went into Treasury Bonds and international stocks. Since the market capitalization of the S&P500 Index on that date was $11.430 trillion, the $7.344 trillion position in US large stocks would represent 64.3% of the S&P500 portfolio – assuming other things equal, which they would not be, as will be discussed shortly…
Note that on July 31, 1963, the first date the market value of the S&P500 Index became available, the portfolios position in large stocks was only 29.5% ($90.522 billion/$307.089 billion) of the S&P500 portfolio. So how could the proportion grow to 64.3% by 2010 when no new additional investments were made by our portfolio? The index fund increased the portfolio’s share of the index by the automatic reinvestment of all dividends, thereby more than doubling the Trust Fund portfolio’s ownership from less than one third to almost two thirds.

**No International Stocks Until 2002**

The first investment in international stocks was not made until July 2002, which was the first time since 1956 that the proportion of stocks in the portfolio fell below 80%. The maximum portfolio composition reached by international stocks was 3.15% in May 2008, falling to 3.00% at the end of 2010.

**The Treasury Bond Portfolio**

The Investment strategy placed funds in Treasury Bonds every year until July 1957 when net inflows turned negative, forcing the Trust Fund to borrow and roll over 30-day loans. These loans were not fully paid off until January 1970, when new bond investments resumed. Net inflows turned negative again in July 1972, resulting in new borrowing and ceased new bond investments. Not until January 1990 did the loan balance reach zero so that new Treasury Bond investments could be made. From this point on, net inflows frequently alternated between positive and negative in sign so that new bond investments were possible only a few times each year. Even though new bond investments were made only about half the time during the full 1937-2010 period, the value of the bond portfolio based on the investment strategy was $2.64 trillion at the end of 2010, which by itself is more than 101% ($2.64 trillion/$2.61 trillion) of the actual Social Security Trust Fund’s value on that date! (This comparison raises the question of how well – or poorly - the historical portfolio of Treasuries (Special Issue Government Bonds) portfolio has been managed). The final Treasury Bond portfolio also represents 25.86% of the total invested portfolio at the end of 2010.

**Occasional Short-Term Borrowing**

The investment strategy employed did not call for any sales of either stocks or bonds, only for new investments in a category to cease whenever that category reached 80% of the value of the total portfolio. Negative net inflows in a given month then required borrowing to enable the full payment of benefits and administrative expenses for that month. Since the yield curve is typically upward sloping, and one month’s negative flow may be more than offset by a larger positive flow the following month, 30-day loans that could be rolled-over when necessary were employed.

After about 20 debt-free years, short-term loans became necessary in July 1957, the first month that net inflows turned negative, and continued via roll-overs until January 1970. Short-term debt reached its highest point in this interval, 7.07% of the total portfolio’s net worth, in August 1966.

---

9 Market capitalization values for the S&P 500 Composite Index were obtained from S&P Indices Client Services, Standard & Poors
Shot-term borrowing resumed in July 1972 and continued uninterrupted through January 1990. After a very brief pause, short-term borrowing again became necessary in August 1990 and continued sporadically through September 1998. This was followed by a debt-free period until November 2007 when occasional borrowing again became necessary until May 2009, a point at which net inflows turned negative and remained so except for January and April 2010.

The debt level reached its highest point, 28.34% of the total portfolio’s net worth, in July 1982. It is noteworthy that while Trust Fund’s debt grew from 0 to $72.37 billion over the 10 years ending in July 1982, the trust fund’s net worth still grew by more than $47 billion. And over the period from June 1972 through May 1985 when debt reached its maximum level of $92.77 billion, the Trust fund’s net worth still grew from $208.27 billion to $560.30 billion, or a whopping $352 billion! After August 1990, the maximum debt level of .83% was reached at the end of 2010. From the above we can see that the work of the Greenspan Commission in the early 1980s appears to have been at least partially motivated by the net cash flows out of the Social Security Trust Fund in the 1970s.

**Summary and Discussion**

First, the investment approach has been deliberately conservative and the realized investment returns are therefore understated. This understatement is the result of several contributing factors. First, investments were delayed to the end of each month while all borrowing was done at the beginning of the month – as if the full amount needed was known in advance. Second, the commissions and market impacts employed are on the high side. Third, the excess of securities lending fees over tracking errors were ignored. And fourth, the short-term borrowing rates were overstated in view of the credit quality of the trust fund’s asset base generated by the investment strategy. In addition, by never selling any assets, the strategy kept transaction costs to a minimum.

With this back-drop, the application of a simple and seemingly sensible investment strategy to the net inflows (outflows) of funds into the Social Security Trust Fund over a 74-year period has yielded some surprising results. Despite in principle equal allocations to bonds and stocks, which gave bonds a head start performance-wise, the 80% portfolio weight cap limited investments in US stocks to less than 19 years (the first 227 months). The cap also kept international stocks from entering the portfolio until July 2002. The need to cover negative net inflows with short-term loans caused new monthly bond investments to be required only about half of the time.

Even though the Treasury Bond portfolio received much larger investments than the stock portfolios, the ending stock portfolio component was more than two and three quarters as large as the final Treasury Bond portfolio. The US stock portfolio alone, coasting on old investments only for more than 55 years, outperformed the bond component by a factor of 2.78 ($7.34 trillion/$2.64 trillion as shown in Table 3). This despite the fact that the bond portfolio outperformed the stock portfolio over the first six years and long-term Treasury Bonds outperformed the S&P500 Total Return Index of large company stocks over the period 1992 through 2009. The power of compounding is invisible but invincible.

Table 3 about here
The relatively high amount of short-term loans at certain times may seem troublesome. When this happens, adjustments to inflows and/or outflows would suggest themselves. This is of course exactly what was done following the Greenspan Commission’s recommendations. That commission, of course, did not see the problem the same way that the investment strategy examined here revealed it – via sharply rising short-term debt.

The presence of short-term debt also means that the investment strategy examined here at times employed leverage. There would seem to be no reason why this could not be done as long as it is on a limited and temporary basis. Since the yield curve is typically upward sloping, intermittent use of short-term debt would also tend to benefit the overall returns earned by the fund. But in the early 1980’s, when net inflows were negative and the portfolio was borrowing heavily, 30-day borrowing rates were high, reaching a maximum of 16.9% annualized in December 1981.

More details on the effects of the short-term loans employed in the study are informative. During the first short-term borrowing period, from July 1957 through January 1970, stocks grew at a compound monthly rate of .70% and bonds at .09% while the monthly compound borrowing rate employed was .39%. Since stocks during the period composed more the 80% of the portfolio and short-term borrowing never exceeded 8%, it is evident that the short-term borrowing approach was a much smarter strategy than selling stocks in making up for the period’s negative net inflows to the Trust Fund.

During the second continuous borrowing period, from July 1972 until January 1990, stocks grew at a compound monthly rate of return of .90% and bonds at a .68% rate while short-term borrowing occurred at a compound rate of .73%. Again, it is clear that asset sales, quite apart from transaction costs, would have been harmful to the Trust Fund’s growth in value.

Over the 10 years and one month July 1972 through July 1982 period, short-term loans grew from 0 to 28.34% of net assets, with borrowing rates reaching as high as 16.9% annualized. During this period stocks grew at a monthly compound rate of only .38%, with bonds managing only .31% - while the monthly compound short-term borrowing rate was a steep .74%. Even so, the net assets of the Trust Fund, due to its much greater size than the debt, grew at a monthly compound rate of .17% during the period, increasing, as noted earlier, by $47 billion to $255.34 billion.

Comparing the Invested Trust Fund with the Historical Trust Fund

As already noted, the invested Trust Fund underperformed the historical Trust Fund over the first six fiscal years, reaching only .90% of the latter’s asset level at the end of June 1942. But from then on, the comparison heavily favors the invested Trust Fund, whose value reached 17.85 times that of the historical Trust Fund at the end of 1983, as shown in Figure 4. The reason for this large discrepancy is that the actual trust fund had added few new net investments and had suffered poor investment returns over a long prior period while the invested Trust Fund had employed short-term loans to fund its shortfalls, permitting a large asset base to keep growing under the at the time very favorable return structure for equities. Beginning in 1984, two factors
caused the ratio between the two funds to begin to retreat. First, the invested Trust Fund needed to repay its loans – an outlay the historical Trust Fund did not have to nearly the same extent. Second, following Paul Volcker’s taming of inflation in the early 1980s, the bond market began a very long period of generating strong total returns. The result was a slow and steady decline in the ratio of value of the invested Trust Fund to that of the historical Trust Fund, ending at 3.91 at the end of 2010.

Other Things Would Not Be Equal…

The above scenario assumed that the Social Security Trust Fund was a small unit in a competitive market, unable to influence the prices at which it could keep on buying stocks and Treasury Bonds. What we do know, then, is where the Social Security Trust Fund would have been if it had been what economists would call a price-taker – and everything else as well would have been equal or unaffected.

It is unrealistic of course to expect the return structure in the stock market in particular but also in the bond markets, not only domestically but globally, not to be affected if the Social Security Trust Fund had implemented the above investment strategy. Each monthly impact would have been small and not particularly noticeable but the gradual buildup to a majority position in the S&P500 portfolio would clearly have a substantial cumulative impact – and would therefore in actuality have ended as a considerably smaller proportion since more than half of the (current) investors in those stocks clearly would not have dropped out. The net new demand for stocks in particular would no doubt have added upward pressure on prices, as was the case in Chile in the early years, before additions to private accounts there began to decline. This would presumably also spill over into the psychology of other individual investors and corporations as well as consumers, all of whom would view the net result of an increase in the future purchasing power of consumers as a positive element. To quantify these changes more precisely would of course be rather difficult. The impact of Social Security investments in equities in a general equilibrium framework has been analyzed by Diamond and Geanakoplos (2003) who found that heterogeneities in the population and assumptions about technology would play important roles.

Identifying contributions to the Social Security Trust Fund as mandatory investments rather than as payroll taxes would presumably also change our measurements of what we call savings – since that it what these contributions clearly are. Trashing the Unified Budget concept would add to this clarification since the current apparent “spending” of the net inflows to the various trust funds that this concept implies would no longer be feasible. This in turn would properly focus attention on the true state of the government’s finances and the need for genuine fiscal discipline.

…The Wealth Effect Would Boost Economic Growth
In view of both of the above factors – an increase in marketable bond and stock investments and a clear-cut savings element – it is difficult to conceive of a scenario in which the net result would not provide a strong positive wealth effect. When people and economic agents feel wealthier, they become more willing to invest in financial, physical, intangible, and intellectual property and assets – and to spend more on consumption. This in turn could hardly avoid spilling over into a healthier financial condition of the government via improved revenue flows. The combined effect of all these ingredients points to an upward impact on economic growth – the focal point of the contemporary economic debate. In today’s global markets, one nation’s wealth effect spills across borders. Thus, a Social Security Trust Fund invested in marketable Treasury Bonds and a passive portfolio of global stocks would in the long term boost not only US but global economic growth.

VI. PRIVATIZING SOCIAL SECURITY RESULTS IN INEFFICIENCY, MORAL HAZARD, AND VERY LOW PRODUCTIVITY

The idea of privatizing Social Security or the minimum safety net in part or in full has a long history but was especially hotly debated after the second Bush administration proposed a partial privatization. To consider the merits or demerits of such a move it will be useful to first briefly review the lessons from the various countries which have implemented, and thus have experience with, privatization of public pension schemes.

Private Accounts and Canada – The Record

**Argentina and Bolivia.** Argentina implemented a partial privatization in 1994. 7% is deducted from wages of which only 4.41% reaches private accounts; the remaining 2.59%, or 37% of the total deduction, is set aside for administrative costs and disability and survivor insurance (Mesa-Lago 2008, p. 99). The initial popularity of the private accounts lowered the government’s receipts, the common and expected result of a transition from a fully public system. But the transition soon grew out of control. In addition, tax cuts and various unexpected expenditures seriously undermined the country’s finances over the following years, causing Argentina to default on its debt in December 2001. As one economist put it, the launch of “private accounts didn’t create the fiscal problem, but it amplified it” (Davis and Moffett 2005).

Bolivia implemented private accounts in 1997 and has also been plagued by unexpectedly large transition costs. There, 12.21% are deducted from wages of which 10% goes into private accounts, with the remaining 2.21% set aside for administrative costs and insurance. The situation is similar in other Latin American nations, with the administrative and insurance deductions falling between Bolivia’s 18.1% and Argentina’s 37% (Mesa-Lago 2008, p. 99). These costs are in addition to the management fees charged by the investing funds. Not surprisingly, the whole region is facing strong pressure to reduce fees and administrative expenses.

**Canada.** The Canada Pension Plan is similar to Social Security in the US since it also provides survivor and disability benefits. As late as 1997, the plan’s funds were solely invested in federal government bonds. The government then created an Investment Board to implement basic asset allocation strategies on a global scale. A recent breakdown showed the Canadian social security
portfolio’s holdings as follows: stocks 52%, bonds 25%, private equity 12%, and inflation sensitive assets 12%. Both passive and active strategies are employed. Canada has not succumbed to the privatization urge.

**Chile.** Chile launched private accounts in 1981 during the time of General Pinochet’s military regime, as the brainchild of Jose Pinera (Moffett 2005). Even though participation is mandatory once you opt out of the public plan, Chile’s approach has been viewed as a model by advocates of privatization due to its early start and the strong performance of the Chilean stock market during the first fifteen years. But like the other Latin American systems, it is subject to high overhead. Of the 12.3% deducted from wages, only 10% enters private accounts; 2.3%, or 18.7% of the amount taken out of wages, goes to administrative fees (1.54%) and survivor and disability insurance (.76%) (Mesa-Lago, 2008, p. 99). By September 2008, those fees had risen to 1.71% and .99%, respectively, for a total of 21.3% of the amount subtracted from wages (Kritzer, 2008, p. 69); the administrative fees alone added up 13.5% of the employees’ contributions to future benefits. In addition, management fees can consume up to a third or more of invested funds. In 1999, the fee for annuitization could be as high as 5.4% (Kritzer, 2000); the maximum appears to have been 6% but a 2004 law limited the charges to 2.5% of the value of the annuity (Kritzer, 2008, p. 72. This seems consistent with the private plan management firms’ returns on assets, which in the 1991-2004 period averaged 27% - which compares to 15.7% for Chile’s financial services industry (Kritzer, 2008, p. 79). Among employees with private accounts, the proportion contributing regularly or sporadically declined from 76% in 1983 to only 54% in 2007. Among the self-employed, for whom participation has been voluntary, only 40% of the 60% with private plans have made active contributions (Kritzer, 2008, pp. 73-74). It is also noteworthy that General Pinochet excluded the military from the privatization program (Rohter, 2005).

A retiree who has contributed for at least 20 years under the private plan and whose payouts do not reach the legal minimum is entitled to any shortfall from the public plan (Pinera 2004). Surprisingly, the Chilean public plan, measured by GDP, paid nearly one and a half times as much in benefits in 2003 as Social Security in the United States (Rother, 2005). Rohter gave the example of a retiree whose 24 years of contributions would only finance a 20-year pension of $315 a month while a public plan colleague having worked on the same pay scale would collect a lifetime annuity of $700 a month; large numbers of private plan retirees are finding themselves with pensions only half as large as if they had stayed in the public plan.

In 2008, Chile implemented a pension reform which is intended to strengthen benefits, broaden coverage, and gradually make participation mandatory. The added spending requirements are provided by a new pension reserve fund set up in 2006. This fund is partly financed from the budget surplus and the revenues from the sale of copper and implemented in part via employer subsidies (Kritzer 2008, pp. 76, 81).

**Poland.** Individual accounts began in Poland in 1999, when nearly half a million mostly inexperienced sales agents working on commissions were authorized to funnel accounts to 21 pension funds (Davis and Moffett, 2005). This produced a somewhat chaotic beginning which has gradually been improved. The mandatory pension contribution rate is 19.52% and the account balance is annuitized at the time of retirement (Gora 2003).
Singapore, Singapore’s individual accounts began in 1955 during its colonial period. The country’s 33% payroll tax is intended to fund not only old age but housing, education, hospital costs, and contingencies. The legal structure provides great flexibility in how funds are used, and so much has been tapped for housing that many retirees find themselves asset-rich and cash-poor (Davis and Moffett 2005). A recent survey (Mercer 2009) recommends that Singapore’s system needs to increase “the percentage of contributions required to be saved for retirement”.

Sweden. Beginning in 2000, Sweden allowed the top 2.5% from the 18.5% payroll tax to flow into personal investment accounts. Individuals could either put their money in up to five funds from a universe of over 600, or into a government “default fund” invested mostly in international stocks. The default fund’s equity holdings are limited to between 50 and 90% (Turner 2004). When the program started, two thirds of participants chose individualized portfolios but by 2003 92% of them had switched out of privatized fund selections (Davis and Moffett 2005). This change of heart is likely due to the various funds’ early investment performance; over the first three years, the default fund fell 30% while the average individually chosen portfolio fell 40% (Cronqvist and Thaler 2004). To make up for such a shortfall requires an out-performance of nearly 17%. The Swedish system is also characterized by very low fees: .16% for the default fund and .77% for the active funds (Kreuger 2004).

United Kingdom. Personal accounts went into operation in Britain in 1988 during the Thatcher administration. Individuals were allowed to opt out the second tier of the public pension plan and even their company pension plan to fund their personal account with part of their payroll tax (Davis and Moffett, 2005). Private accounts became very popular and by 1991 4.3 million had signed up (Cohen, 2005), with 6 million eventually opening private accounts (Rice-Oxley and Ross 2005). But much of the enthusiasm rested on over-optimistic return projections that were assumed to more than make up for the loss of employer contributions, along with commission-driven sales practices. The result came to be known as “the mis-selling scandal” and caused the insurance industry to compensate millions of people to the tune of £13billion as of 2004 (Davis and Moffett 2005) and to also pay huge penalties and fines. It also dug a huge hole in the national pension fund of £5.9 billion. Nearly two million among those who chose private accounts had returned to the state system by 2005. In a reversal, many of the companies selling private accounts have urged their customers to return to the public plan. Even more ironically, the British Confederation of British Industry has endorsed greater pension benefits via tax increases. Part of this greater need is attributable to Britain’s re-indexing of initial benefits from wage inflation to price inflation (which is about 1.5% to 2% lower on an annual basis) beginning in 1979 (Cohen, 2005). In addition, fund management fees have been estimated to consume 20 to 30 % of a UK private account’s lifetime yield (Giles and Balls 2005, Cohen 2005).

Summary. To summarize, it is evident that private accounts where they have been tried suffer from excessive fees, in some cases exorbitantly so. Sweden has been the most successful by far in limiting the impact of costs and investment fees. Canada stands out by foregoing privatization and simply adding equities to its national pension fund. In our review of the above foreign countries we have also observed the presence of moral hazard, gross inefficiencies, and the consumption of enormous quantities of person-years not only in establishing private accounts but in operating them. These issues will now be addressed in more detail.
Private Social Security Accounts Are Inefficient

So why leave the investing to the Social Security Trust Fund? Why not privatize all or part of the Social Security System, as many have proposed – and some countries have experimented with? There are at least five powerful reasons why privatization of the minimal safety net falls short – in sharp contrast to the personal add-on safety net where the individual’s own choices clearly must reign supreme.

First, the Social Security System’s national investment pool is a clear beneficiary from what is known as economies of scale, the idea that larger efficiencies are obtainable the greater the operational size. In the field of passive financial investments, economies of scale are especially significant. A handful of individuals can manage a $10 trillion portfolio of index funds when only small changes are required each month.

Second, by employing a common investment pool for retirement, life insurance, and disability insurance, the benefits from economies of scale are expanded even further. In privatized plans, these three functions are typically operated separately.

Third, the transaction costs for the periodic investments in the Trust Fund’s index funds will be miniscule, the world’s smallest, due to their large size. Individuals adding small amounts, some less than $100, to their private accounts, even if they use index funds, are necessarily subject to higher transaction costs. In South America and the United Kingdom, transaction costs and fees have consumed large amounts of the funds invested in private accounts, thus sharply reducing the availability of benefits. In Chile, the companies licensed to manage privatized accounts were the main beneficiaries, not their clients. Sweden’s private accounts, which are limited to only 13.5% of retirement contributions, have by far the lowest fees.

A large pool may further reduce transaction costs by more easily avoiding rebalancing between stocks and bonds by instead switching new investments at pre-set value bounds (as in Chapter 5), which may also generate benefits from mean reversion, the observed phenomenon that prolonged moves in one direction by an asset category are typically followed by prolonged moves in the opposite direction.

Fourth, the Social Security Trust Fund may (and does) at times experience negative net inflows. But the Trust Fund’s very large asset base enables it to borrow at very low interest rates. By using 30-day loans on a roll-over basis, it is also most likely to benefit from the typically rising term structure of interest rates.

Fifth, the Social Security System offers inflation-adjusted life-time annuities for retirees, survivors, and the permanently disabled based on an automated rule. It is highly unlikely that the private sector, with its much smaller pools and a profit-motive, could offer nearly comparable terms. Sloan (2009) made an analysis of his own and his wife’s Social Security retirement benefits beginning in 2011. At his request, the Social Security Administration valued their benefits at $600,293. To purchase an identical life-time, inflation-protected annuity in the private sector, they were quoted a price of $774,895, nearly 13% higher, by Vanguard, a low-cost provider of investment products.
It is noteworthy that the proponents of Social Security privatization in the United States have ignored the life insurance and disability insurance components that are critical to so many millions of Americans. As noted by Kreuger (2005), for example, recent years exhibit a sharp increase in Social Security disability claims. For this and other reasons, a transfer of the disability component of Social Security to the private sector poses some especially difficult challenges.

Private Accounts and Moral Hazard

Moral hazard in the world of privatized Social Security accounts is a very straightforward concept. It simply means that if the benefits obtained from the private account fall below some predefined limit, the government in some way, usually from its public plan, will step in and make up the difference. The shortfall could be due to excessive risk-taking gone bad, unusually high fees, or a poorly conceived privatization plan, or some combination. Since private account holders would be able to enjoy the returns when their investments do well and be bailed out if they do poorly, they would in effect be the beneficiary of a free option offered by the government, as noted by for example Berk (2005).

If private account investors were left to subsist on the fruits of their own decisions, moral hazard due to privatization would of course disappear. But modern nations do not wish to see their citizens live in severe poverty and have therefore set minimum standards for old age income levels. Moral hazard is therefore at least potentially present in all privatization plans.

As we have seen, moral hazard has been institutionalized in the Chilean privatization system; in Britain, as we saw above, it has run amok. Sweden has circumvented the problem by limiting personal accounts to a small fraction of its public plan with no fallback; any losses below the private plan default portfolio or any other standard are not bailed out. As noted by Becker (2005), for example, moral hazard can be reduced by limiting choices to index funds of stocks and bonds. Thus, it can be kept small at least in the short run. But the financial industry, in its search for profits, can always be counted on to push for weakening any portfolio constraints in the name of deregulation, thereby increasing moral hazard. It is noteworthy that the British insurance industry was the principal designer of that country’s truly disastrous privatization plan (Cohen, 2005).

As a perpetual defined benefit plan, Social Security’s investments, both as illustrated in Chapter 5 and as is the case in the current system, are stationary in character in that the age of any participant is not a factor. This is in contrast to personal insurance and retirement plans which tend to be life-cycle or target based. The life-cycle concept typically favors stocks over bonds in earlier years, with a gradual switch toward bonds as the individual grows older. John Bogle of Vanguard, for example, has proposed that the proportion of bonds should be equal to one’s age. A life-cycle type of approach to private account investments, then, even if based on index funds, becomes a potential source of underperformance, and possibly moral hazard, in relation to the age-neutral approach of the Social Security model proposed in this book.
The existence of a minimal national safety net may of course cause some individuals to take on
greater risks in their personal safety nets than they otherwise would. That, of course, is their
choice to make.

**Private Accounts Generate Huge Losses in Productivity**

Productivity measures the number of person-hours required to make unit of product, or more
generally to reach a certain economic goal. Since the beginning of the industrial revolution,
manufacturing has made enormous strides in productivity and is largely responsible for the large
rise in economic well-being observed in modern countries. In the service sector, on the other
hand, the results are rather mixed; the internet and the ATM are probably the best examples of
solid breakthroughs.

Privatizing the minimal safety net in its current form, as noted in the previous Chapter, will
require huge amounts of work. Some 200 million citizens will need to make personal investment
and retirement plans, life insurance plans, and disability insurance plans – all of them inflation-
adjusted – requiring access to hundreds of thousands of advisors and investment managers and
insurance providers. In contrast, the Social Security Administration accomplishes all of these
tasks, and does so much more efficiently, with administrative expenses of less than .25% of
assets. The productivity losses from full privatization are therefore enormous. With partial
privatization, along the lines proposed by President Bush, the economic situation would be even
worse since the existing Social Security system would continue to exist.

**VII. THE WAY FORWARD**

The recent period has seen a clamor calling for reform of the Social Security System of the
United States. Most proposals (see e.g. Blinder 2010, Brandon 2010, Farrell 2010, Malkiel 2010,
and Peterson 2010) have called for rather modest changes. The thrust of the present analysis, as
is already evident, is that a more comprehensive, yet easily implemented, restructuring is needed.

It is evident is that the Social Security Trust Fund is not in the best of hands. It clearly needs to
disengage from being a political football. What is required is a change in the mindset that will
view Social Security contributions as genuine (passive) investments into a minimal safety-net
plan, a plan that can expect above average net-of-fees investment returns for the purpose of
funding a combination of inflation-indexed, life-time annuity-based retirement, life insurance,
and (when applicable) disability benefits.

**Making the Social Security System Independent**

The **Federal Reserve model**. The Federal Reserve System appears to provide the best model.
The Social Security System would then be governed by a Social Security Board (SSB) composed
of seven members with 14-year staggered terms and have the same independent status as the
Federal Reserve. The SSB would appoint (five?) investment trustees to run the current Trust
Fund, which would gradually be converted to passive positions in US and international stock and
bond markets. At some point, the SSB would also assume authority over, and responsibility for,
the administration of the various Social Security offices around the country.
If we can trust the Federal Reserve to guide interest rates and inflation policy, could we not trust the same independent structure to guide passive investments generating above-average returns (net of fees) for the minimal safety net of inflation-indexed, life-time annuity-based, retirement, life insurance, and disability benefits?

In contrast to the recent history of the Fed, in which most board members leave after only a few years, it would be desirable for the SSB to have a board composed of individuals dedicated to the long-term future of the system and who expect to serve a full term.

Once the SSB is given independent status, the Unified Budget would reach the natural death it deserves, restore the other trust funds to their true status, and force the federal government to stop mimicking Madoff and engage in honest reporting of its finances.

**The transition into stocks and (marketable) Treasury Bonds.** At a pace of say $25 billion a month, the conversion of one half of the current Social Security Trust Fund’s US government bonds (called Special Issue Government Bonds) to passive index-based holdings of stocks would take about five years and could be accomplished without noticeable market impact. A similar amount of monthly conversion of the other half of the current Trust Fund’s bonds into marketable long-term Treasury Bonds could also easily be accomplished. Net inflows would be invested in stocks until a 50-50 balance between stocks and bonds was reached. Negative net inflows would be financed with short-term borrowing as in Chapter 5. The market impact would then tend to be minimal since purchases would be spread, through the purchase of index funds, over thousands of securities in proportional fashion, with the new net demand tending to effect prices somewhat positively (as appeared to be the case in the early years in Chile when private accounts were still growing). In the current global environment, stock investments would sensibly be equally divided between US and international securities. The actual choices would of course be the purview of the SSB’s investment team.

**Annual reports.** Each year the SSB would issue a public report on its financial position, status, and cash flows. Each individual participant would have internet access to his or her contributions and receive an annual report confirming changes in his or her individual account.

**Research staff.** Like the Fed, the SSB would have a staff to conduct research and to present reports to the board and the public about issues relating to the functioning of the minimal safety net. It would also at times appoint committees to address possible changes to the Social Security model currently in place. A number of such issues have of course have already been noted. An obvious one to consider is possible adjustments for increasing life expectancy. Another is whether the increase in earnings inequality should generate an increase in the maximum earnings base which was initially set at 90% but which has since slipped to the 80s (Reich 2011). A third is whether Social Security coverage should be made universal, to include the state and local government employees who are currently outside the system (and whose present safety nets are in generally sad shape). There is also the question of how to adjust for what has been called “legacy costs”, the fact that those who retired in the early years of Social Security’s existence received more benefits relative to their contributions than later retirees have and will. I will not belabor these issues here since they have thoroughly addressed elsewhere. I would simply
suggest that changes to the Social Security System recommended by the SSB be subject to a strict up or down vote by Congress.

**Unfunded liabilities… goodbye?** In some future year, another significant issue will arise: whether to lower contributions or raise benefits or some combination of both. Feldstein (2007) has suggested that by investing private accounts in the stock market, contributions could be lowered by two thirds. That still falls short of what the Trust Fund could accomplish without privatization due to economies of scale alone. Since the results in Chapter 5 shows the Trust Fund invested in stocks and bonds beating the existing Trust Fund at the end of 2010 $10.2 trillion to $2.61 trillion, the three to one ratio suggested by Feldstein is more than in the ballpark even with bonds included, leaving room for a substantial boost in the benefit/contribution ratio for the SSB board to address sometime down the line.

With these changes, the public will begin to view its Social Security contributions very differently, as something that will grow undisturbed to provide generous benefits in the future, safe from being “apparently raided” by the federal government to pay current government expenses or enact tax cuts as now happens under the Unified Budget.

**From payroll taxes to personal contributions.** Currently, Social Security contributions (payroll taxes) are evenly split between employee and employer, with the self-employed serving in both positions. The employer’s portion is tax-deductible while the employee’s is not. Since the administrative simplicity of the current contribution system is difficult to improve upon, it suggests that the employer’s mandate to forward the employee’s total contribution should be continued. But a case can be made that the total contribution should be clearly visible to, and attributable to, the employee. A simple way to do so would be for the employer to increase the employee’s earnings by the amount of his or her annual Social Security tax formerly paid by the employer, as Chile did in the early years after privatization (Pinera 2004). The employer would then gain a tax deduction for the increase in compensation that is exactly offset by the lost tax deduction for the Social Security taxes not paid, with no effect on the employer’s before or after tax income.

Since the employee’s additional income is a (50%) Social Security contribution, it should be deductible just like it is currently for self-employed individuals. Thus an employer’s tax deduction would be replaced by employee tax deductions of equal value with a roughly neutral effect on federal revenues. In fact, a strong case can be made that, since Social Security benefits are taxable, 100% of an employee’s Social Security contribution should be deductible just like it is for private pension plans. This would of course reduce federal tax receipts, at least in the short run, and, in view of the current fiscal environment, is best put on the back-burner – but also on the agenda of the SSB research staff.

**Some Agenda Items for the Social Security Board**

As noted by Peter Diamond in his presidential address at the 2004 American Economic Association Annual Meeting, the current US Social Security System functions fairly well, especially compared to similar systems in other nations (Diamond 2004). Paul Volcker sees it as “the bedrock of any retirement policy in this country” (Collins 2010). But even if the three
serious shortcomings addressed in Chapter 4 of this book are remedied, there are four administrative issues in particular that the new Board needs to ask its research staff to examine. The first concerns how to achieve administrative efficiency, the second how to streamline the disability claim review process, the third how best to unclog the interface between private disability policies and those of the Social Security System, and finally how to deal with the Social Security contributions of illegal immigrants.

**Administrative staffing.** Service loads on Social Security Administration (SSA) personnel have grown in recent years, resulting in higher staff stress and longer waiting times for beneficiaries (Davidson 2009). Seeking the proper balance between service levels and administrative costs appears to be a natural responsibility for the Social Security Board, along with such issues as process automation and privacy.

**The disability insurance backlog.** A recent study found that the SSA received more than 2.8 million disability claims in 2009, a 21.3% increase from the year before (Banham 2010), with the number of claims doubling just between 2001 and 2007 (Basler 2007). With Congress not having allowed the Social Security Administration to allocate sufficient funds from its own Trust Fund to administrative expenses as it relates to disability claims, some cases are taking years to resolve even though only those who have paid into the system qualify. Two thirds of those who appeal an initial rejection eventually win, but waiting for a hearing and a judge often takes so much time – up to three years – that the individual in question may lose his home, ending up declaring bankruptcy, or die (Eckholm 2007). The average monthly benefit check is $1,062, not nearly enough to live on for most people. Still, reducing the disability claim processing time appears to be the single most important administrative issue to be addressed. For a comprehensive analysis of the various issues facing the disability component of the Social Security System, see Autor and Duggan (2006).

**The interface with private disability insurance.** To add a private safety net on top of the minimal safety net, the insurance industry offers both group-based and individual disability insurance policies. These policies are generally coordinated not only with Social Security benefits but also with many other disability plans such as workers’ compensation and disability pensions. The private insurers thus have an incentive to shift as much of its benefit payments as possible to these other plans.

The requirements to qualify for Social Security disability benefits are much tougher than for private plan benefits. Yet the industry apparently forces individuals who do not qualify under the rules to apply for Social Security disability benefits, and even to require them to keep on appealing upon denials (Walsh 2008). One effect of unwarranted disability claims dumped on an already clogged Social Security System is to delay the processing of valid claims; lawsuits have been filed to end the practice. This is another area where the SSB needs to step in.

**The contributions of illegal immigrants.** Large numbers of illegal immigrants are paying Social Security taxes based on fake Social Security cards, generating billions of inflow each year from which no benefits will be collected. The Social Security Administration even keeps a file on the earnings recorded under bad Social Security numbers (Porter 2005). At some point the
SSB will need to take a serious look at this conundrum – which also needs to be part of immigration reform.

VIII. CONCLUDING COMMENTS

The most surprising aspect of the Social Security System must be that after 74 years, its Trust Fund has never invested in equities – or even in marketable government bonds. It is well established that stocks outperform bonds over long periods (which in technical terms is due to their higher risk premia – recall Table 1), which in turn implies that a passive portfolio of stocks and bonds will substantially beat a pure bond portfolio over a person’s (post-child) lifetime. The key observation from this is of course that the ratio of available outputs from any given sequence of inputs, in a perpetual vehicle such as the Social Security Trust Fund, will be substantially higher based on passive stock and bond investments than from bond investments alone. This boosted ratio, in turn, translates to greater purchasing power by consumers, either via lower inputs, or higher outputs, or both in combination - and from the wealth effect, higher economic growth as well. So why then, one must ask, has this basic, and highly significant, economic observation not been acted on?

A key objection to equity investments that has been raised is that it would amount to “socialism”. Socialism, of course, occurs when the government owns, and operates, the means of production. While the US government owns and operates the national forests, the national parks, the Department of Defense and its many assets, and many other properties as well, most people don’t view this as socialism. Stock ownership by the Social Security Trust Fund could certainly be viewed as an intrusion into the private sector since share owners are asked to vote in matters of corporate governance. The simple remedy, of course, is to make the Social Security System independent, as discussed in Chapter 7. In recent years, index funds and mutual funds have relied on independent advisors in voting their holdings on behalf of the share owners, many of which are pension funds. Under this approach, the government would be unable to interfere in corporate governance matters via index fund ownership by the Social Security Trust Fund. Since index funds did not emerge until the 1970s, the early resistance to equity holdings by the Trust Fund is more understandable than it has been since the time of the Greenspan Commission.

As noted in Chapter 6 and elsewhere, the private sector is no match for the US Social Security System structure, as designed for a (national) minimal safety net, on the efficiency dimension, as measured by administrative expenses and manpower needs. With respect to inflation-adjusted, life-time annuity-based contracts covering retirement, life insurance, and (in part) disability insurance, a single company, or group of companies in the private sector are unlikely to survive long on a 1% margin for administrative expenses and profit. Thus, this is an area where a national pool without a profit motive becomes dominant, as even Hayek seems to recognize – if reluctantly (1960, p. 287). But for the personal safety net to be constructed above the minimal safety net, an additional safety net that virtually everyone desires, and itself a huge enterprise in its scope, there is no substitute for a competitive private sector in providing the desired products in a genuine and fully informed free market environment.

There appears to be no reason for a fund as large as the one for Social Security to depart from passive investments, a deviation which would tend to increase its risk exposure. Thus,
placements in private equity and in hedge funds, as employed by the Canada Pension Plan, and even fundamental indexing of the type pioneered by Robert Arnott (Tully 2010), would therefore seem unnecessary. On the other hand, investments in corporate and international bonds and even limited positions in small company stocks should not be ruled out.

In an economy with population growth, we would expect positive net inflows as a typical pattern but not necessarily every month. When negative inflows occur, short-term loans seem preferable to asset sales, as illustrated in Chapter 5. Not only would this leave the earning power of the Fund’s assets unimpared and reduce transaction costs, but a Trust Fund with a strong asset base would have access to minimal borrowing rates.

Recall that opponents of Social Security tend to equate it with “welfare”, especially those who are anxious to cut its benefit payments. Since no one is entitled to Social Security benefits without first having paid into the Social Security System, and its redistributive feature is modest, it is in fact not welfare. Applying the “welfare” label to it would look even more out of place once Social Security has achieved independent status, as proposed in Chapter 7. Moving away from non-marketable government bonds as its only asset would further remove Social Security from the “welfare” stigma. With an independent System’s Social Security Board making periodic recommendations for parameter adjustments, the notion of 75-year projections and unfunded liabilities connected with the Social Security System are likely to just fade away.

With mandatory contributions identified directly with individuals replacing payroll taxes, and the Social Security System assuming independent status, there appears to be no way the Unified budget concept can continue to survive, since the Social Security Trust Fund is by far the largest of the US government’s trust funds. The result will be to force the government to begin reporting its finances, in particular its operating deficits or surpluses, honestly for the first time since 1969. One can only wonder what caused the Secretaries of the Treasury, presumably financially astute individuals, to misrepresent the United States government’s finances to the tune of $4.149 trillion over the last four decades…

Since the public pension plans and minimal safety nets of most nations are in worse shape than Social Security is even in its current form, the approach to the minimal safety net outlined in this book may also serve as a model for other nations, in line with suggestions made by Pagrotsky and Fogde (2007).

Finally, once the Social Security Trust Fund is fully engaged in a passive investment program, with negligible, or even negative fees when the earnings from securities lending are taken into account, one cannot help but wonder to what extent the private sector will begin to clone its investment approach…

REFERENCES


Canada Pension Plan, 2010, cppib.ca/Investments/Total_Portfolio_view/asset_mix.html, May


MSCIBarra.com/Performance


Table 1

New Value of $1 After 74-year Period 1937-2010

<table>
<thead>
<tr>
<th>if invested in</th>
<th>Large US stocks</th>
<th>Small US stocks</th>
<th>Long-term gov’t bonds</th>
<th>30-day US Treasury Bills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$1,260</td>
<td>$9416</td>
<td>$53</td>
<td>$17</td>
</tr>
<tr>
<td>Annual compound return %</td>
<td>10.1</td>
<td>13.2</td>
<td>5.5</td>
<td>3.9</td>
</tr>
</tbody>
</table>

Source: Author’s calculations using data from Morningstar, Inc. 2011.
Table 2

US Government’s Financial Surpluses or Deficits, 1970-2010
(in millions of dollars)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Total</th>
<th>Federal Funds</th>
<th>Trust Funds</th>
<th>Fiscal Year</th>
<th>Total</th>
<th>Federal Funds</th>
<th>Trust Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>-2,842</td>
<td>-13,168</td>
<td>10,326</td>
<td>1990</td>
<td>-221,036</td>
<td>-341,181</td>
<td>120,145</td>
</tr>
<tr>
<td>1971</td>
<td>-23,033</td>
<td>-29,896</td>
<td>6,863</td>
<td>1991</td>
<td>-269,238</td>
<td>-380,971</td>
<td>111,733</td>
</tr>
<tr>
<td>1973</td>
<td>-14,908</td>
<td>-25,683</td>
<td>10,774</td>
<td>1993</td>
<td>-255,051</td>
<td>-355,436</td>
<td>100,385</td>
</tr>
<tr>
<td>1974</td>
<td>-6,135</td>
<td>-20,144</td>
<td>14,009</td>
<td>1994</td>
<td>-203,186</td>
<td>-298,508</td>
<td>95,322</td>
</tr>
<tr>
<td>TQ</td>
<td>-14,744</td>
<td>-12,793</td>
<td>-1,951</td>
<td>1997</td>
<td>-21,884</td>
<td>-147,826</td>
<td>125,942</td>
</tr>
<tr>
<td>1978</td>
<td>-59,185</td>
<td>-71,876</td>
<td>12,691</td>
<td>1999</td>
<td>125,610</td>
<td>-87,120</td>
<td>212,730</td>
</tr>
<tr>
<td>1979</td>
<td>-40,726</td>
<td>-59,061</td>
<td>18,335</td>
<td>2000</td>
<td>236,241</td>
<td>1,629</td>
<td>234,612</td>
</tr>
<tr>
<td>1980</td>
<td>-73,830</td>
<td>-82,632</td>
<td>8,802</td>
<td>2001</td>
<td>128,236</td>
<td>-100,513</td>
<td>228,749</td>
</tr>
<tr>
<td>1981</td>
<td>-78,968</td>
<td>-85,791</td>
<td>6,823</td>
<td>2002</td>
<td>-157,758</td>
<td>-360,156</td>
<td>202,398</td>
</tr>
<tr>
<td>1982</td>
<td>-127,977</td>
<td>-134,221</td>
<td>6,244</td>
<td>2003</td>
<td>-377,585</td>
<td>-555,977</td>
<td>178,392</td>
</tr>
<tr>
<td>1987</td>
<td>-149,730</td>
<td>-222,348</td>
<td>72,618</td>
<td>2008</td>
<td>-458,553</td>
<td>-724,621</td>
<td>266,068</td>
</tr>
<tr>
<td>1989</td>
<td>-152,639</td>
<td>-276,122</td>
<td>123,483</td>
<td>2010</td>
<td>-1,293,489</td>
<td>-1,416,821</td>
<td>123,332</td>
</tr>
</tbody>
</table>

Total is 4,149,368

Source: Office of Management and Budget, 2012, Historical Tables, Table 1.4.

Beginning in 1977, the fiscal year ends at the end of September; previously the fiscal year ended in June. The July-September 1976 period is usually referred to as the transition quarter, or TQ for short.
Table 3
Historical Social Security Trust Fund

Balance Sheet

December 31, 2010
(in $trillions)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Issue Government Bonds (non-marketable)</td>
<td>$2.609</td>
</tr>
<tr>
<td>Liabilities</td>
<td>$0</td>
</tr>
<tr>
<td>Equity</td>
<td>$2.609</td>
</tr>
</tbody>
</table>

Invested Social Security Trust Fund

Balance Sheet

December 31, 2010
(in $trillions)

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Treasury Bonds (marketable)</td>
<td>$2.639 25.86%</td>
</tr>
<tr>
<td>Stocks (S&amp;P 500 Index)</td>
<td>$7.344 71.97%</td>
</tr>
<tr>
<td>International stocks (EAFE+ Canada Index)</td>
<td>$0.306 3.00%</td>
</tr>
<tr>
<td>Total assets</td>
<td>$10.289</td>
</tr>
<tr>
<td>Short-term debt</td>
<td>$.085 .83%</td>
</tr>
<tr>
<td>Total liabilities and equity</td>
<td>$10.289</td>
</tr>
</tbody>
</table>

Note that the amount of US government’s debt held by the Social Security Trust Fund under the Invested scenario is nearly identical to the historical amount at the end of 2010.
Figure 1. Net Social Security Inflows by Fiscal Year Excluding Interest Income and Expense

Source for author’s calculations of net inflows and outflows for 1937-86: Office of Management and Budget, 2010, Table 1.13.

Source for 1987-2010 net inflows and net outflows: Office of Chief Actuary, Trust Fund Data, Social Security Online, available at ssa.gov/cgi-bin/ops_series.cgi
Figure 2. Proportions Invested in the Asset Categories
Figure 3. The Values of the Invested and Historical Trust Funds Compared
Figure 4. Ratio of the Value of the Invested Trust Fund to the Value of the Historical Trust Fund