Privatizing Social Security: Advisable But It Can Be A Roller-Coaster Ride To The U.S. Taxpayer

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ABSTRACT

The ability of the Social Security retirement program to pay the promised benefits to future generations has been debated since the 1960s. Various suggestions have been made, but the one that has attracted the most passionate opinions has been whether some or all of the Social Security Trust Funds should be invested in the stock market, which would yield higher returns than on the Federal government issued bonds (Treasury Bonds).

In reviewing 88 years of financial market data going back to 1926, the author shows that investing in the stock market (using the S&P 500 as the proxy) will most probably produce higher returns for the U.S. taxpayer (investor) over the long term, but the investor will have to be prepared for a roller-coaster ride of highs and lows.

Keywords: Privatizing Social Security; Social Security Trust Fund Returns; S&P 500 Returns

INTRODUCTION

The debate over privatizing all or part of the Social Security Trust Fund can be traced to 1964 when Senator Barry Goldwater, then Republican Party Presidential Candidate, made it a central part of his political campaign. However, Robert A. Rankin observed the following in the *San Jose Mercury News* (July 26, 1998, pg. 1E):

In 1964, presidential candidate Barry Goldwater was so ridiculed for suggesting that Social Security become voluntary that his campaign never recovered. Even in the Reagan and Bush years, lawmakers of both parties agreed that Social security was the "third rail of politics" -- touch it with any proposed change and you will die.

In spite of this dire warning to politicians, the issue of privatizing Social Security (SS) has been vigorously debated over the past fifty years in political campaigns, by Presidential Appointed Task Forces, by so-called independent think-tanks, and in the news media. A *Google* search for "privatizing social security" presented 383,000 results and a similar search of the *LexisNexis Academic* data base presented 1,000 results. Every president or his cabinet member since the 1960s has appointed a task force to make recommendations to ensure the financial stability of the SS programs and to provide reasonable retirement and insurance benefits to its contributors; namely, the workers and their families.

In reviewing 88 years of financial market data going back to 1926, the author shows that investing in the stock market will most probably produce higher returns for the U.S. taxpayer (investor) over the long term, but the investor will have to be prepared for a roller-coaster ride of highs and lows.

LITERATURE REVIEW

Numerous proposals have been made over the past fifty years regarding the payroll surpluses that are held in the Social Security Trust Fund (henceforth referred to as the Trust Fund). These proposals are best summarized by

the 13-person Advisory Council on Social Security appointed in June 1994 by Dr. Donna E. Shalala, Secretary of Health and Human Services. Table 1 (see Appendix) is a summary of the three conflicting proposals made by the 13-person Council, which was split into three factions, in their Final Report submitted in December 2006 (http://www.socialsecurity.gov/; Search for "1994-1996 Advisory Council").

The Advisory Council members were bitterly divided with six of the 13 members opposed to the most important changes recommended by the other seven members. The six members were distressed at the surge of interest in "privatizing" part of SS. The suggested plans varied from allowing some of the payroll taxes to be invested in the stock market, which would be strictly supervised by an investment advisory panel under Plan 1 (referred to as "Maintain Benefits"). At the other side, allowing for individual accounts into which workers could choose from an array of five to ten mutual funds under Plan 3 (referred to as Individual Accounts). Plan 2 (referred to as Personal Security Accounts) is a compromise between Plans 1 and 3 and would create a two-tier system consisting of a flat Federal benefit and a mandatory personal security account managed by workers. These three plans have been used in subsequent years as a basis for suggested changes to the existing SS retirement program. An important point to note is that the current system, which has been in place for the past 60 years, allows for payment of retirement benefits to the worker and his/her spouse, for disability benefits, and benefits to the spouse and minor children of a worker who dies before reaching retirement age. In short, the SS programs have a comprehensive life insurance component in addition to their retirement benefits.

The Existing Plan (under current law) and Plan 1 are similar to a defined benefit plan (DBP), where the Federal government promises to pay the defined benefits to the beneficiaries with the result that the U.S. taxpayer will ultimately be responsible for making the promised payments. Therefore, Under Plan 1, the gains and losses from investing in the stock market would be borne by the taxpayer. Under Plan 3, which is similar to a defined contribution plan (DCP), the gains and losses from investing in the stock market would be borne by the worker. The author characterizes Plan 2 as a "Quasi Defined Benefit Plan" which has elements of a DBP and a DCP.

The author decided to focus on the above Advisory Council because their work during the 1994-1996 period was conducted when stock market prices were strongly influenced by the "dot com boom", while the Trust Fund was showing relatively modest returns from its portfolio of fixed income securities issued by the Federal Reserve Bank (Treasury Securities). For example, returns for the S&P 500 and for the Old-Age and Survivors Insurance (OASI) for the 1991-1996 period are presented in Table 2. The OASI Trust fund is the most significant part of SS.

Table 2:
Returns in Early 1990s: S&P 500 versus Old-Age and Survivors Insurance (OASI)

Year	OASI Assets at start of Year	Interest Earned	Interest Rate Earned	S&P 500 Returns
1991	$214.2 billion	$20.8 billion	9.2 percent	30.5 percent
1992	$267.9	$24.3	8.7	7.6
1993	$319.2	$27.0	8.3	10.1
1994	$369.3	$30.0	8.0	1.3
1995	$413.5	$32.8	7.9	37.6
1996	$458.4	$35.7	7.8	23.0

These financial results were evaluated in the context of the estimates by the Chief Actuary in the *Annual Reports of the Social Security Administration (SSA)*. In the *1996 Annual Report*, he estimated that the OASI Trust Fund would be depleted by 2029, using the intermediate assumption (page 6). Similar estimates were issued each year and the Trustees usually concluded by stating: "With informed discussion, creative thinking, and timely legislative actions, Social Security can continue to protect future generations" (page 5 of *2013 Report*).

A search of *The Clute Institute* website for published articles on "social security" yielded 15 articles that are directly or indirectly related to the issues discussed in this article. Four articles are included in this literature review and are discussed in the chronological order that they were published.

Pritchard and Potter (February 2006) in "Proposed Changes to Social Security: An Analysis" listed 12 possible changes. These suggested changes include reducing future benefits, increase payroll taxes, increase income taxes on benefits, increase estate tax to fund the SS programs, and require all state and local government workers to enroll in the SS programs.

Caliendo and Atkins (April 2006) in "The President's Social Security Plan: How much would you pay to participate?" used a simple life-cycle model to analyze whether or not Private Investment Accounts (PIAs) would benefit workers. They found: "In most circumstances, workers would benefit from the private account program. Only when marker rates are very low or a person expects to live for a very long time does the current pay-as-you-go system give a greater present value to a worker."

Ekmekjian, Haroian and Snyder (October 2006), in "Social Security: Personal Investment Accounts (PIAS)", identified seven major issues that need to be addressed if PIAs were to replace the current SS program. They conclude that:

....on a straight financial basis, the dollar value of PIAs exceeds the narrowly defined SS benefit by a wide margin. The current SS program continues to benefit workers, both male and female, that are at or near the retirement age. For all others, a total or partial investment in PIAs provides a greater total dollar portfolio and, depending upon one's investment strategy, even provides for death bequest to one's heirs. The examination has not taken into account COLA's, administrative fees or management fees for PIAs. In addition, the transitional or management costs and the impact on the current SS program have not been examined.

Pritchard and Potter (January 2008), in "Reducing the Downside Risk of Not Receiving Anticipated Social Security Benefits by Using Personal Accounts", explores Plan 2 (Personal Security Accounts) that was suggested in the *Report of the 1994-1996 Advisory Council*. They present the argument that:

…. opting for a personal account in conjunction with traditional Social Security is less risky than opting to have all of one's Social Security taxes go into traditional Social Security. The overall downside risk of receiving lower than anticipated Social Security retirement income is reduced by diversifying to include personal accounts along with traditional Social Security.

Based on the author's review of the literature where the pros and cons of the various options/proposals to reform the SS program have been debated, the author is in favor of Plan 1 ("Maintain Benefits") where a significant portion of the Trust Fund is invested in the stock market. This would allow for the current DBP benefits to continue and the stock market risk would be borne by the U.S. Federal government and ultimately the taxpayer.

88-YEAR HISTORY OF FINANCIAL MARKET PERFORMANCE IN THE U.S.

Ibbotson SBBI 2014 Classic Yearbook, published annually by Morningstar, is an excellent source of financial data going back to 1926. In Table 3 (see Appendix), annualized compound returns are presented for: 1) large company stocks (S&P 500 stock market index); 2) long-term corporate bonds (20-year maturity); 3) long-term government bonds (Treasury Bonds with 20-year maturity); 4) intermediate-term government bonds (Treasury Notes with 5-year maturity); 5) Treasury Bills (30-day maturity); and 6) inflation rate (consumer price index).

The S&P 500 produced an annual average compound return of 10.1 percent for the 1926-2013 period (88 years), which is substantially greater than for fixed income securities. Treasury Bonds (20-year) had an average of 5.5 percent, which was 4.6 percent below returns on the S&P 500. The 88 years of data is then divided into nine decades (with the 1920s as only half a decade). The S&P 500 out-performed Treasury Bonds (20-year) in seven of the nine decades, except for the 1930s and 2000s. However, S&P 500's excess return in the 1970s was only 0.4 percent (5.9 percent versus 5.5 percent) which can be attributed to the high rates of inflation (average of 7.4 percent, which is the highest in any decade). The Stock Market Crash of 1929 and the Great Depression of the 1930s had a devastating impact on the private sector of the economy so that returns on Treasury Bonds (20-year) exceeded S&P 500 returns by 5.0 percent, on average, in the 1930-1939 period. The "Bursting of the Dotcom Bubble" in 2000 and the "Financial Crisis" of 2007-2008 had similar impacts in the last decade on the private sector of the economy so

that returns on Treasury Bonds (20-year) exceeded S&P 500 returns by 8.6 percent, on average, during the 2000-2009 period. Similar results are found by analyzing the following recent ten-year periods: Treasury Bonds (20-year) returns exceeded S&P 500 returns by 5.2 percent, on average, during the 2001-2010 period; by 6.0 percent during the 2002-2011 period; and by 0.4 percent during the 2003-2012 period. However, S&P 500 returns exceeded Treasury Bonds (20-year) returns by 1.3 percent, on average, during the 2004-2013 period due to the 32.4% return in the S&P 500 in 2013. The well-below par performance of the stock market in the past 14 years, beginning in 2000, should cause some anxiety to potential investors. The higher average returns in the S&P 500 should also be evaluated relative to the higher volatility in these returns during the 88 years, which will be addressed in the next section. The financial performance in Table 3 is well summarized on pages 33-34 of *Ibbotson SBBI 2014 Classic Yearbook*:

The great stock and bond market rise of the 1980s and 1990s was one of the most unusual in the history of the capital markets. In terms of the magnitude of the rise, these decades most closely resembled the 1920s and 1950s. These four decades accounted for a majority of the market's cumulative total return over the past 88 years.

While the importance of a long-term view of investing is noted in this book and elsewhere, the counterpart of this observation is: To achieve high returns on your investments, you only need to participate in the few periods of truly outstanding returns. The bull markets of 1922 to mid-1929, 1949-1961(roughly speaking, the Fifties), mid-1982 to mid-1987, and 1991-1999 were such periods. . . . .

The 17 ½ year period starting in mid-1982 and ending in 1999 comprised a rare span of time in which investors quickly accumulated wealth.

The volatility of the stock market is aptly captured in a speech given by Alan Greenspan, Chair of the U.S. Federal Reserve Board, on December 5, 1996. He asked, "But how do we know when irrational exuberance has unduly escalated asset values, which then become subject to unexpected and prolong contractions as they have in Japan over the past decade?" The phrase "irrational exuberance" stuck in the mindset and Robert Shiller, 2013 Nobel Laureate in Economics, made it the title of his best-selling book, first published in 2000, on the over-valuation of U.S. stocks. Shiller has a website where he reports price-earnings data at the end of each month and comments on the state of the stock and housing markets (http://www.irrationalexuberance.com/).

THE SOCIAL SECURITY PROGRAM AND INVESTMENT PERFORMANCE OF THE OASI TRUST FUND

The SS Program commenced operations in January 1937 and was designed as a "pay-as-you-go" system where retired beneficiaries were paid their monthly annuities from payroll taxes collected from active workers and their employers. This system continues to operate today, except that it now has two parts - Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) - collectively referred to as OASDI. They have separate trust accounts and different payroll tax rates. The current situation is well captured on page 2 of the *2013 Annual Report of the Trustees:*

At the end of 2012, the OASDI program was providing benefits to about 57 million people: 40 million retired workers and dependents of retired workers, 6 million survivors of deceased workers, and 11 million disabled workers and dependents of disabled workers. During the year, an estimated 161 million people had earnings covered by Social Security and paid payroll taxes. Total expenditures in 2012 were $786 billion. Total income was $840 billion, which consisted of $731billion in non-interest income and $109 billion in interest earnings. Asset reserves held in special issue U.S. Treasury securities grew from $2,678 billion at the beginning of the year to $2,732 billion at the end of the year.

The computation of the monthly retirement benefit paid to a retiree is fairly complex, but the important point is that it is more of a DBP that is not directly affected by the investment performance of the OASI Trust Fund. The normal retirement age (referred to as full retirement age) varies from 65 to 67 years depending on when the worker was born. However, early retirement can be taken at age 62 and retirement benefits must be taken no later than age 70.

In Table 4, annualized compound returns are presented for large company stocks (S&P 500 stock market index) and for Special Issue Government Bonds (SIGBs) held by the OASI Trust Fund. The SIGBs are issued by the U.S. Treasury Department and managed through their Bureau of Public Debt. The SIGBs have maturities ranging from 1 to 15 years. The data are primarily for a 62-year period from 1950 to 2012. This 62-year period provides a more stable political and economic environment after the end of World War II in 1945. The S&P 500 produced an annual average compound return of 11.0 percent for the 1950-2012 period, which is substantially greater than the 5.9 percent for the SIGBs, resulting in an excess of 5.1 percent. The 62 years of data are then divided into six decades. The S&P 500 out-performed SIGBs in four of the six decades, except for the 1970s and 2000s. The SIGBs produced average excess returns of 0.3 percent in the 1970s (6.2 percent versus 5.9 percent), which can be attributed to the high rates of inflation (average of 7.4 percent, which is the highest in any decade as per Table 2). As stated earlier, the "Bursting of the Dotcom Bubble" in 2000 and the "Financial Crisis" of 2007-2008 had a similar impact in the last decade so that returns on SIGBs exceeded S&P 500 returns by 6.7 percent, on average, during the 2000-2009 period (-0.9 percent for S&P 500 versus 5.8 percent for SIGBs). The substantial stock price gains of the "Dotcom era" have been wiped out by losses in the last decade. However, the data in Table 3 show that the S&P 500 has out-performed the SIGBs in two of the past three years - in 2010, S&P 500 return of 15.1 percent versus 4.6 percent for SIGBs; in 2011, S&P 500 return of 2.1 percent was below the 4.4 percent for SIGBs; and in 2012, S&P 500 return of 16.0 percent versus 4.1 percent for SIGBs. Furthermore, the S&P 500 return of 32.4 percent for 2013 will be well in excess of the return on SIGBs. The return for the latter is not available at this time.

The author has been focusing on the compound annualized returns, which fail to capture the variations in return (volatility or risk). The volatility of returns is best measured by determining the arithmetic mean (simple average), the standard deviation (std. dev.) around it, and the resulting coefficient of variation (CV), which is the standard deviation divided by the arithmetic mean. CV is a form of risk-reward ratio in that it measures how much variation in returns there is for each 1 percent mean return. CV allows one to compare returns over time and also across different types of investments. A risk-averse investor prefers low CV ratios because it provides the smallest variation per 1 percent return. The arithmetic mean (simple average) is not used widely in measuring financial performance because it provides a linear growth rate in returns rather than an exponential growth rate. The latter is captured by the compound rate (also called geometric mean return) because it allows for growth-on-growth (compounding). The arithmetic mean is greater than the compound average (geometric mean) and the difference is greater when there is a large standard deviation. Paquette (2005) shows the difference in results between geometric mean and arithmetic mean when there are significant variations in returns during the period under review.

A review of Table 4 shows that the CV for S&P 500 is significantly greater than for SIGBs across all six periods because of the substantially large standard deviations for stocks. Participating in the stock market can result in large gains and losses over time compared to the stable returns from government-issued fixed income securities. The CV of 17.6 for the 2000-2009 period is extremely high and, as stated earlier, it is due to the well below par performance of the stock market in the last decade, which should cause some anxiety to potential investors.

The "roller-coaster ride" experienced by investors holding stocks in large companies since 1995, for example, can best be appreciated by reviewing Table 5 where the following are shown: 1) the steady growth in OASI assets which are primarily in SIGBs, 2) the growth in interest earned from SIGBs, 3) the decrease in the average rate of interest earned on SIGBs, and 4) the volatile S&P 500 returns. The S&P 500 had 14 years of positive returns (a high of 37.6 percent in 1995 and a low of 2.1 percent in 2011) but also had four years of substantial losses (-9.1 percent in 2000, -11.9 percent in 2001, -22.1 percent in 2003, and -37.0 percent in 2008). Returns on SIGBs exceeded those on the S&P 500 in six of the 18 years (the above four years of losses and in 2005 and 2011). The annual returns show the ups and downs of holding stocks, but the S&P 500 still out-performed SIGBs by 2.42 percent (8.56 percent versus 6.14 percent) over the recent 18-year period. Returns on SIGBs have been declining steadily, from 7.9 percent in 1995 to 4.1 percent in 2012, which reflects the long-term perceptions of financial market participants who are spread around the world investing in stocks, bonds, financial derivatives, real estate, and commodities. For example, the "Sovereign Debt Crises" in the euro-zone increased the demand for U.S. Federal government-issued fixed income securities causing interest rates to remain low because the U.S. is a relatively safe-haven for investors. However, the "Sovereign Debt Crises" also had a negative impact on U.S. stocks because U.S. companies were exporting less to Europe and deriving less revenue from their European operations.

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Almost all OASI assets are held in SIGBs and they increased from $413.5 billion at the beginning of 1995 to $2,524.1 billion (or $2.542 trillion) at the end of 2011 (an increase of 610 percent over 17 years). The debate over privatizing SS continues today with some financial experts suggesting that liquidating some of the SIGBs and investing the money in the private sector would help boost the overall economy.

CONCLUSION

The three plans proposed by the 13-person Advisory Council in 1996, with no majority support for any of the plans, show the complexity of the issues. Politicians have failed to garner sufficient support from the electorate to implement any form of privatizing the current SS retirement programs. The privatizing of all or part of the SS retirement programs would convert it from a DBP to a DCP, wholly or partly, and payments from the latter plan would depend on financial market performances, which can be risky. Furthermore, the current program also provides life insurance protection to the worker and or his/her dependents as well as disability insurance. These comprehensive benefits offered by the SS programs and the "irrational exuberances" of stock markets could well explain the resilience of the program in its present form.

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APPENDIX

Table 1
Summary of Proposals of the 1994-1996 Advisory Council on Social Security

	Overview	Mandatory Savings Accounts	Trust Fund Investment Policy	Income From Mandatory Savings Accounts
Current Law	Pays benefits to retired and disabled workers and their families and to survivors of workers who die. Benefits are financed by specially earmarked taxes.	None.	Money in the Social Security trust fund and can be invested only in Government securities, not in private stocks or bonds.	Not applicable.
Plan 1: "Maintain Benefits"	Maintains current benefit structure with modest changes in benefits and revenues, and perhaps a new investment policy for the Social Security trust fund.	None.	40 percent of trust fund money might be invested in private market (after further Federal study). Investments would be passively managed by an independent board to follow some broad index of market performance.	Not applicable.
Plan 2: Personal Security Accounts	Creates a two-tier system, consisting of a flat Federal benefit and a mandatory personal security account managed by individuals. Transition to new system would be financed with new Government borrowing, taxes or both.	40 percent of current payroll taxes are redirected into personal security accounts. Workers can invest the money as they want, in a wide range of financial instruments.	No change from current law.	Money in account becomes available when worker becomes eligible for Social Security retirement benefits. Worker uses it as he or she chooses. At time of death, any money in the account goes into the worker's estate.
Plan 3: Individual Accounts	Scales back benefits to fit within current payroll tax revenues. Adds a new mandatory individual savings plan, to be administered by the Government.	Workers pay an additional 1.6 percent of earnings into individual accounts. Workers have a limited number of investment options, perhaps 5 to 10 mutual funds.	No change from current law.	Individual account is automatically converted to annuities when worker retires.

http://www.socialsecurity.gov/; (Search for "1994-1996 Advisory Council")

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Table 2: Compound Annual Rates Of Returns By Decade (%)

	1926 - 2013 (88 Years)	1926 – 1929	1930 – 1939	1940 – 949	1950 – 1959	1960 – 1969	1970 – 1979	1980 – 1989	1990 – 1999	2000 – 2009
Large Company Stocks (S&P 500)	10.1	19.2	-0.1	9.2	19.4	7.8	5.9	17.6	18.2	-0.9
Long Term Corporate Bonds (20 Years Maturity)	6.0	5.2	6.9	2.7	1.0	1.7	6.2	13.0	8.4	7.6
Long Term Government Bonds (20% Years)	5.5	5.0	439	3.2	-0.1	1.4	5.5	12.6	8.8	7.7
Intermediate Term Government Bonds (5 Years)	5.3	4.2	4.6	1.8	1.3	3.5	7.0	11.9	7.2	6.2
Treasury Bills (30 Days)	3.5	3.7	0.6	0.4	1.9	3.9	6.3	8.9	4.9	2.8
Inflation	3.0	-1.1	-2.0	5.4	2.2	2.5	7.4	5.1	2.9	2.5
S&P 500 Minus Long Term Govt. Bonds (20 Years)	4.6	14.2	-5.0	6.0	19.5	6.4	0.4	5.	9.4	-8.6

	2001-2010	2002-2011	2003-2012	2004-2013
Large Company Stocks (S&P 500)	1.4	2.9	7.1	7.4
Long Term Corporate Bonds (20 Years Maturity)	7.6	8.3	7.8	6.4
Long Term Government Bonds (20% Years)	6.6	8.9	7.5	6.1
Intermediate Term Government Bonds (5 Years)	5.6	5.8	6.2	4.4
Treasury Bills (30 Days)	2.2	1.8	1.6	1.5
Inflation	2.3	2.5	2.4	2.4
S&P 500 Minus Long Term Govt. Bonds (20 Years)	-5.2	-6.0	-0.4	1.3

Data from Table 1-4 (page 33) and Table 2-1 (page 40); *Ibbotson SBBI 2014 Classic Yearbook;* Morningstar (2014) and from previous editions

Table 3
Annual Rates of Returns by Decade (%): S&P 500 versus Old-Age and Survivors Insurance (OASI)

	1950-2012 (63 Years)	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009
Large Company Stocks (S&P 500) - Compound	11.0	19.4	7.8	5.9	17.6	18.2	-0.9
Special Issue Government Bonds (SIGB) - Compound	5.9	2.5	3.3	6.2	10.4	8.1	5.8
Premium Earned by S&P 500 over SIGB	5.1	16.9	4.5	-0.3	7.2	10.1	-6.7
S&P 500 - Arithmetic Mean (Average)	12.5	20.8	8.7	7.5	18.2	19.0	1.2
S&P 500 - Standard Deviation (Std Dev)	17.6	19.8	14.4	19.2	12.7	14.2	21.1
S&P 500 - Coefficient of Variation (CV) = Mean/Std Dev	1.4	1.0	1.7	2.6	0.7	0.7	17.6
S&P 500 - Number of Years With Negative Returns	14 (22%)	2 (20%)	3 (30%)	3 (30%)	1 (10%)	1 (10%)	4 (40%)
SIGB - Arithmetic Mean (Average)	5.9	2.5	3.3	6.2	10.4	8.1	5.8
SIGB - Standard Deviation (Std Dev)	2.8	0.2	0.7	1.0	1.2	0.8	0.7
SIGB - Coefficient of Variation (CV) = Mean/Std Dev	0.5	0.1	0.2	0.2	0.1	0.1	0.1
		2010	2011	2012			
Large Company Stocks (S&P 500)		15.1	2.1	16.0			
Special Issue Government Bonds (SIGB)		4.6	4.4	4.1			
Premium Earned by S&P 500 over SIGB		10.5	-2.3	11.9			

Table 4
Annual Rates Of Returns For The 1995-2012 Period (18 Years): S$P 500 Versus Old-Age And Survivors Insurance (OASI)

Year	OASI Assets at Start of Year ($ billions)	Interest Earned on SIGBs ($ billions)	Interest Rate on SIGBs (%)	S&P 500 Returns	Excess Returns by S&P 500
1995	413.5	32.8	7.9	37.6	29.7
1996	458.5	35.7	7.8	23.0	15.2
1997	514.0	39.8	7.7	33.4	25.6
1998	589.1	44.5	7.6	28.6	21.0
1999	681.6	49.8	7.3	21.0	13.7
2000	798.8	57.5	7.2	-9.1	-16.3
2001	931.0	64.7	6.9	-11.9	-18.8
2002	1071.5	71.2	6.6	-22.1	-28.7
2003	1217.5	75.2	6.2	28.7	22.5
2004	1355.3	79.1	5.8	10.9	5.0
2005	1500.6	84.0	5.6	4.9	-0.7
2006	1663.0	91.8	5.5	15.8	10.3
2007	1844.3	97.0	5.3	5.5	0.2
2008	2023.6	105.3	5.2	-37.0	-42.2
2009	2203.9	107.9	4.9	26.5	21.6
2010	2336.8	108.2	4.6	15.1	10.4
2011	2429.0	106.5	4.4	2.1	-2.3
2012	2524.1	102.8.	4.1	16.0	11.9
Compound return			6.14%	8.56%	2.42%
Arithmetic mean (average)			6.15%	10.48%	4.33%
Standard deviation (Std dev)			1.27%	20.07%	
Coefficient of variant (CV)			0.21	1.91	

S&P 500 data from Table 2-2 (pages 41-42); *Ibbotson 2014 Classic Yearbook;* Morningstar (2014)
Special Issue Government Bonds data from *Annual Reports of the Trustee; http://ssa.gov/OACT/TR/index.html*