T-1706

United States General Accounting Office

GAO

Report to the Special Committee on Aging, U.S. Senate

April 1998

SOCIAL SECURITY FINANCING

Implications of Government Stock Investing for the Trust Fund, the Federal Budget, and the Economy

GAO/AIMD/HEHS-98-74

Special Treasury Investment Policy: Low Returns and Minimal Risk

Under the current law, the Secretary of the Treasury—managing trustee for the trust fund—is required to invest in special Treasury securities unless the Secretary determines that purchasing marketable Treasury and agency securities is "in the public interest." In the past, the Treasury Department has, at times, determined that such purchases would be in the public interest, although such purchases have been rare.[2] With the practice of investing in special Treasury securities, the Social Security trust fund receives a relatively low return with minimal risk.

By law, the interest rate on special Treasury securities is equal, at the time of issue, to the average market yield on outstanding marketable government securities not due or redeemable for at least 4 years According to the Congressional Research Service's analysis of the law and practice governing Social Security's investment policy, this statutory rate was intended to confer neither an advantage nor a disadvantage on the trust fund.[3] From the trust fund's perspective, the statutory rate represents a longer-term interest rate, and long-term interest rates have historically been higher than short-term rates. From the government's perspective, the statutory rate was intended to approximate the cost of long-term borrowing from the public.[4]

Like Treasury securities sold to the public, special Treasury securities are backed by the full faith and credit of the U.S. government and are viewed as having no risk of default. Although it cannot sell its holdings in the open market, the Social Security trust fund faces no liquidity risk because, by law, it can redeem special Treasury securities before maturity without penalty. This liquidity feature is particularly important for the trust fund if it needs to dip into its assets to cover a payroll tax shortfall during a general economic downturn. Moreover, redeeming special Treasury securities before maturity presents no risk of loss due to interest rate fluctuations because the trust fund can recover the par value plus accrued interest In contrast, the trust fund would have to sell marketable Treasury securities at the market price—which fluctuates inversely with market interest rates. The market price of a Treasury security falls when the current interest rate on Treasury securities of equal maturity rises Selling

[2]As of 1996, marketable Treasury securities represented only 0 009 percent of the trust fund's holdings.

[3]Geoffrey Kollmann, Social Security Investing the Surplus (Congressional Research Service, 91-129 EPW, January 27, 1991)

[4]The average nominal interest rate on new special Treasury securities issued in 1996 was 6 6 percent The average nominal rates for marketable medium- and long-term Treasury securities outstanding in 1996 was 6 5 percent for Treasury notes issued with a term of at least 1 year but not more than 10 years, and 9 percent for Treasury bonds with a term of more than 10 years

marketable Treasury securities before maturity when market interest rates are rising could result in a sizable loss. In practice, the Treasury has allowed the Social Security trust fund to redeem its special Treasury securities at any time to pay benefits but not to do so solely for the purpose of maximizing the trust fund's return

Like any investor, the Social Security trust fund faces the risk that its investment returns will be eroded by inflation. This is a particular concern given that Social Security benefits are indexed for inflation. Social Security beneficiaries receive an annual cost of living adjustment that is normally based on the Consumer Price Index. Under the intermediate scenario for the next 75 years, which the Trustees regard as their "best estimate," the ultimate nominal interest rate assumed over the long term is 6.2 percent, while annual inflation is assumed to be 3.5 percent. Thus, the trust fund is expected to receive an ultimate real (after inflation) interest rate of 2.7 percent on its Treasury holdings.

Although the current debate focuses on allowing the Social Security trust fund to invest in the stock market, there also are investment options within the federal government. Although the trust fund is not specifically authorized to do so by the Social Security Act, it may purchase securities issued by the Government National Mortgage Association, the Federal National Mortgage Association, and other Federal farm and home credit entities [5] The Advisory Council's Maintain Benefits approach suggested considering such investments to increase the trust fund's return. Agency securities typically pay more because they are not uniformly guaranteed as to principal and interest and there is some risk of default. And, like marketable Treasury securities, agency securities would expose the trust fund to potential losses due to fluctuating market prices.

Another option could be to change the statutory rate of interest for special Treasury securities. For example, the Congress could raise the rate by a fixed percentage or link the rate to a stock market index, such as the Standard and Poor's index of 500 large stock companies (S&P 500). The interest premium in excess of the average rate Treasury pays on debt held by the public would represent a general revenue transfer to the Social

[5]The Social Security Act requires that the Secretary of the Treasury invest trust funds in "interest-bearing obligations of the United States or in obligations guaranteed as to both principal and interest by the United States " Although certain federally sponsored agency obligations do not meet these criteria, the Secretary may invest in such obligations based on a 1966 opinion of the Attorney General The opinion held that notwithstanding the absence of statutory language pledging the "faith" or "credit" of the United States, agency guaranties or other contractual liabilities issued in pursuance of an agency's statutory functions constitute "general obligations of the United States backed by its full faith and credit." Op Atty Gen 327 (1966)

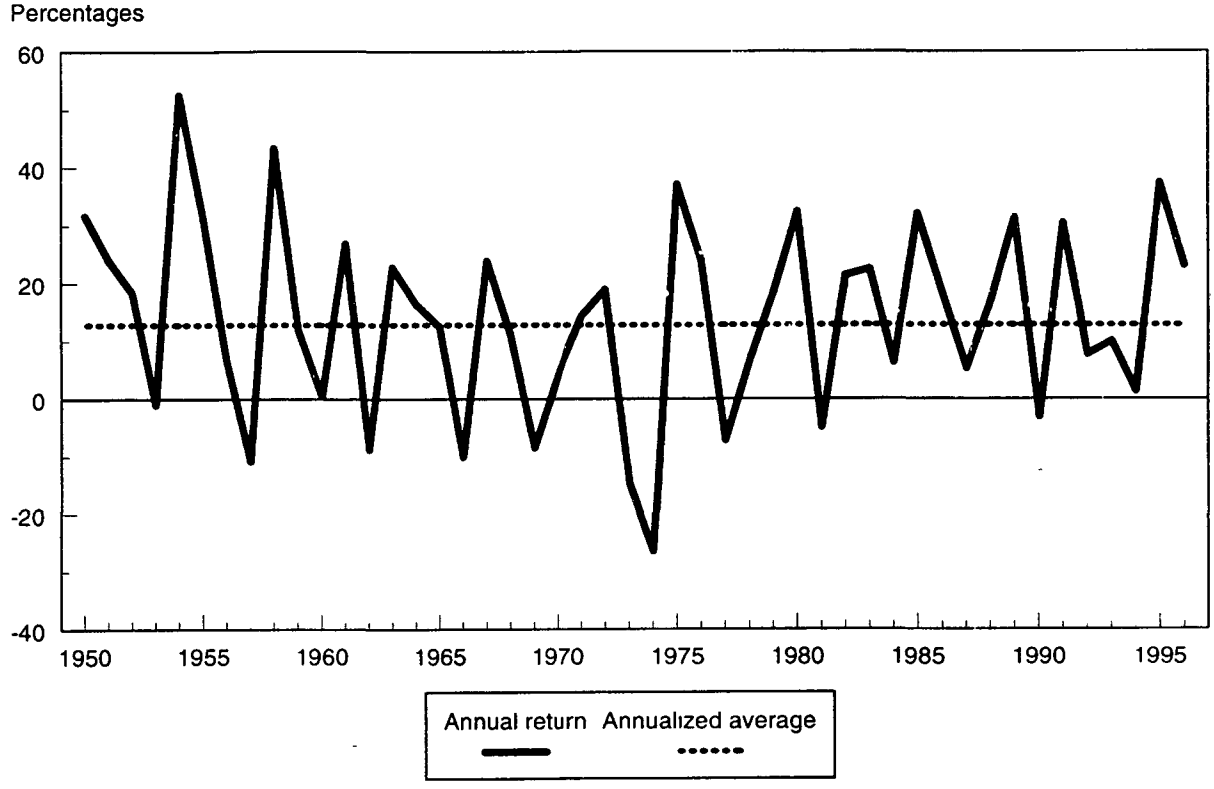
Security trust fund. Increasing the rate credited to the Social Security trust fund account would appear to boost the program's finances inasmuch as the trust fund's balance would increase However, crediting more interest to the trust fund would not generate revenue for the government, so the government's capacity to finance retirement benefits would be unchanged.

Stock Returns Have Been Higher but Are More Uncertain

Historically, the rates of return on stocks have exceeded interest rates on Treasury securities, although stock returns are more variable. According to an analysis prepared for the Advisory Council, real yields on stocks—i.e., adjusted for inflation—have averaged about 7 percent.[6] In its deliberations, the Advisory Council agreed to use this rate in estimating average future yields on stocks. Of course, an average return over a long period of time obscures the reality that stock returns fluctuate substantially from year to year, and there have been years in the past with negative returns. Figure 3 1 shows the annual returns—not adjusted for inflation—for large company stocks from 1950 to 1996. Actual nominal returns varied widely from the annualized average return over the period and ranged from a low of –26 5 percent in 1974 to a high of 52.6 percent in 1954.

[6]Joel Dickson, "Analysis of Financial Conditions Surrounding Individual Accounts," Report of the 1994-1996 Advisory Council on Social Security, Volume II, pp 484-488 The stock market realized an annualized real yield of approximately 7 percent from 1900 to 1995

Figure 3.1: Annual Returns on Large Company Stocks in Comparison to the Annualized Average Return for 1950 Through 1996



Note Large company stock returns are based upon the S&P 500 index before 1957 the index consisted of 90 of the largest stocks The total annual return reflects capital appreciation and cash income during the year assuming any income is reinvested and does not reflect any transaction costs The annualized average return for the period was 12 8 percent This compound annual rate reflects the return over the period figured on a constant year basis which is not the same as the arithmetic average of rates for each year

Source Stocks Bonds Bills, and Inflation 1997 Yearbook Used with permission Copyright 1997 Ibbotson Associates <www Ibbotson com> All rights reserved (Certain portions of this work were derived from copyrighted works of Roger G Ibbotson and Rex Sinquefield)

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According to an analysis by the Congressional Research Service,[7] the annualized average return for the S&P 500 since 1950 was almost twice the average rate credited on the Social Security trust fund's Treasury securities.[8] Although the 30-year moving average of the S&P 500 since 1970 consistently outperformed the Treasury returns credited to the Social Security trust fund, the 10-year moving average of the S&P 500 underperformed the trust fund's Treasury returns at times. Again, a long-term average return does not reflect fluctuations in year-to-year stock returns. In fact, nominal stock returns were less than the Social Security trust fund's annual yield in 17 years from 1950 to 1996—more than 35 percent of the time

Short-run fluctuations generally are less of a concern for a long-term investor who buys and holds investments. Table 3.1 illustrates the actual best and worst nominal returns on stocks as well as long-term government bonds for investment periods ranging in duration from 1 year to 20 years. An investor would face uncertain returns in the short term given that annual returns range widely and were negative in nearly 1 out of 4 years. Likewise an investor can lose money selling marketable government bonds before maturity because of bond price fluctuations. As table 3 1 shows, the range between the best and the worst returns narrows as the investment time horizon lengthens [9] Given that from 1926 to 1996, there was no 20-year period with a negative stock return, an investor might reasonably expect to earn a positive return over 20 years.

[7]Statement of David Koitz of the Congressional Research Service before the Subcommittee on Social Security of the House Committee on Ways and Means on April 10, 1997, at a hearing on the future of Social Security

[8]According to the Congressional Research Service's analysis, since 1950, the annualized average nominal return for the S&P 500 was 11 36 percent assuming annual administrative costs of 1 percent, compared to 5 96 percent for the trust fund's nominal yield

[9]The variation of returns around the expected average can be quantified in statistical terms, such as the standard deviation For more data about stock and other asset returns, see Stocks, Bonds, Bills, and Inflation Yearbook (Chicago, Illinois Ibbotson Associates)

Table 3.1: Best and Worst Returns on Large Company Stocks and Long-term Government Bonds for Varying Investment Periods From 1926 Through 1996

Percentages

Investment period	Large company stock returns		Long-term government bond returns	
	Worst	Best	Worst	Best
1 year	-43 34	53 99	-9 18	40 36
10 years	-0 89	20 0o	-0 07	15 56
20 years	3 11	16 86	0 69	10 45

Notes Annual compound rates of return were calculated for overlapping holding periods from 1926 through 1996 For the 71 1 year holding periods, annual returns on large company stocks and long-term government bonds were positive in 72 percent of the years For the 62 10-year holding periods returns were positive in 97 percent of the periods for large company stocks and in 98 percent for long term government bonds For the 52 20-year holding periods returns on large company stocks and long term government bonds were positive in every period

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Future Stock Returns Are Uncertain

There is no guarantee that investing in the stock market, even over 2 or 3 decades, will yield the long-run average return. According to economic and financial literature, there are reasons to believe that future stock returns could be less than the historical average.[10] Also, as discussed in chapter 4, government investing by itself could affect stock prices and returns at least in the short run. While the average historical stock return is commonly used in assessing future stock performance, assuming a moderately lower return could also be consistent with the expected economic and demographic outlook.

An investor entering the market at today's high stock prices may earn less than the long-term historical average. Two fundamental measures for evaluating stock prices are the dividend yield—the ratio of annual dividends to stock prices—and the price-earnings ratio. According to an analysis of historical stock performance, returns on stocks over 10-year periods have been well below average when the dividend yield was low

[10]For example, see John E Golob and David G Bishop, "What Long-Run Returns Can Investors Expect from the Stock Market?" Federal Reserve Bank of Kansas City Economic Review, Vol 82, No 3 (Third Quarter 1997), pp 5-20 and John H Cochrane, "Where is the Market Going? Uncertain Facts and Novel Theories," Economic Perspectives, Vol XXI, Issue 6 (November/December 1997), pp 3-37

and the price-earnings ratio was high.[11] Indeed, the stock market has been at record high levels in recent years, and the dividend yield is below long-run historical values.[12] Likewise, the price-earnings ratio is well above its long-run average. Some analysts have estimated that recent price-earnings ratios would be consistent with a 1 percentage point decline in the long-run return on stocks; in other words, future stock returns could decline from the historical real average of 7 percent to 6 percent over the long run.[13]

Another factor that may affect future stock returns is that the U.S. economy is expected to slow as the population ages. The rate of national saving and the growth in real wages and productivity, factors that relate to economic growth, have slowed notably in the past two decades.[14] Social Security's Trustees assume future growth in the GDP will slow as the baby boom generation retires and relatively fewer young people begin work. Whereas the economy grew at an average real rate of 2.2 percent from 1989 to 1997, real economic growth under the Trustees' intermediate scenario is assumed to be 2.0 percent annually over the next decade and then to slow to 1.3 percent by 2020. Some economists have estimated that the macroeconomic and demographic outlook would be consistent with long-run stock returns lower than the historical average.[15]

Another uncertainty is whether the baby boomers' retirement might affect the stock market. As they retire, baby boomers are expected to sell stocks to finance consumption, and private pension plans likewise will sell stocks to finance retirement benefits. The Advisory Council's technical panel reported that selling pressure resulting from the sheer number of the baby boom retirees could possibly depress stock prices but that estimating any baby boom price effect would be highly speculative. Given that the financial markets and investors anticipate the aging of the population, asset prices may adjust downward gradually beforehand rather than

[11]Burton G. Malkiel, A Random Walk Down Wall Street (New York City, New York: W. W. Norton & Company, 1996), pp. 384-389.

[12]Golob and Bishop, pp. 7-8, estimated that whereas the dividend yield for the S&P 500 had averaged about 4 percent since the 1950s, this ratio dropped below 2 percent for the first time in 1996 and has remained below 2 percent most of the time since then.

[13]Golob and Bishop, pp. 13, 14, and 16.

[14]See Retirement Income: Implications of Demographic Trends for Social Security and Pension Reform (GAO/HEHS-97-81, July 11, 1997).

[15]Golob and Bishop estimated that macroeconomic trends could reduce stock returns over the next decade by about one-half a percentage point, for a long-run real return of 6.5 percent. A 1997 report for the Twentieth Century Fund/Economic Policy Institute, Saving Social Security With Stocks: The Promises Don't Add Up, estimated that given the Trustees' other assumptions, future stock returns could be as low as 4.0 percent.

dropping abruptly when the baby boomers begin retiring Also, some analysts, including those we interviewed, suggest that global demand for stocks could offset any baby boom price effect. For example, investors from countries with relatively younger populations might invest in the U.S. stock market to save for their own retirement even as the baby boomers are selling their stocks

While future returns on stocks might reasonably be expected to be less than the historical average, analysts, including those we interviewed, expect stock returns to be higher than those on Treasury securities over the long term. How much higher is uncertain. The spread between the rates of return on stocks and Treasury securities has been shrinking. Historically, stocks have earned higher rates of return than those of Treasury securities to compensate for the additional risk associated with stocks. This "equity risk premium" has declined since the 1950s from about 7 percent to around 3 to 4 percent today.[16] It is unclear whether this change will be long-lasting or whether the equity premium will decline even further. Some economists have suggested that the shrinking risk premium reflects a structural change in that the economy appears less susceptible to recessions [17] To the extent that corporate profits fluctuate with general economic conditions, fewer downturns translate into less volatility in corporate earnings. If investors perceive that the outlook for corporate earnings is more certain and that stocks may be less risky than they have been historically, stock investing might carry a lower premium and, therefore, relatively lower returns. The uncertainty about the risk and size of the risk premium have implications for analyzing the benefits of a stock investment proposal.[18]

Although investors believe that over the long run stock returns will always be higher than bond returns, one study has questioned this conventional wisdom.[19] According to standard analytical models, stocks are virtually certain to outperform bonds over a long enough investment period. However, extrapolating from these standard models, the study estimated that a stock portfolio has a 32 percent chance of underperforming a bond

[16]For an historical examination, see Olivier J Blanchard, "Movements in the Equity Premium," Brookings Papers On Economic Activity, 2 1993, pp 75-118

[17]Goldman Sachs, "The Equity Risk Premium and the Brave New Business Cycle," U S Economics Analyst, No 97/8, February 21, 1997

[18]For further reading, see Jeremy J Siegel and Richard H Thaler, "Anomalies The Equity Premium Puzzle," Journal of Economic Perspectives, Vol 11, No 1 (Winter 1997), pp 191-200

[19]Martin Leibowitz and William Krasker, "The Persistence of Risk Stocks Versus Bonds Over the Long Term," Financial Analysts Journal, November/December 1988, pp 40-47

portfolio over a 10-year horizon. Even over a 30-year investment time horizon, there is still about a 20 percent chance that a bond portfolio would provide a higher return. As this study indicates, investing in the stock market does not ensure a higher return than might be possible investing in government and corporate bonds.

Higher Returns Could Delay Exhaustion of the Social Security Trust Fund

If the stock market continues to outperform Treasury securities, the Social Security trust fund could increase its investment revenue with a stock investment policy The higher returns possible on stocks would allow the Social Security trust fund, even without other program changes, to pay benefits longer before depleting its assets.[20] The potential gain from stock investing would depend on both how much the Social Security trust fund invests in the stock market and how much future stock returns are.

According to the Trustees' 1997 intermediate estimate, the trust fund expects to collect roughly $30 billion more in cash than is needed to pay benefits each year from 1998 until 2008 and continue to receive some excess cash until 2012. In addition, the interest credited on the trust fund's special Treasury securities was roughly $40 billion in 1997 Given that the Social Security trust fund's balance, beginning in 1997, was expected to exceed 150 percent of its annual expenses,[21] the trust fund theoretically could start investing in stocks in 1998. Under the Trustees' intermediate projections, the trust fund does not anticipate that it would need to tap its investment income and assets to pay current benefits for nearly 15 years.

We developed two scenarios to illustrate the trust fund's potential gain from stock investing. Under an aggressive scenario, the trust fund would invest both its future annual cash surplus and interest in the stock market, while maintaining a contingency reserve of special Treasury securities equal to at least 100 percent of the next year's expected expenditures. We also tested an alternative scenario under which only Social Security's cash surplus would be invested in stocks, and Social Security's cash deficit, beginning in 2012, would be financed from stock earnings and sales. At our request, the Social Security Administration's Office of the Chief Actuary simulated the potential effect on the trust fund of these two investment scenarios using the Trustees' 1997 intermediate assumptions. The simulations use the 7-percent real yield on stocks assumed by the Advisory

[20]This statement would also apply to other assets, such as corporate bonds, which could yield potentially higher returns than the current statutory policy of investing solely in Treasury securities

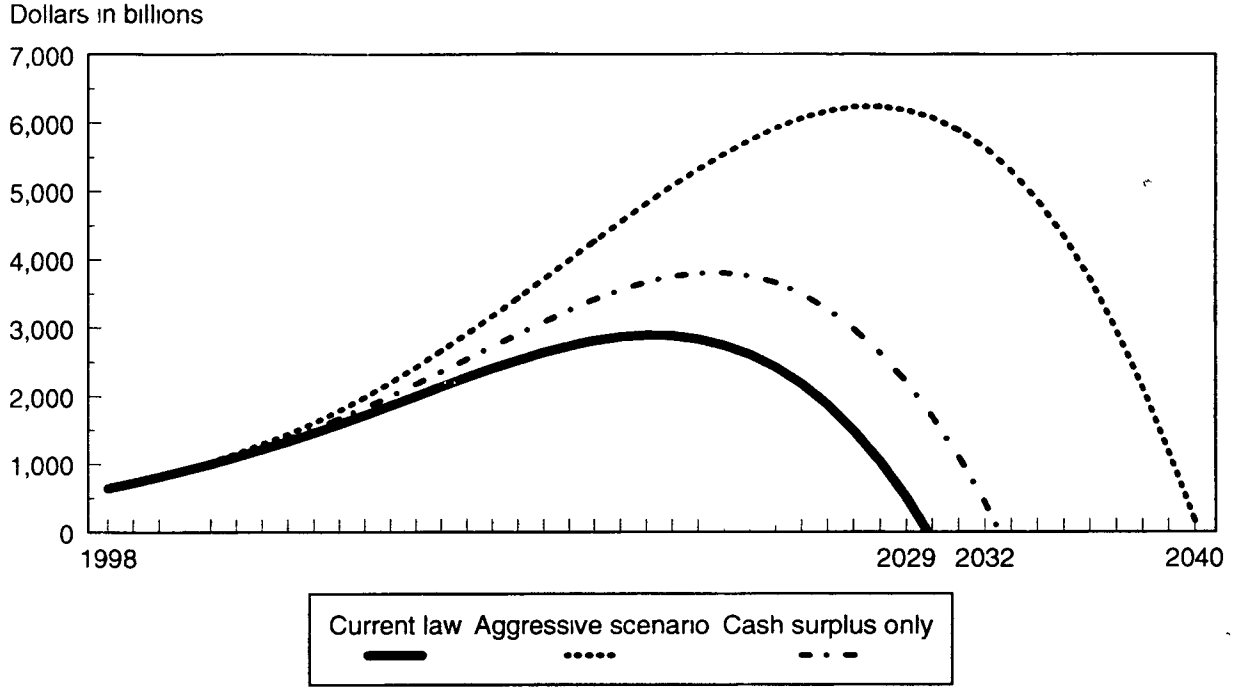
[21]As discussed in chapter 2, a balance of 100 to 150 percent of anticipated annual spending is considered a prudent contingency reserve

Council in estimating future stock performance. This historical average stock return is 4.3 percentage points higher than the trust fund expects on its special Treasury securities. In the simulations, stock earnings are assumed to be reinvested in the market unless the trust fund needs cash to pay benefits or to invest in Treasury securities to maintain a 100-percent contingency reserve The simulations also reflect the Advisory Council's assumption that annual administrative costs for the trust fund's stock holdings would be 0 5 basis points.[22] See appendix I for further discussion of our assumptions

Figure 3 2 shows the estimated trust fund assets under the aggressive investment scenario compared to the cash surplus scenario as well as to the current statutory policy of investing solely in special Treasury securities. These simulation results illustrate some outcomes associated with our two alternative stock investment policies. They should not be interpreted as forecasts and do not represent the full range of possible outcomes for the Social Security trust fund.

[22]A basis point is 1/100 of 1 percentage point, so one-half of a basis point is 0 00005

Figure 3.2: Estimated Trust Fund Assets Under Current Law and Two Alternative Stock Investment Scenarios



Note Assets at the beginning of year

Source Social Security Administration

Assuming the historical 7 percent real yield on stocks, investing both Social Security's future annual cash surplus and the interest on its Treasury securities in the stock market could delay the projected exhaustion of the trust fund for about a decade, from 2029 to 2040. This potential delay would extend the trust fund's life well into the baby boomers' retirement years.[23] However, this delay results from a scenario representing an outer bound of how much the trust fund might invest in the stock market. Under the aggressive scenario, the trust fund would hold only enough Treasury securities to cover its contingency needs and would amass a sizable stock portfolio. Within 5 years, the trust fund would have about $500 billion invested in the stock market. Stocks as a share of the

[23]In 2040, the oldest baby boomers would be 94 years old and the youngest would be 76 years old

trust fund's portfolio would peak in 2017 at more than 70 percent. While a 70 percent stock allocation is not necessarily unsound from an investment perspective, it would be a dramatic shift from investing solely in Treasury securities.

In nominal dollars, the trust fund's stock holdings under the aggressive scenario would peak in 2025 at about $4 trillion.[24] According to Social Security's Trustees, the ratio of trust fund assets at the beginning of a year to that year's expected expenses is a useful measure of the trust fund's asset level. At their peak, the trust fund's stock holdings would represent about twice Social Security's expected expenses in 2025.[25] By 2034, the trust fund's assets would drop to about 150 percent of expected annual expenses. At that time, the trust fund would still have more than $1.5 trillion—about one-third of its portfolio—in stocks. In 2036, the trust fund would liquidate all of its stocks, and its special Treasury securities would drop below a 100 percent contingency reserve level.

If only Social Security's cash surplus were invested, still assuming a 7 percent real rate of return, then the trust fund's projected exhaustion could be delayed by only 3 years, from 2029 to 2032. This scenario is somewhat more conservative, the trust fund would invest less than half as much as under the aggressive scenario. Within 5 years, the trust fund's stock investments would be about $200 billion. Stocks as a share of its portfolio would peak at about 35 percent, which is conservative in comparison to the 60 percent held by state and local government pension plans as a whole. The trust fund's stock holdings, in nominal dollars, would peak in 2017 at approximately $1.2 trillion, an amount roughly equivalent to that year's expected expenses. In 2024, the trust fund would liquidate all of its stocks, but its special Treasury securities would still represent more than 150 percent of the next year's expected expenses. In 2028, however, the trust fund's balance would drop below a 100 percent contingency reserve level.

Again, these estimates of the potential delay of the trust fund's exhaustion were based on a 7 percent average real return on stocks. The possible gain for the Social Security trust fund would be significantly less if future stock returns are lower than this historical average. As an illustration, if the future real return on stocks is 1 percentage point lower, the aggressive

[24]Nominal asset levels are not comparable over time due to inflation, economic growth, and growth in the Social Security program.

[25]Total assets, including special Treasury securities, would be approximately $6.1 trillion—about three times expected expenses in 2025.

scenario would extend the trust fund's life by not 11 years, but only 6 years to 2035. Again assuming the real return on stocks is 1 percentage point lower, the possible delay under the cash surplus scenario would not be 3 years, but only 2 years to 2031. These results demonstrate the sensitivity of the rate of return assumption and are not intended to represent the worst or the most likely outcomes for the trust fund.

Stock Investing Entails Greater Risk

Investing in the stock market involves a clear trade-off In exchange for the prospect of higher returns, the trust fund must accept greater risk. The trust fund would face greater uncertainty about its future returns and even the chance of losing money. Under the current policy, the trust fund receives a relatively low rate investing in Treasury securities but can readily liquidate its special Treasury holdings to pay benefits. In contrast, the trust fund would face uncertainty as to the amount or timing of future stock earnings and dividends. Moreover, just as the trust fund expects to liquidate its Treasury securities to pay benefits, it would have to sell its stocks to get cash to pay benefits. There is no certainty about what stock prices would be when the trust fund has to sell or whether it could recover amounts invested.

The primary risk that the trust fund would face is "market risk," or the possibility of financial loss caused by adverse market movements. When the stock market drops, prices of stocks—regardless of their individual quality—fall and can stay depressed for a prolonged period of time. Fluctuations in overall market rates of interest can affect the stock market, and rising interest rates tend to depress stock prices. Market risk does not disappear over time. Although a long investment time horizon provides more time to recover from short-term fluctuations, an investor also would have more time to encounter a prolonged stock market downturn.

Depending on the composition of its stock portfolio, the trust fund could also be exposed to "concentration risk," or the potential loss resulting from a heavy investment in a group of related companies or an industry susceptible to the same economic dynamics. Like any investor, the trust fund would face "default risk," or the exposure to loss due to an individual company failing.

Diversification Reduces Default and Concentration Risk

According to portfolio theory, diversification reduces risk. Diversifying a stock portfolio across companies and industries reduces both default and concentration risk. Diversification also reduces the risk that the portfolio's

return will vary widely from the expected market return. Indexing, discussed in more detail in chapter 4, is one way to broadly diversify a stock portfolio and to match the approximate market return. Under the Advisory Council's Maintain Benefits approach, the trust fund would invest in stocks indexed to the broad stock market.

A diversified stock portfolio, however, does not protect against the risk of a general stock market downturn. An investor can shield against stock market risk by diversifying into other types of assets, such as corporate bonds. Also, one way to mitigate U.S. stock market risk is to diversify into international markets. To minimize exposure to short-term stock market fluctuations, an investor can hold less risky, albeit lower-yielding, assets to cover liquidity needs in the short run.

Social Security Trust Fund Would Be Vulnerable to Stock Market Risk

Higher stock returns could delay the trust fund's exhaustion, but, without other program changes, the trust fund inevitably will have to liquidate its stocks to pay benefits. Social Security's tax revenues are projected to be inadequate to cover annual benefits beginning in 2012. To pay benefits after that point, the trust fund will have to draw upon its investment earnings and eventually its assets to cover the shortfall. Riding out a general stock market downturn could be difficult for the Social Security trust fund as it faces a cash deficit and growing numbers of retirees. The trust fund might have to sell its stock holdings at a loss to raise cash to pay benefits. The more the trust fund is counting on stock sales to finance current benefits, the greater its vulnerability in the event of a general stock market downturn.

Conceivably, the trust fund could draw on its contingency reserve to avoid selling its stocks at a loss during a general market downturn. Once the trust fund depletes its special Treasury holdings though, it would be wholly subject to the vagaries of the stock market to get cash needed to pay benefits. Under such circumstances, a contingency reserve of 100 or even 150 percent of expected annual expenses may be inadequate for the trust fund to ride out a prolonged market downturn.

Again, if stock investing is implemented in isolation from other program changes, the trust fund would have to liquidate a sizable stock portfolio. The size of the trust fund's stock holdings as a share of the stock market and possible price effects are discussed further in chapter 4. In the simulations, the liquidation of the trust fund's stock portfolio would coincide with the baby boomers' retirement. A sustained stock market

downturn during this period not only would decrease the value of the trust fund's stock holdings but would affect retirees' personal savings as well.

A General Stock Market Downturn Could Coincide With a Social Security Tax Shortfall

The degree of risk facing the Social Security trust fund under a stock investment policy would depend, in part, on the relationship between stock returns and the trust fund's predominant revenue source—payroll taxes. Like stock returns, payroll tax revenues fluctuate with changes in overall economic conditions. If stock returns tend to be high when payroll tax revenues drop, the trust fund theoretically could reduce its overall risk by diversifying into stocks. If, however, stock returns move in tandem with payroll tax revenues and tend to fall during recessionary periods, the trust fund would face greater risk investing in stocks. A general stock market downturn coinciding with a payroll tax shortfall would exacerbate Social Security's need for cash to pay benefits. One economic study, done from the perspective of the government as a whole, concluded that stock returns and tax revenues are positively correlated.[26] The Advisory Council's technical panel reported in September 1995 that further research on the relationship between stock returns and payroll tax revenues is critical in evaluating whether stock investing is appropriate for the Social Security trust fund.

Who Bears the Investment Risk of the Social Security Trust Fund?

The Social Security trust fund could expect to earn a higher return by diversifying into stocks, but it is reasonable to anticipate that its return could be lower than the long-term average market return.[27] As our simulations illustrate, as long as its return on stocks is greater than the expected return on special Treasury securities, the trust fund would be able to pay benefits longer than is possible under the current investment policy. If, however, the real return on stocks over the next 20 or 30 years averages less than the expected return on Treasury securities or is negative, the trust fund would be exhausted sooner than in 2029, exacerbating Social Security's long-term financial imbalance.

The increased risks associated with the Social Security trust fund's stock investments would be borne collectively through the government and ultimately by taxpayers. According to recent research, the increased risk

[26]Henning Bohn, "Tax Smoothing with Financial Instruments," The American Economic Review, Vol 80, No 5 (December 1990), pp 1217-1230

[27]This discussion focuses on the real possibility that the trust fund would earn less than the 7 percent real return assumed by the Advisory Council and used in our simulations Alternatively, it is theoretically possible that the trust fund could earn more