

Social Security

Social Security

- Social Security (exclusive of Medicare) is comprised of three major benefit programs.
 - Retirement
 - Disability
 - Survivorship

Social Security

SideBar Discussion: Retirement Plans

- Defined Benefit
- Defined Contribution
- Pay-As-You-Go

Social Security

Actuarial Considerations and Projections

- All defined benefits plans and even some extent to defined contribution plans must accumulate enough assets that generate enough income to satisfy promised retirement benefits.

Retirement Plans

Defined Benefit Plans

- Benefit is defined as years of service and salary.
- Firm (also known as the plan sponsor) contributes money aside into a plan or fund (a type of trust fund) based on actuarial projections.

Retirement Plans

Defined Benefit Plans

- Payments are made out of the fund to beneficiaries.
- Funds of plan are invested and earn income which is deposited into the plan's fund.

Retirement Plans

Defined Benefit Plans

- If investments do not yield projected investment income, then firm is liable to plan to fund deficiency. This is called investment risk.
- If beneficiaries live longer than expected, then firm must contribute additional funds to cover the deficiency. This is called longevity risk.

Retirement Plans

Defined Benefit Plans: Fully Funded

- When a plan is fully funded, then it has enough in its reserves to fully satisfy current obligations.
- Therefore, if the firm sponsoring the plan were to go bankrupt, then the plan has enough assets earning enough income to pay out benefits as promised.

Retirement Plans

Defined Contribution Plans

- Participants deposit a predefined monthly amount into an investment account, usually managed by a mutual fund.
- The beneficiary relies on these assets to fund retirement. Good (poor) investment performance increases (decreases) retirement income.

Retirement Plans

Defined Contribution Plans

- Participant has the investment risk and longevity risk.
- Very often, upon retirement the accumulated fund buys an annuity to eliminate investment and longevity risk into retirement.
- Participant pays investment management fees.

Retirement Plans

Pay-as-you-go

- A true pay-as-you-go system pays all receipts out to current retirees.
- There is no balance accumulated.
- Benefits vary as receipts vary.

Social Security

How Social Security Works

- Social Security retirement is a defined benefit plan.
- Benefits are based on the number of quarters employed and on the income earned.
- Benefits are paid on a sliding scale and are capped.

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How Social Security Works

- Lower income earns a higher benefit per dollar contributed but higher income workers earn higher aggregate benefits.
- Benefits and benefit caps are increased each year at the rate of inflation as measured by a wage index.

Social Security

How Social Security Works

- Contributions are deposited into a Trust Fund.
- Benefits are paid out of this Trust Fund.
- Excess cash in the Trust Fund is invested in US Treasury Securities (per law).
- Interest earned on these securities is deposited into the Trust Fund.

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How Social Security Works

- During retirement, which begins at age 67, benefits are paid over the life of the retiree.
- A surviving spouse may also be eligible for benefits.
- There is an early retirement option, age 62, but the monthly benefit is reduced.
- There is also an option to delay retirement in which case the monthly benefit is increased.

Social Security

- It is important to note that benefits are not affected by the investment performance of the Trust Fund. Social Security has the investment risk.
- Investment risk is minimized by investing in US Treasury securities. The gov't can print money to redeem their bonds.
- The US Federal Government and the people of the United States are the sponsors of the plan.

Social Security

- If the federal gov't is unable to redeem the bonds, retirement will be the least of anyone's worries!

Social Security

- It is equally important to note that Social Security accepts the longevity risk. Regardless, of how long the retiree lives, the monthly benefit will be paid from Social Security.

Social Security

Why Social Security is NOT a pay-as-you-go!

- Social Security benefits do not depend directly on current receipts. They are defined by a formula.
- Social Security currently receives more than it pays out. Social Security has accumulated a \$2 Trillion dollar reserve that is expected to grow to \$5 Trillion.

Social Security

OASDI Trust Fund	2005
Beginning Balance	\$1,687
+Contributions	607
+Interest	95
-Payments	530
Ending Balance	\$1,859

Social Security The Future

Future of Social Security

How Projections Work

- Projections are based on assumptions such as longevity, salary, work history, investment returns, inflation, etc.
- Three separate projections are made for low cost (optimistic), medium cost (most likely), and high cost (pessimistic).

Social Security

How Projections Work

- The high cost and middle cost estimates both project that the Trust Fund will be exhausted between 2038 and 2041. A very narrow band.
- The low cost projects exhaustion far into the future...2075?

Future of Social Security

How Projections Work

- Two key dates are mentioned most often; the date when payments exceed contributions plus interest, and when the Trust Fund is exhausted.
- The typical scenario is that increasing numbers of retirees causes payments to increase and a declining work force cause contributions to decrease.
- The Trust Fund balance should increase at a decreasing rate and then start decreasing.

Future of Social Security

How Projections Work

- This assumes that retirees are not contributing enough during their working life to fund their retirement.
- Yet simple math would suggest that putting aside 12% of your salary should accumulate enough funds to finance retirement.

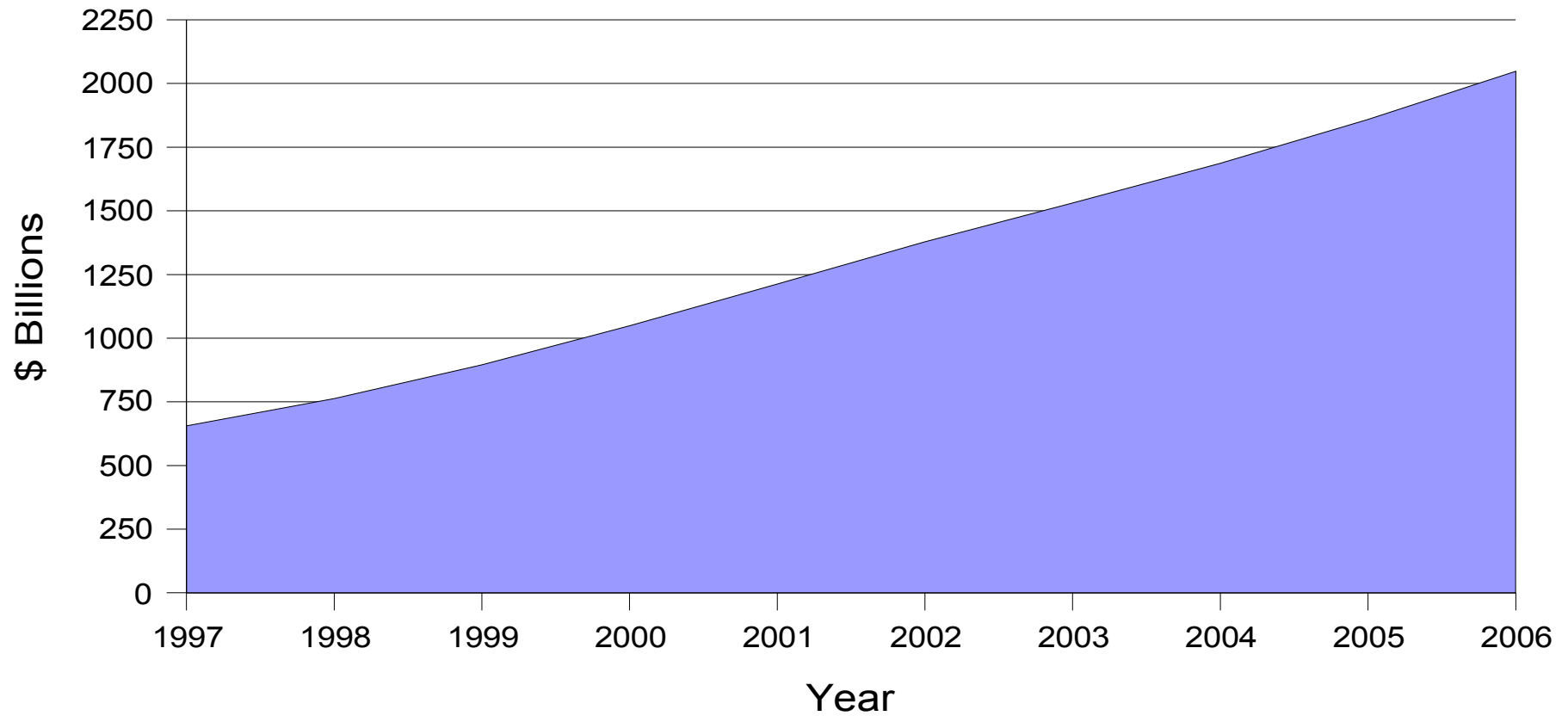
Future of Social Security

How Projections Work

- The problem may arise because the change to 12% did not occur until the 1980's. So it takes time to catch up to a fully funded balance over the generations.

Social Security

Trust Fund Balance



Future of Social Security

What about other projections?

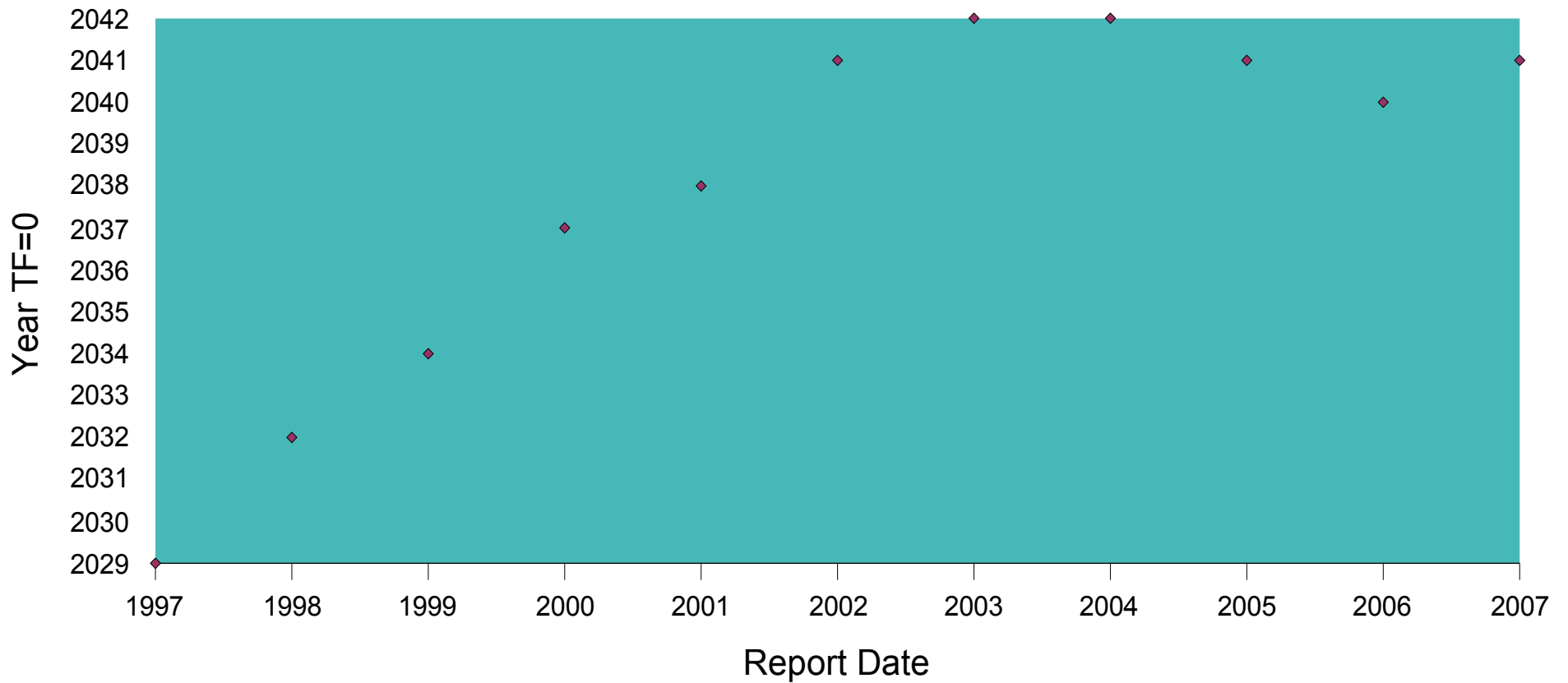
- The Congressional Budget Office (CBO) projects that the Trust Fund exhaustion will not occur until 2055. Interestingly enough, they base their conclusions on the same data as Social Security.
- Both the CBO and SSA assume a low rate of economic growth, about 1.5%, which is considerably less than the historical average of 3%.

Future of Social Security

- Consequently, it is no surprise that projections are frequently revised upward.
- The trend of upward revision was stalled during the Bush Administration but is now continuing again in view of large accumulating surpluses.
- If Baby Boomers delay retirement as now seems to be happening, the Fund will grow faster to larger balances.

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Progression of 'Fail Dates'



Future of Social Security

What happens if/when the Trust Fund becomes exhausted?

- Benefits are reduced by 20% to 30% over time.
- Since Social Security was never designed to provide 100% of retirement needs, only 30%, the actual reduction in retirement income, given 70% is privately funded, that would be a 5% net reduction in retirement income.

Future of Social Security

However.....

- Because Social Security benefits are indexed to inflation, they increase.
- In fact, because they are indexed to wages rather than prices, they increase about 1% per year faster than the general cost of living.
- This means future retirees are enjoying a real increase in purchasing power of their benefits.

Future of Social Security

That means.....

- Even a 20% or even 30% cut in benefits 40 years from now would still be equivalent to today's benefits in purchasing power.
- It's not so bad!!!!

Social Security/Retirement

Why is/was Social Security Necessary?

- Very few, if any, saved for retirement.
- Many who have saved for retirement, lose it quickly.
- Firms were not going to help employees. Many pension plans have gone bankrupt.
- The situation has not changed substantially despite financial education and very strong tax incentives.

Social Security/Retirement

Everyone is Living Longer

- ALL retirement plans face the problem of providing income for longer periods of retirement, regardless of whether they are private or public.
- No one can fund 30 years of retirement on 30 years of working.
- Eventually, Social Security and the nation will be forced to raise the retirement age.

Social Security Appendix

What happens to the Baby Boomers?

- The last Baby Boomer retires around 2030.
- Gen X starts 2027.
- About 2040 the majority of retirees will be Gen X.
- Around 2050 the last of the Baby Boomers, “pops”.
- Gen Y starts retirement about 2043.

The End