



AMERICAN ACADEMY *of* ACTUARIES

Comparing the benefits you will get from your federal DB and DC plans

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What I hope to cover

- Describe DB and DC in terms of your plans
 - CSRS
 - FERS & TSP & SS
 - Comment where different than Private Sector
- Show benefit for sample employee
 - At retirement (age 57)
 - At disablement (age 40)

CSRS

- Defined Benefit =

High 3 x (2% x service – 3.75%)

Or subtract 2 yrs of service

- High 3 average pay (consecutive years)
- Maximum = 80% of High 3
 - Reached at 41 years and 11 months
 - Unused sick leave (if any) can increase benefit over 80%

Generous especially if at 55 with COLA!

CSRS service

- Active Military service can be included
 - Can pay 7% contributions to avoid SS offset at 62
- To get 2.5% Congressional formula could be discriminatory in PS
 - Must have at least 5 years of Congressional service
 - Last 5 yrs before retirement must be covered service
 - Military service up to 5 years gets 2 ½ %

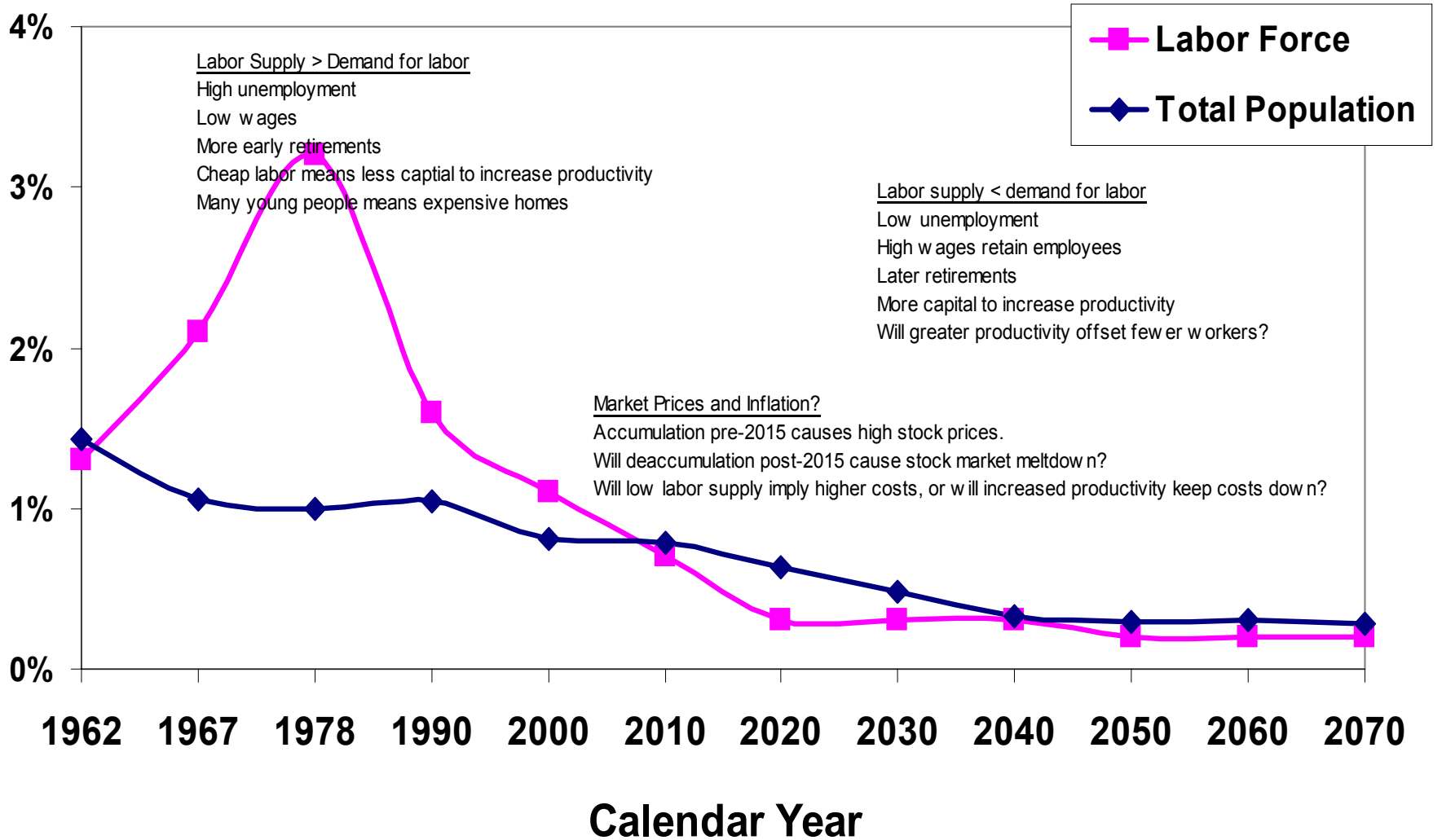
CSRS Annuities

- COLA = Full CPI, even before age 62 Generous: Private Sector may give ad hoc colas
- Reductions for spouse's benefit
 - 2 1/2 % on benefit up to \$3,600/year Generous to encourage spouse benefit?
Subsidizes low income benefits
 - 10% on rest of benefit (for which you desire survivor benefit)
 - Unless both spouses reduce/waive
- Benefit available to non-spouses too
 - But with larger reductions (based on age difference)
 - 10% if 5 years younger (or less)
 - 40% if 30 years younger (or more)
- Survivor gets 55% of unreduced benefit PS: 50% of reduced benefit
 - Benefit terminates if spouse remarries before age 55 Rare in Private Sector
- Benefit pops up on death of survivor Rare in Private Sector
- You can get your contributions back if have a life threatening medical condition
 - Your annuity is actuarially reduced

CSRS Retirement Ages

- Retirement Eligibility at:
 - Age 55 & 30 years *Large firms had this, but many dropping.*
 - Age 60 & 20 years
 - Age 62 & 5 years
- Involuntary Retirement at:
 - Age 50 & 20 years *Private Sector may give ad hoc early retirement windows*
 - Any age & 25 years
 - 2% reduction for each year before age 55
- *Special provisions for Law Enforcement, Firefighters, ATC*

Average Increases in Labor Force and Population



Unreduced early retirement benefits don't help anymore

Due to smaller increases in labor force, employers may encourage employees to retire later.

Source: 2001 SSA Trustees' Report, Tables V.A2 and V.B2

CSRS Ancillaries

- Disability benefit available after 5 years PS sooner
 - Retirement formula \hat{U} the smaller of :
 - Benefit at age 60
 - 40% of High 3
 - Used if hired before age 45
- Death benefit available after 18 months
 - Spouse gets 55% of benefit as if employee had retired
 - \hat{U} 55% x smaller of: benefit at age 60, or 40% of High 3
 - Terminates if remarried before age 55 Rare in Private Sector
 - Surviving children get annuities too

CSRS Vesting

- Vested after 5 years typical in Private Sector
 - Get benefit at age 62, or
 - Refund of employee contributions (**w/o** interest) illegal in PS
 - If notify spouse, and not barred by divorce court
 - You can redeposit (with interest) upon return
- Service < 5 years
 - Get contributions back with 3% interest IRC requires higher rate
 - No interest if service < 1 year
 - No interest after separation

FERS

- **Defined Benefit = 1 % x service x High 3**
 - Increased 10% at age 62 (if svc>20) illegal in PS Private Sector: many integrate with SS
 - High 3 average pay (continuous service)
 - Nothing from unused sick leave
- **Plus Social Security Supplement until age 62** (x svc/40)
 - SS benefit as if retired at age 62 Generally just in union plans
 - Using federal service only
 - Phased out for earnings > SS earnings test
 - \$10,680 in 2001
 - No COLA on SS supplement
- **Congressional employee service**
 - Contribute extra ½ % of pay
 - Formula = 1.7% of pay for first 20 years of Congressional svc

FERS Annuities

- Reductions for survivor benefit
 - 10% of benefit Generous if spouse is real young
 - Unless both spouses waive
 - Spouse gets 50% of unreduced benefit
 - Plus SS supplement until age 60
 - Or 25% continuation (for 5% reduction to your benefit)
 - Benefit available to non-spouses too
 - But with larger reductions (based on age difference)
 - Same reductions as CSRS for non-spouses
 - Benefits stop upon remarriage before age 55 Rare

FERS Annuities

- COLA = CPI – 1%, but only after age 62
 - Closer to ad hocs in large private sector plans
 - If CPI < 3%, then COLA = lesser of 2% and CPI
 - Disabled & Survivors get COLA before 62 also
 - Disability retirees getting 60% formula, don't get COLA in 1st year

FERS Retirement Ages

- Retirement Eligibility Ages
 - Voluntary & Involuntary same as CSRS, except
 - Minimum Retirement Age replaces age 55
 - MRA gradually increases from 55 (born before 1948) to
 - MRA = age 57 for people born after 1969
 - Also can retire at MRA & 10 years
 - Benefits reduced by 5% for each year before age 62
- 5% is typical in medium size plans

FERS Vesting

- Vested after 5 years
 - Benefit deferred to age 62 (or other dates from prior slide)
 - No Social Security Supplement
 - Or you can get refund of contributions
 - With interest if service $>$ 1 year
 - But you lose your service and can't get it back
- Contributions are:
 - 7% of pay less FICA tax
 - Equals 0.8% of pay

FERS Ancillaries

- If 18 months of civilian service
- Death: Spouse gets 50% of accrued benefit, if svc \$10
 - Plus death benefit = $\frac{1}{2}$ pay + lump sum (\$21K in '97)
 - Children get annuity too
- Disability Benefit (until recover or pay > 80% of former job)
 - 60% of High 3 minus SS disability benefit (year 1 only)
 - 40% of high 3 minus 60% of SS disability (until 62)
 - Or Accrued retirement benefit, if larger
 - At age 62, you get Retirement Benefit calculated as if worked to age 62 (High 3 increase by FERS colas)

TSP

- Thrift Savings Plan: Agency Contribution
 - 1% automatic (Congressional employees vested in 2 years)
 - **Generous** 100% match on your first 3% of pay (Vested immediately)
More common in private sector 401(k)s
 - 50% match on the next 2% of pay (Vested immediately)
 - 0% match thereafter
 - Maximum = 5% of pay (reached when you put in 5%)
- Your maximum pre-tax contribution = \$11,000 in 2002
Same in Private Sector
 - Not more than 11% of pay in 2001
 - Increases by 1% each year until 2006, when eliminated
 - Contributions and earnings not taxed until distributed

Same in Private Sector

TSP

- Employees eligible 60 days after hire to contribute
- Transfers from Qualified plans & conduit IRAs Some doing in Private Sector ok 7/01
- Loans available Common in private sector 401(k)s

TSP

Most of this page matches Private Sector

- Withdrawals available on separation
 - Lump sum
 - Life Annuity (with COLA = CPI + 3%, if desired)
 - \$100 buys \$8 annuity at 57
 - Indexed annuity reduces 1st check by 30%
 - \$100 buys \$9½ annuity at 65
 - Indexed annuity reduces 1st check by 25%
 - Period certain annuity
 - Must commence by April 1 of CY following 70 ½
 - Automatic if under \$3,500 (changing to \$200 next year)

Now \$5,000 in Private Sector

Sample Employee

- Single employee
- Age 27 at hire
- Age 57 at retirement
 - 30 years of work
 - Pay followed national wage growth + average federal pay increases
- Contributes 3% to TSP (& gets 4% from govt.)
- Chooses indexed annuity

Sample Employee

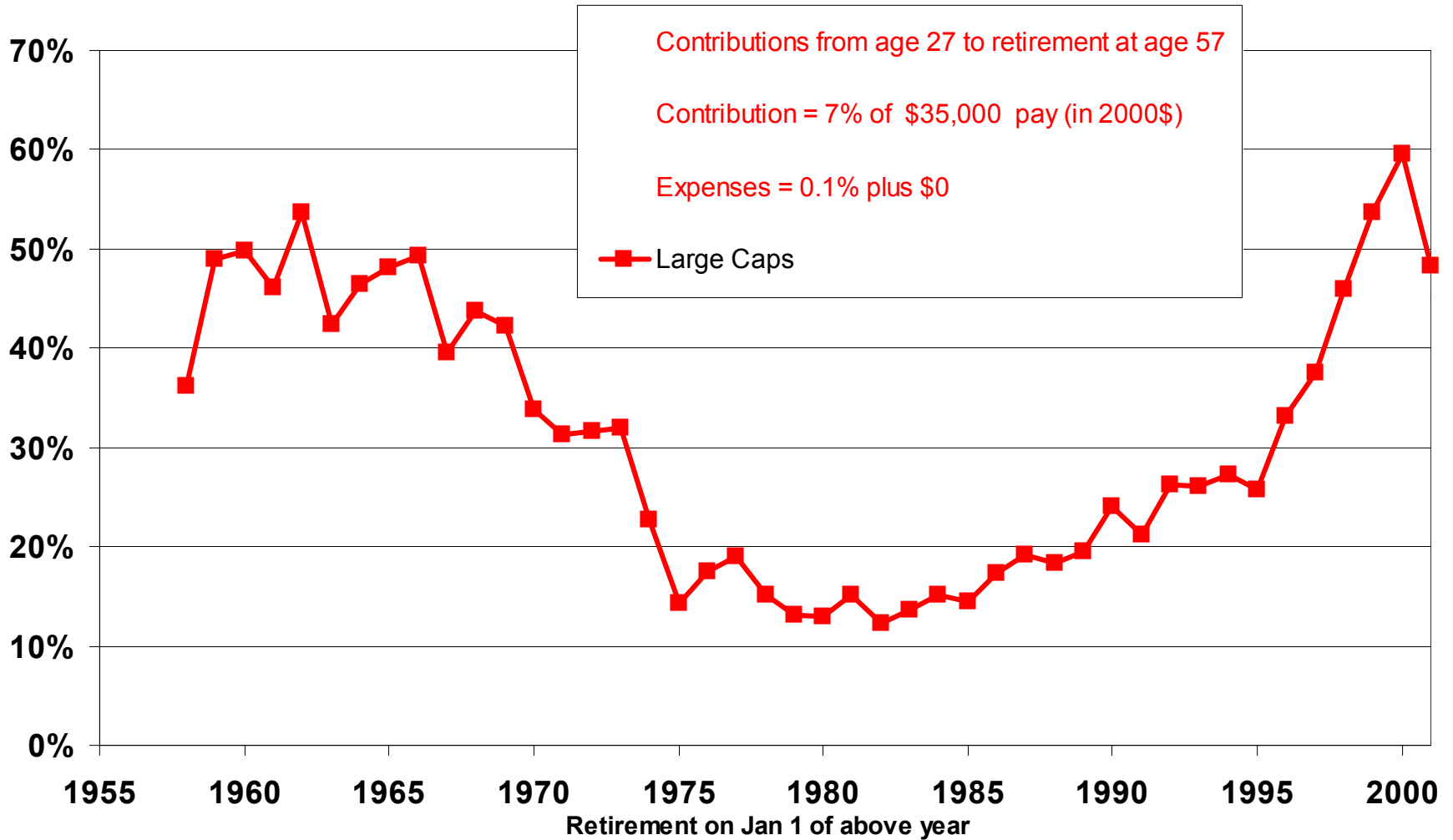
- CSRS annuity = 56.25% of High 3
 - $30 \times 2\% = 3.75\%$
 - Full CPI means purchasing power is same at age 95
- FERS annuity = 30% of High 3
 - $30 \times 1\%$
 - COLA = $\text{CPI} - 1\%$ (unless $\text{CPI} < 3\%$)
- TSP benefit can vary widely depending on markets
- Social Security benefit depends on pay history

Sample Employee @ age 57

Retirement Benefit	Benefit as a % of High 3 pay with economy like the years	
	1952 - 1982	1970 - 2000
CSRS benefit	56%	56%
FERS benefit	30% <small>21%</small>	30% <small>21%</small>
TSP benefit	12% <small>11%</small>	60% <small>?</small>
Soc Sec Supplement	15%	15%
Total pre-62	57% <small>Need to work more years</small>	105% <small>You saved too much</small>
Purchasing power @ 95	47%	?

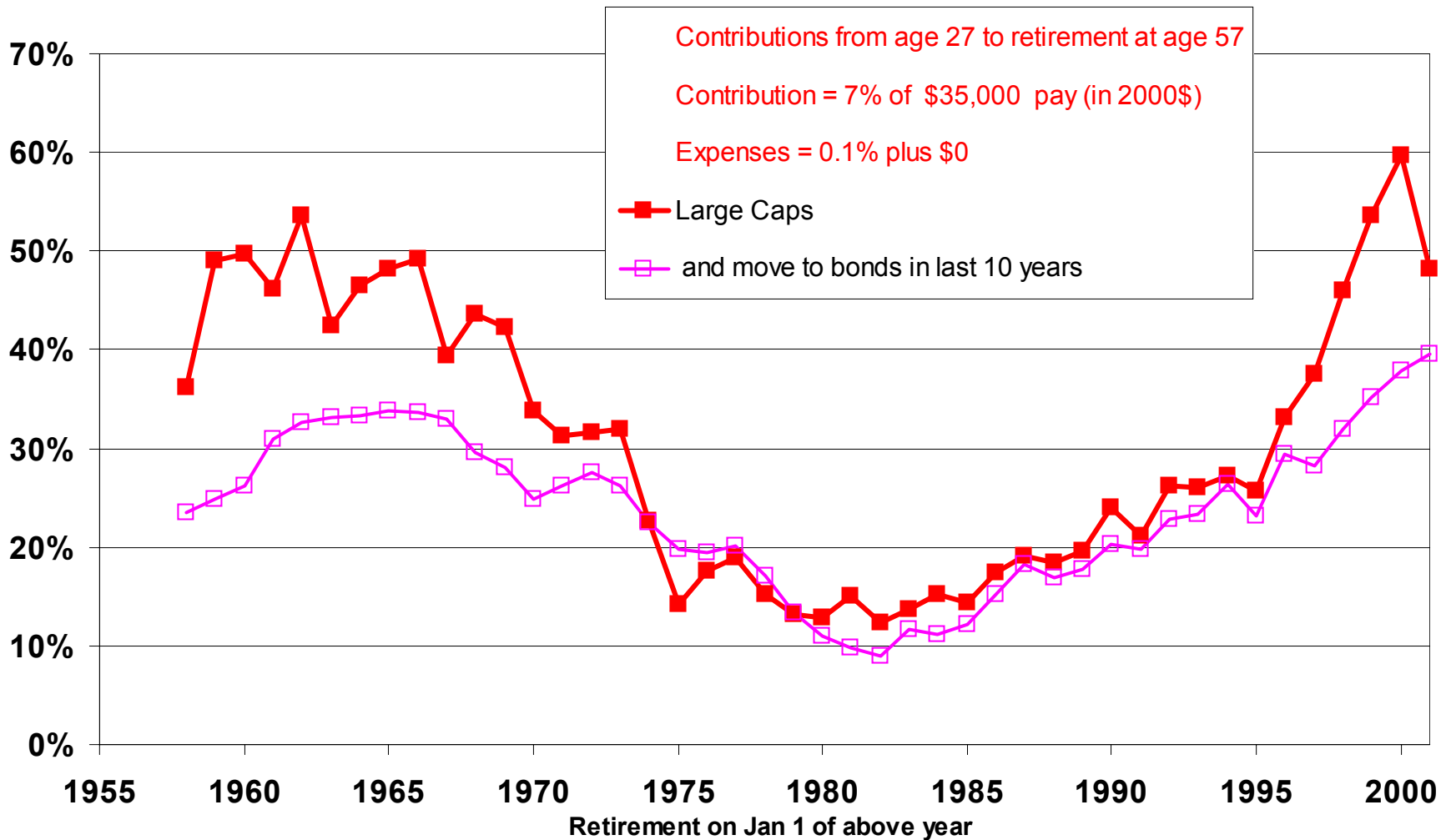
Can't compare FERS to CSRS. You had to contribute 3% of pay more than CSRS employee to get TSP benefit. Note wide variance in the TSP benefit (depending on economy at retirement). Purchasing power falls lots by age 95. Supplement depends on pay level and stops at age 62, or if you earn more than SS earnings limit.

**Chart I - Replacement Rates from Qualified Savings
(using Historical Yields from Ibbotsen)**



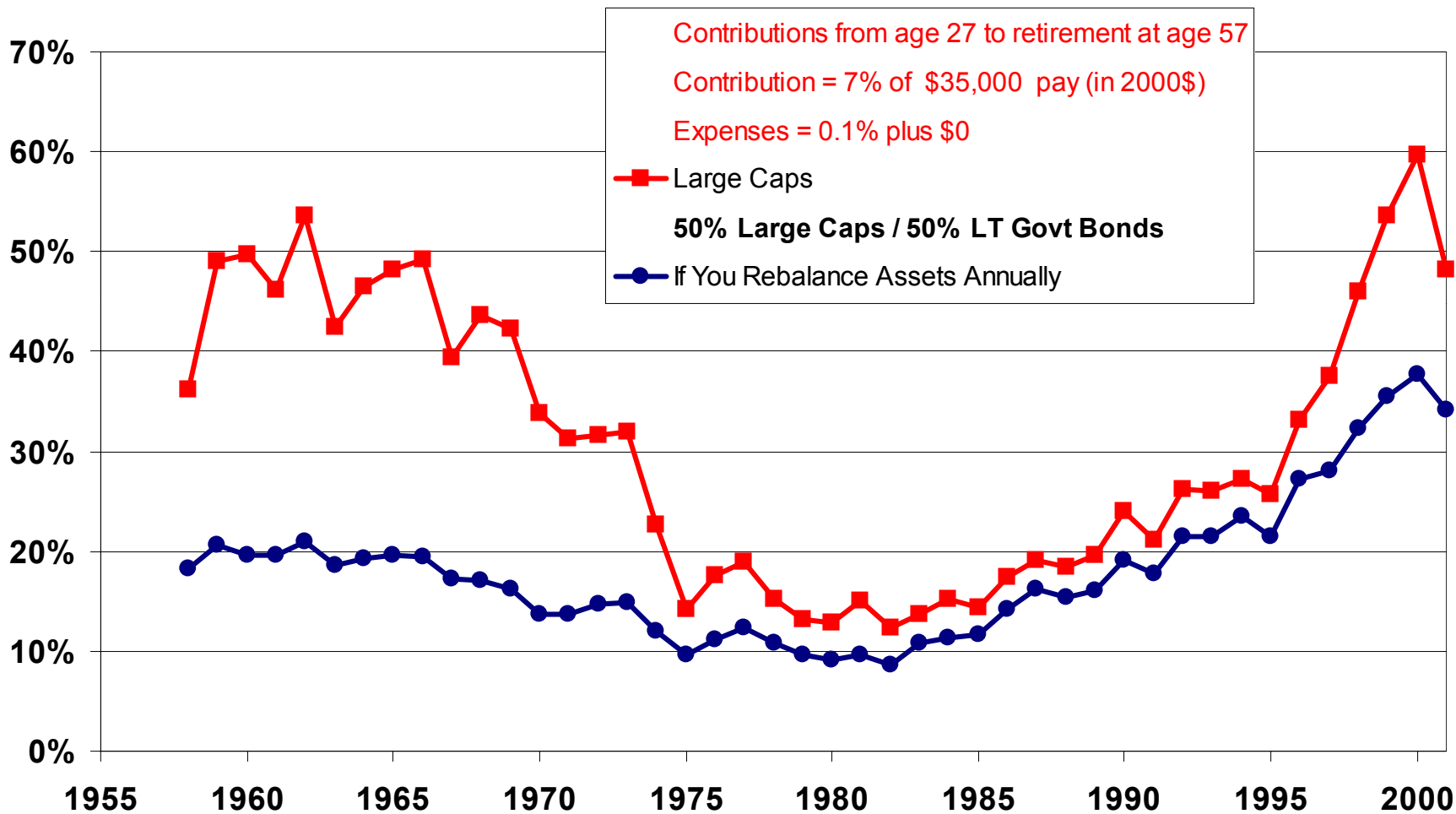
Note variability. Get 60% if retire in 2000 or 12% if retire in 1982

Chart II - Replacement Rates from Qualified Savings (using Historical Yields from Ibbotsen)



Why move to bonds in last 10 years? It varies less (4.3 versus 5.0), but it yields less 86% of the time.

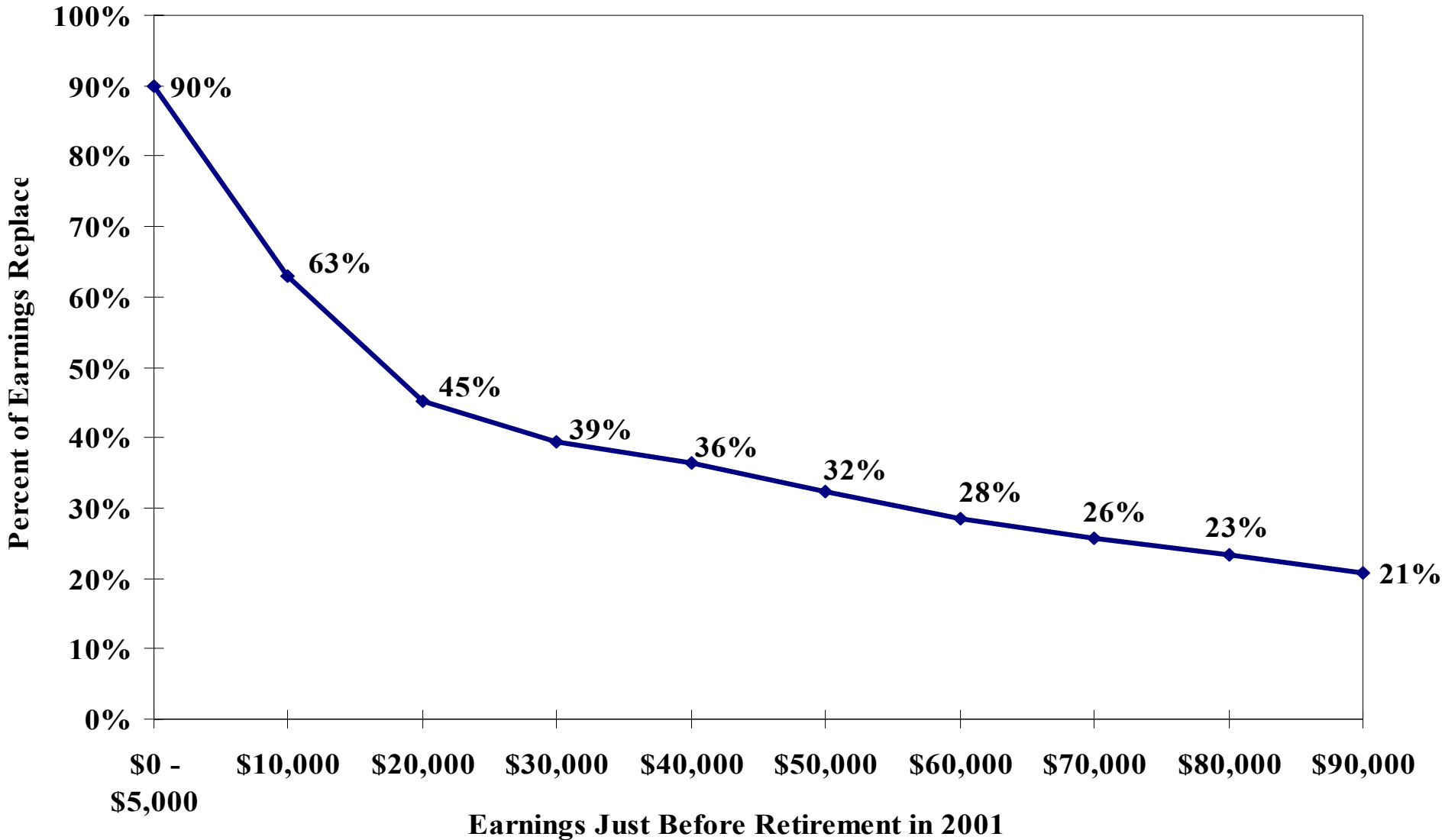
Chart III - Replacement Rates from Qualified Savings (using Historical Yields from Ibbotsen)



Retirement on Jan 1 of above year

Why diversify? It varies less (3.2x versus 4.1x), but always yields less too.

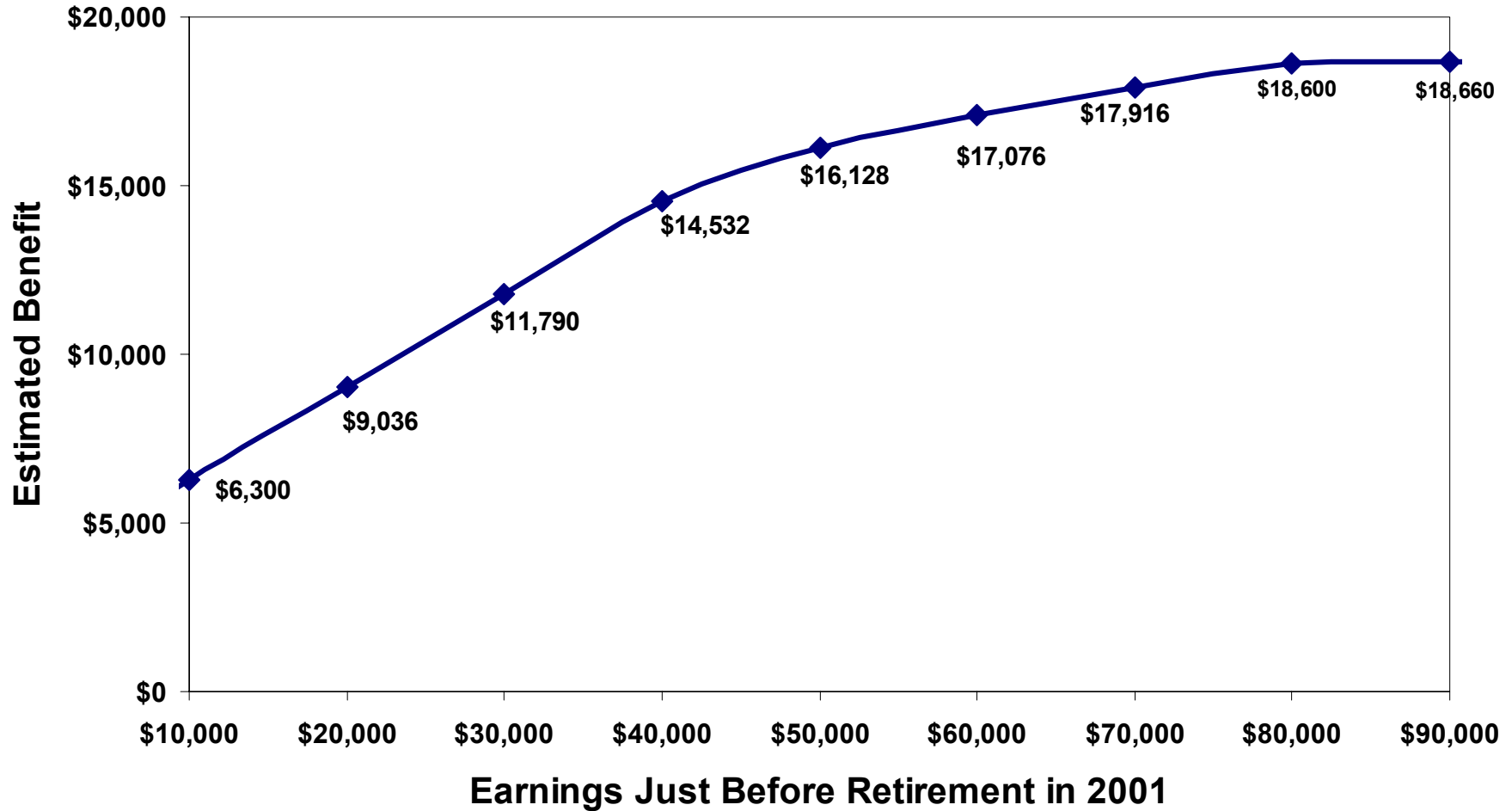
Social Security Replacement Ratios at Normal Retirement Age (and at Disability)



See History of Provisions at www.ssa.gov/OACT/HOP

Past wages based on National Average Wage Index

Social Security Benefits at Normal Retirement Age (and at Disability)



This and prior graph show the primary goals of Social Security:

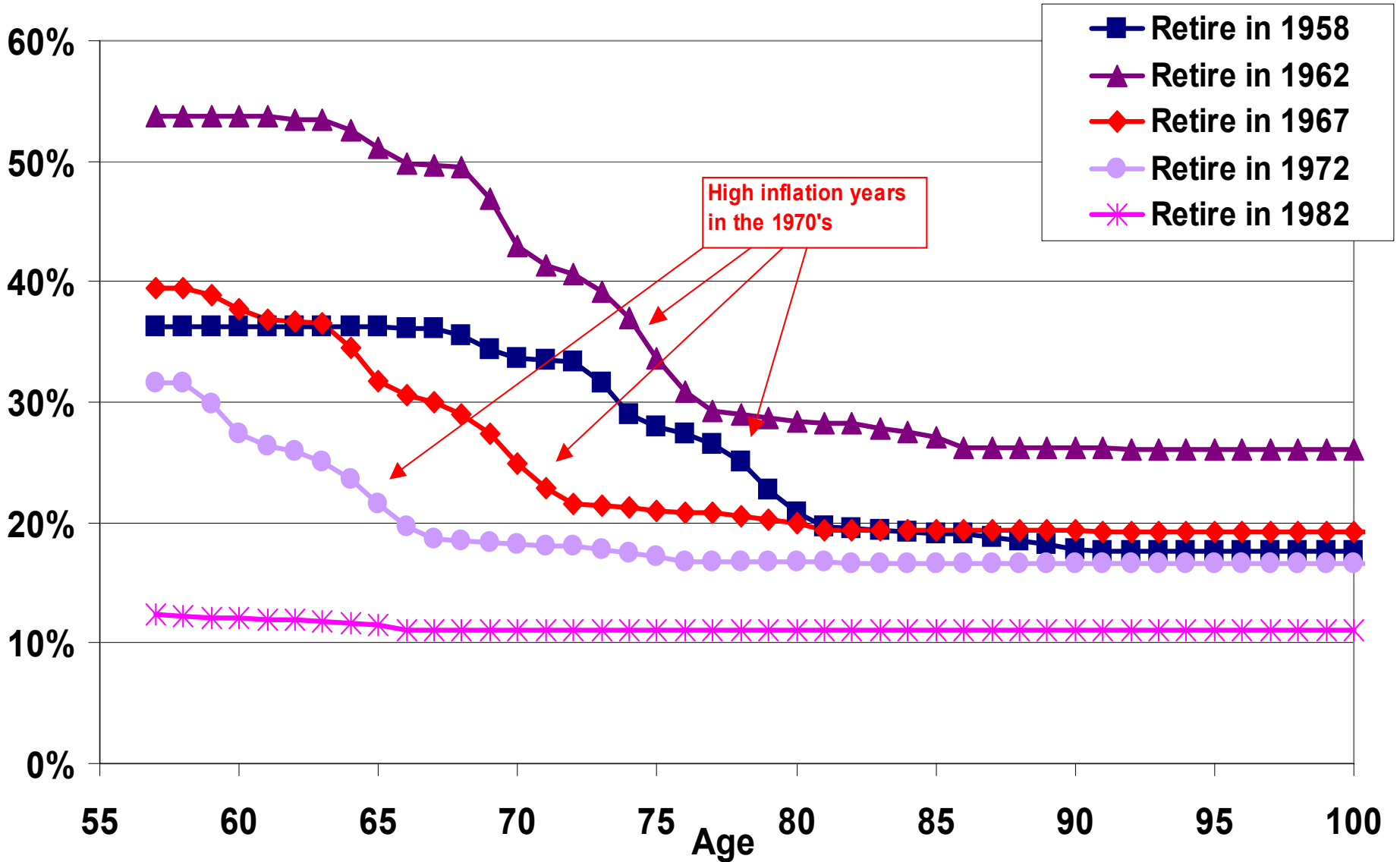
- (1) Socially Adequate benefits (important to lower wage earners)
- (2) Individually Equitable benefits (important to higher wage earners - the more contributed, the more received).

COLAs

CPI	FERS COLA	TSP COLA
-1%	-1% ?	0%
0%	0%	0%
1%	1%	1%
2%	2%	2%
3%	2%	3%
4%	3%	3%
5%	4%	3%
10%	9%	3%
15%	14%	3%

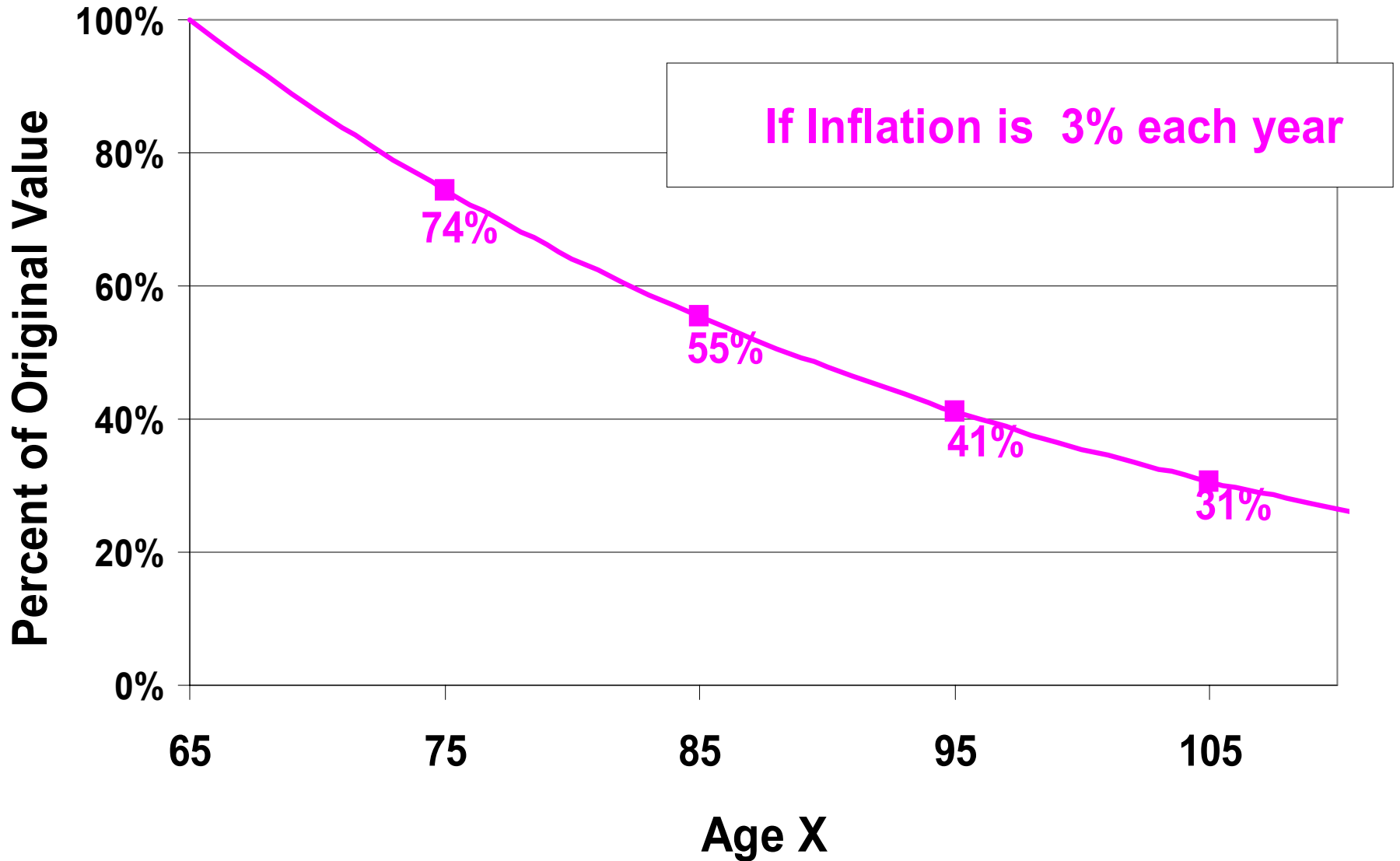
Replacement Rates in Retirement

Even with TSP 3% indexed annuity

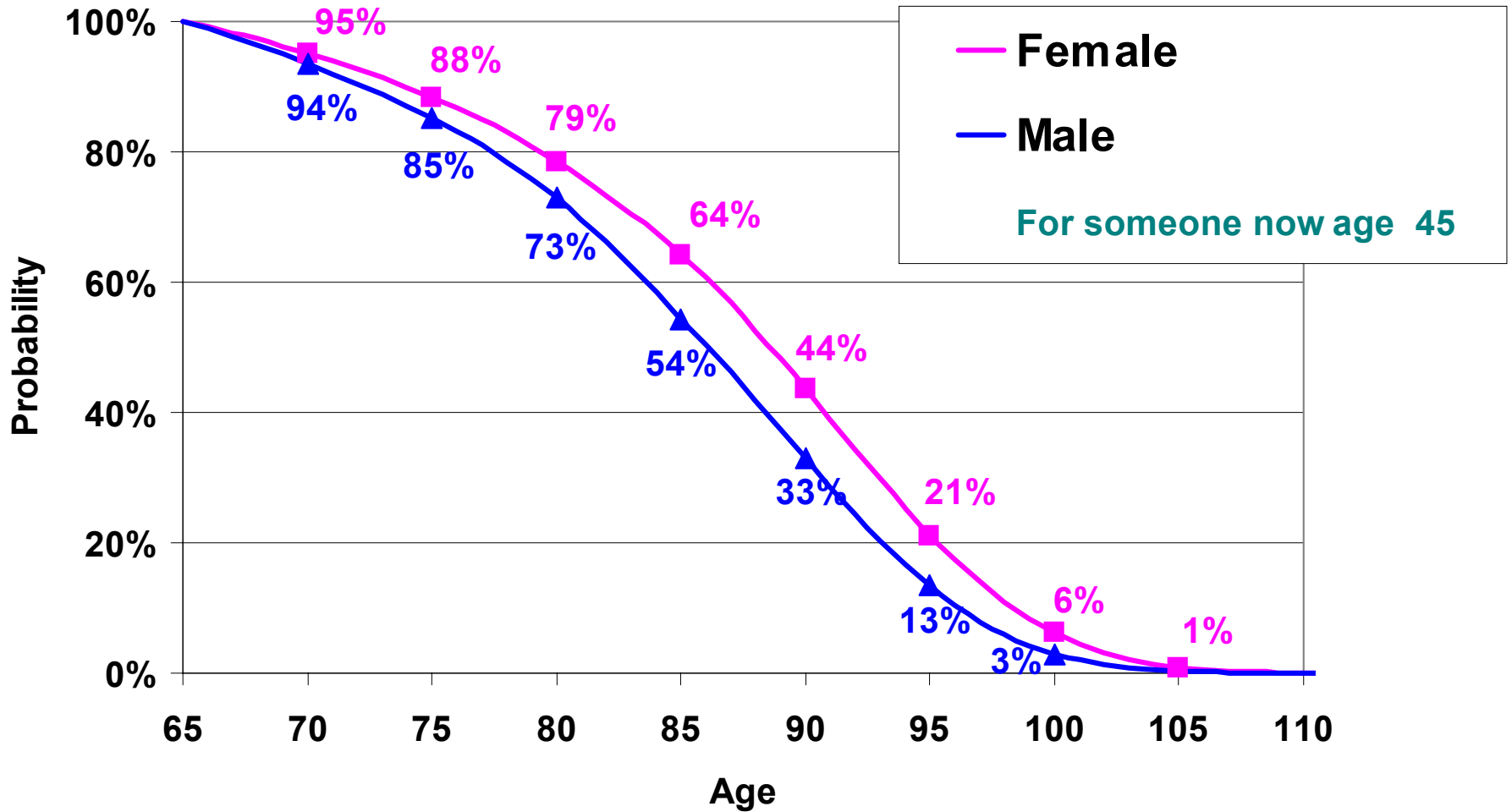


Even with TSP cola, one's purchasing power shrinks thru time.

Purchasing Power is reduced by Inflation

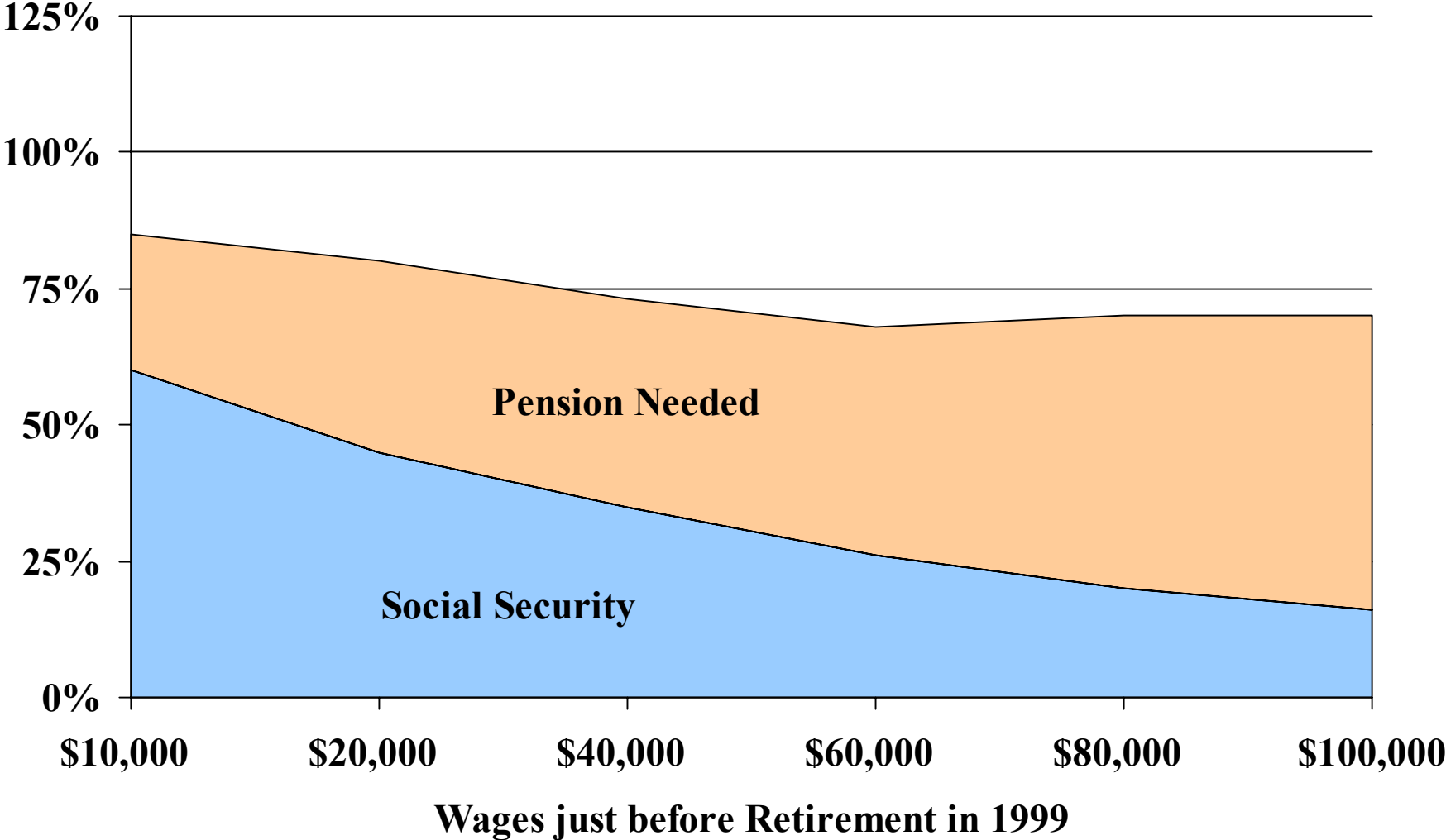


Probability of Living From Age 65 to Specified Age

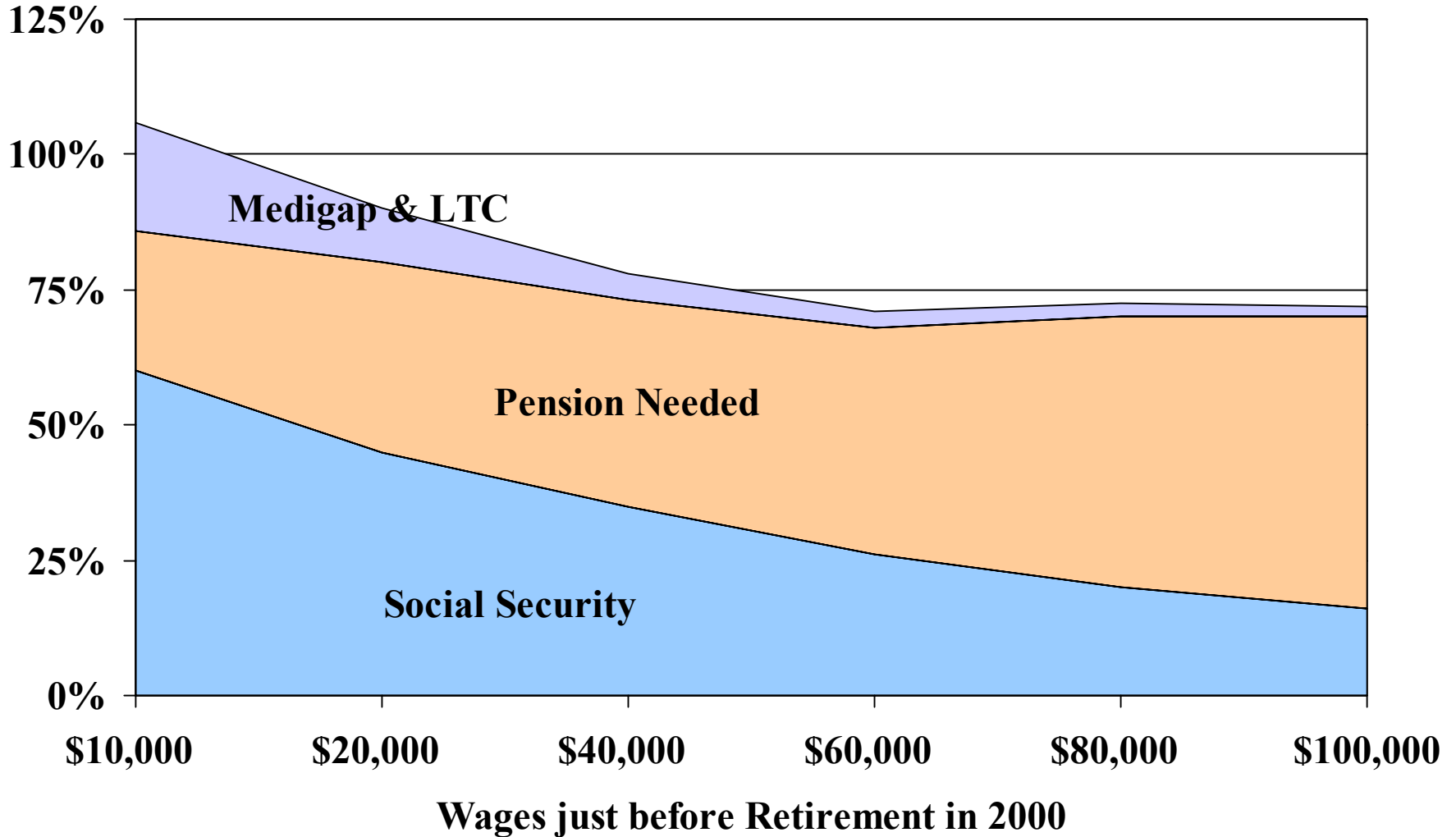


1994 Group Annuity Mortality table without loading, with full projection
Ron Gebhardtsbauer, American Academy of Actuaries

Amounts Needed for 100% Replacement of Spendable Income in Retirement - Single Person



Amounts Needed for 100% Replacement of Spendable Income in Retirement - Single Person



People with low incomes need may more than 100% replaced, if they don't want to fall on Medicaid

Sample Disability Benefit

- CSRS disability annuity = min 40% of High 3
 - Full CPI means purchasing power is same forever
- FERS disability annuity
 - First year = 60% of High 3 minus SS = 23% of High 3
 - Thereafter = 40% of High 3 minus 60% of SS = 26% of High 3
 - COLA = CPI – 1% (unless CPI < 3%)
- Won't be much in TSP account to provide benefit
 - What happens if disabled until retirement?
 - Can you contribute to your TSP?
- Social Security benefit depends on pay history
 - For example: 37% of High 3

Sample Employee @ age 40

Disability Benefit	Benefit as % of High 3 pay
CSRS benefit	40%
FERS benefit	26% 21%
TSP benefit	0%
Social Security Disability Benefit	37%
Total	63%
Purchasing power @ 62	57%

Conclusions

- Pensions are complex
- Your Benefits are generous
 - Especially Congressional ones
 - But not everyone stays for 30 years
- You can plan on DB amounts for retirement
 - If you work in federal government until retirement
- DC benefits can vary a lot due to economy
- All lose purchasing power at old age
 - You can reduce your risks if you
 - Get indexed annuity to cover expenses (by age 80)
 - Buy LTC insurance