Social Security

$PV_{Obligations} > PV_{Assets}$

The Situation

- In the 1930's we established Old Age and Survivor's Insurance.
  - Individuals would contribute a percentage of their salary (up to a maximum salary)
  - Businesses would match
  - When a person reached age 65, they would receive a pension based on their contribution.

Changes

- The tax rate has gone up as has the maximum level of income subject to the OASI tax.
  - So too have benefits
- Other Changes
  - People can draw benefits as early as age 62
  - The age of eligibility for the "full" pension is slowly increasing to age 67
  - The tax on earnings for retirees has been reduced.

The Pension

- The formula for computing benefits is complex.
- John Smith has earned the median income every year he has worked (admittedly median income is a moving target). His pension will be about 40% of the median income when he retires

The Pension

- The formula for computing benefits is complex.

Bill Jones has earned 110% of the median income; his pension will be approximately 41.5% of median income

d the median income
rked (admittedly
noving target). His
40% of the median
es

The Pension

- The formula for co
complex.

Sam Brown has earned 90%; his pension will be 38.5% of the median income

Bill Jones has earned 110% of th median income; hi pension will be approximately 41.5% of median income

40% of the median
es

The Joys of Matrimony

- John and Sally Smith are married: same birthday. They have worked all their lives and each made the median income. Each will get a pension equal to 40% of the median income, for a combined pension of 80% of the median income.

The Joys of Matrimony

- John and Sally Smith are married: same birthday. They have worked all their lives edian income. Each ual to 40% of the combined pension of come.

Bill and Helen Jones are married; same birthday. Helen never worked. Their combined pension will be 60% of median income

The Joys of Matrimony

- John and Sally Smith birthday. They have come.

Bill and Helen Jones are married; same birthday. Helen never worked. Their combined pension will be 60% of median income

Note that the Smiths paid twice as much in OASI taxes and only get ⅓ more in pension.

The Social Security Trust Fund

- The government collects social security taxes (now ~ $400B a year), pays them into a trust fund and pays benefits out of the trust fund.
- Currently benefits are a lot less (~$60B a year).

The Trust Fund in the Future

- Because the population is aging, benefits are projected to exceed OASI receipts around 2017.
- The official forecasts are that, in 2037, the Social Security Trust Fund will run out of money.

The Trust Fund in the Future

- Because the population is aging, benefits are projected to exceed OASI receipts
- are that, in 2037, the Fund will run out of

Many people argue this means Social Security will be bankrupt in 2037.

The Trust Fund in the Future

- Because the population is aging, benefits are projected to exceed OASI receipts

These are point estimates after all, but there is a date in the future when the social security trust fund will be empty.

are that, in 2037, the Fund will run out of

The Trust Fund in the Future

- Because the p fits are projected

These are p estimates afte but there is a c the future whe social security trust fund will be empty.

Note that in 2037, according to the official estimates, taxes will equal about 73% of promised benefits .

, the it of

Your Benefits

- Many people confuse social security with a well-run pension fund.
- Two types of well-run pension funds:
  - Defined contribution
  - Defined benefit

Defined Contribution

- Every year, employees and/or employers contribute to a trust fund, run much like a giant mutual fund.
- When the employee retires, he can use the present value of the contributions made on his behalf to purchase an annuity.

Defined Contribution

The amount of the annuity depends on just how much was contributed and the earnings of the pension fund

- es and/or employers und, run much like a
- etires, he can use the ontributions made on e an annuity.

Defined Contribution

The amount of the annuity depends on just how much was contributed and the earnings of the pension fund

If the fund is invested in common stocks, the employee bears the risk of how well the market has done

- es and/or employers
- e n

Defined Contribution

- The amount of the es and/or employers
  annuity und is
  on just ted in
  was co stocks, e
- and the ployee n
  of the e risk of
  f ell the
  market has done

Examples:

TIAA/CREF

Teacher's Insurance Annuity Corporation/College Retirement Equities Fund

401k Plans

Defined Benefit

- Each year employees and/or employers contribute to a trust fund.
- An employee is promised a defined benefit when she retires, with the benefit a function of years worked and salary earned.

Defined Benefit

- Each year employees and/or employers contribute to a trust fund.
- An employee is promised a defined benefit when she retires, with the benefit a function of years worked and salary earned.

(2.2%)(Years Employed) (FAS)

Defined Benefit

- Actuaries compute the obligations of the pension fund; if $PV_{Obligations} > PV_{Assets}$ the employer is required to make extra contributions nd/or employers
  d.
- ed a defined benefit
  he benefit a function
  lary earned.

ployed) (FAS)

Defined Benefit

- Actuaries co the obligatio
- the pension f $PV_{Obligations}$ >P Assets the employer is required to make extra contributions

Examples: STRS and most traditional union pension plans

efit
he benefit a function
lary earned.

ployed) (FAS)

Defined Benefit

- Actuaries co the obligatio
- the pension f $PV_{Obligations}$ >P the employe required to n extra contributions

Examples: STRS and most traditional

Hence, the employer bears the risks

efit
ction

ployed) (FAS)

The Economics of Social Security

- Examined as an investment, Social Security is a bad idea. For a young person

$$PV_{Future\ Benefits} < PV_{Future\ Taxes}$$

- The magic age is somewhere in the late 40's

The Economics of Social Security

- Examined as an investment, Social Security ... young person

$$... < PV_{Future\ Taxes}$$

... omewhere in the late

As a consequence, most young people are cynical about OASI.

The Economics of Social Security

- Examined as an invest... yo...

As a consequence, most young people are cynical about OASI.

The other side of the coin is that older people are quite focused on maintaining the current system

The Economics of Social Security

The consequence is that Social Security is sometimes called the third rail of American Politics

The other side of the coin is that older people are quite focused on maintaining the current system

The Economics of Social Security

The consequen... that Soci... Security is sometimes called the third rail of American Politics

Any politician who touches it, dies.

...ide ... is ... people are quite focused on maintaining the current system

The Privatization Option

- The general idea:
  - No government funded Social Security System
  - Individuals (and perhaps their employers) would be required to contribute to a government-approved retirement plan

The Privatization Option

- The general idea:
  - No government funded Social Security System
  - Individuals (and perhaps their employers) would be required to contribute to a government-approved retirement plan
- Examples
  - Chile
  - United Kingdom

The Problem

- Suppose (to take an extreme position), the government allowed people to walk away from the social security system. No more taxes, no benefits.

The Problem

- You would be required to contribute the amount you pay in Social Security Taxes to an approved retirement plan.
- Your employer would be required to contribute the amount it currently pays to your retirement plan.

The Problem

- You would be required to contribute the amount you pay in Social Security Taxes to ... to ... pays to your retirement plan.

It would be in the interest of almost everyone under 45 to do so.

Drawback

- What about current recipients?
- What about persons close to retirement, who would not walk away?
- There simply isn't enough money to pay their benefits.

The Real Problem

- Most States use Funds Accounting

The Real Problem

- Most States use Funds Accounting
- Ohio has
  - A general fund
  - A highway fund
  - And hundreds of others

The Federal Unified Budget

- Beginning in the 1960's the United States began to use something called the Unified Budget.
  - The general fund
  - The highway trust fund
  - Airport trust fund
  - Social Security trust fund

The Federal Unified Budget

- Beginning in the 1960's the United States began to use something called the Unified

Without the Social Security Trust fund the reported deficit would be significantly greater

  - Airport trust fund
  - Social Security trust fund

The Federal Unified Budget

- Beginning in the 1960's the United States began to use something called the Unified

Without the Social Security Trust fund t… would be si…

If we phased out the Social Security Trust Fund and paid obligations out of general revenues, our budget deficit would soar.

End