

How big a pension will you need to retire with the same income you take home now?

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An early step in retirement planning is to determine how much income will be needed to maintain a pre-retirement standard of living. A benchmark goal for retirement income, therefore, is to replace 100% of the cash flow from current salary.

Many future retirees probably assume that to do that, they will need a pension that is 100% of their current salary. An examination of tax, financial and other variables explains why a pension that is less than 85% (77% if you move to a state that does not have an income tax) of their highest salary will result in the same cash flow as their present income.

CSU Unit 3 employees (the faculty) who take the time to plan for their retirement often calculate their cost of living to determine whether they will have sufficient resources to pay for their post-retirement lifestyle.

Like many employees, professors have a defined benefit pension plan, in which the future pension is based on a formula and calculated as a percentage of the employee's gross salary (highest year).

In these circumstances, it is not uncommon for the employee to use his or her current salary as a point of reference, representing "the amount of income I need to maintain my current standard of living." A prospective retiree might say, "I can't retire yet; I'll only have 60% of my regular pay."

The question is therefore: What percentage of my salary must I receive from the pension plan in order to have the same cash flow after tax available to spend? Surprisingly, the answer is much less than 100% using the current 2003 tax rates.

For this article, we assume the University pension to be the only source of post retirement income available as a replacement for current salary. That is, any additional income is extraneous, whether it comes from Social Security, savings, post-retirement part-time employment, or other sources. The only issue is what

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level of pension is needed to fully replace the pre-retirement salary.

As the accompanying charts indicate, an employee who earns \$80,000 of gross salary would need to receive a pension of only \$67,060 single and \$67,850 married filing jointly to have the same after-tax cash flow, assuming he/she stays in California. This represents a pension of 83.8% or 85.8% of pre-retirement gross

income.

If that same single employee were to move to a state without a state income tax, such as Alaska, Florida, Nevada, South Dakota, Texas, Washington, or Wyoming, the pension that would produce the same cash flow would be reduced to \$31,725 or only 77.2% of the gross salary of \$80,000. Similar percentages apply even with higher incomes or those who file joint returns with working spouses.

How is it possible that a retiree needs a pension that is less than 85% of gross salary in order to have an equivalent cash flow after tax? Several factors account for this startling result.

1. Mandatory Pension Contribution.

Even though an employee receives a gross salary of \$80,000, the University requires the employee to pay into the pension plan (pre-tax) an amount equal to 5% of each month's salary that exceeds \$513. Thus, the employee is required to pay into the pension \$3,692 per

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CHART A: AMOUNT OF INCOME NEEDED

Cash Flow	Employee Single Wages	Retired Single Pension	Retired Single Non-Calif.	Employee Married Wages	Retired Married Pension
Salary	\$80,000			\$80,000	
Pension		\$67,060	\$61,725		\$67,850
Pension Contribution	(\$3,692)			(\$3,692)	
Federal Income Tax	(\$13,904)	(\$11,629)	(\$10,291)	(\$8,801)	(\$7,141)
FICA Tax (7.65%)	(\$6,120)			(\$6,120)	
California Income Tax	(\$4,862)	(\$4,006)		(\$2,709)	(\$2,029)
Total Cash Flow	\$51,422	\$51,425	\$51,434	\$58,678	\$58,680

AGE		50	51	52	53	54	55
Service Years	10	11.00%	12.80%	14.60%	16.4%	18.20%	20.00%
	11	12.10%	14.08%	16.02%	18.04%	20.02%	22.00%
	30	33.00%	38.40%	43.80%	49.20%	54.60%	60.00%
	31	34.10%	39.68%	45.26%	50.84%	56.42%	62.00%
	32	35.20%	40.96%	46.72%	52.48%	58.24%	64.00%
	33	36.30%	42.24%	48.18%	54.12%	60.06%	66.00%
	34	37.40%	43.52%	49.64%	55.76%	61.88%	68.00%
	35	38.50%	44.80%	51.10%	57.40%	63.70%	70.00%
	36	39.60%	46.08%	52.56%	59.04%	65.52%	72.00%
	37	40.70%	47.36%	54.02%	60.68%	67.34%	74.00%
	38	41.80%	48.64%	55.48%	62.32%	69.16%	76.00%
	39	42.90%	49.92%	56.94%	63.96%	70.98%	78.00%
	40	44.00%	51.20%	58.40%	65.60%	72.80%	80.00%

CHART B: Retirement Chart (ages 50-55).

This chart shows the amount of pension as a percentage of one's salary at the time of retirement depending on the number of years of service. SOURCE: PERS-PUB 3F (Feb. 2002)

year, reducing net salary subject to income tax to only \$76,308. *Net Saving: \$3,692*

2. Social Security and Medicare Tax.

All employees (unless hired many years ago) are required to pay the employee share of Social Security and Medicare, which is equal to 7.65% of wages up to \$87,000 per year. In calculating this amount, the gross income of \$80,000 is used rather than the net (taxable) income of \$76,308. Thus the cost for Social Security and Medicare is \$6,120 per year. No Social Security or Medicare taxes are assessed against pension benefits. *Net Saving: \$6,120*

3. Income Tax on the Above. The double-edged sword of Social Security and Medicare taxes are that they do not reduce taxable income. Thus, although the employee pays in \$6,120 of employment taxes, that same amount is subject to state and federal income tax at marginal rates, 9.3% and 28% single (25% married) respectively. Thus, on \$6,120 of Social Security and Medicare taxes, the combined income tax rate of approximately 37% creates a tax on the tax of \$2,264. *Net Saving: \$2,264*

As described above, pensioners' income can be much less than their gross salary and still provide an equivalent amount of net cash flow. The savings from not having to pay into the pension plan, not having to pay Social Security and Medicare tax and not having to pay income tax (federal and state) on the Social Security tax provides this reduction. The net saving is:

Pension contribution	\$3,692
Social Security & Medicare taxes	\$6,120
Income tax on those taxes	\$2,264
Net saving	—\$12,076

The total saving of \$12,076 equals 15% of the gross pretax income of \$80,000 or a net expected pension of \$68,000. In fact, slightly less is required because the tax saving is even greater due to the fact that the marginal tax rate is lower for the pension.

Chart A (see page 18) demonstrates the amount of income needed from a pension to generate the same net cash flow assuming you are single and that your only income was \$80,000 in salary, depending on whether the retiree continues to live in California or moves to a

non-tax state.

In considering one's pension in percentage terms under the contract, one additional technical adjustment arises. In theory, the pension is coordinated with Social Security by applying the defined percentage to one's highest monthly salary less \$133.33 (or one's highest 12-month salary less \$1,600).

Accordingly, \$67,060 as a percentage of \$78,400 (\$80,000 - \$1,600) is 85.5%. This is the percentage that is equivalent to replacing current (highest) salary for the unmodified pension. If that same (single) employee were to move to a state without an income tax, the equivalent necessary amount of pension income would be reduced to \$61,725 or, if simply looking on the CSU tables, 78.9% of the final salary.

For those under 56, it will be hard to achieve 100%, even if all that is needed is 81.61%. A portion of the retirement chart is provided in Charts B (above) and C (page 20). Amounts will also be reduced for married employees who select a joint and survivor retirement payout. This assumes a payout for the life of the employee only.

The factors described above repre-

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sent the major disconnects between pension percentages and gross salary from employment. They are bare bones calculations.

There are many other items that affect a retiree's cash flow, some of which allow for a smaller percentage, some possibly demanding a larger one. Here are some of those items.

Smaller percentage necessary

1. Tax Shelter Annuities. If the employee is contributing to a tax-shelter annuity and living on income after that contribution, the percentage needed for retirement is also reduced. Like the contribution to the pension fund, this is an outlay that will not continue in retirement. In addition, of course, the Tax Shelter Annuity can produce additional income.

2. Union Dues. The cost of union dues has not been put into the model. Again, this is a cash outflow that does not continue in retirement. It is presently .95% for CFA members and thus, in this example would actually decrease the amount needed for retirement by another \$475.

3. Parking and Employee Expenses.

Most faculty incur parking charges at their campus. These and other employment related costs would not be incurred upon retirement.

Larger percentage (or supplemental income) necessary

1. Dependent or Health Care Reimbursement Accounts. The benefits of these before-tax reductions to pay for dependent or health care are not available in retirement. Accordingly cash outlays may use after-tax dollars which would require a greater cash flow.

2. Vision Care. Vision care insurance is also not available in retirement. Again, this would require greater cash flow for these expenditures, since the retiree would have to pay for his/her own vision insurance or pay full price for the vision services.

3. Medical Insurance. The cost of medical insurance changes at retirement, and possibly again at age 65 when the retiree becomes eligible for Medicare. Although a retiree prior to retirement can retain the basic health care plan, the State's contribution may be different. When the retiree

is eligible for Medicare at 65, the State requires that the health care plan be a Medicare supplement and that the retiree get Medicare. This is another cash outflow that should be considered.

4. Inflation. Over time, a major consideration for those planning for retirement is the effect of inflation on cost of living. The calculations above compare take-home pay from employment with the payment immediately upon retirement. However, our pension has a maximum cost-of-living adjustment of 2% per year, starting in the second calendar year after retirement. If inflation is higher than 2%, as is likely, the pension will shrink in real dollars. For example, if inflation averages 4%, the pension would have lost 25% of its buying power after 15 years.

5. Modified pension schemes. The percentage of salary from the benefit formula that we typically think about is for the "unmodified" pension. If the retiree chooses one of the other plans calling for pension payments to a surviving spouse, the percentage is likely to be smaller, due to the longer actuarial joint life for the couple. One can estimate his/her pension

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Service Years	AGE	56	57	58	59	60	61	62	63
	10	20.64%	21.26%	21.88%	22.50%	23.14%	23.76%	24.38%	25.00%
	11	22.70%	23.39%	24.07%	24.75%	25.45%	26.14%	26.82%	27.50%
	30	61.92%	63.78%	65.64%	67.50%	69.42%	71.28%	73.14%	75.00%
	31	63.98%	65.91%	67.83%	69.75%	71.73%	73.66%	75.58%	77.50%
	32	66.05%	68.03%	70.02%	72.00%	74.05%	76.03%	78.02%	80.00%
	33	68.11%	70.16%	72.20%	74.25%	76.36%	78.41%	80.45%	82.50%
	34	70.18%	72.28%	74.39%	76.50%	78.68%	80.78%	82.89%	85.00%
	35	72.24%	74.41%	76.58%	78.75%	80.99%	83.16%	85.33%	87.50%
	36	74.30%	76.54%	78.77%	81.00%	83.30%	85.54%	87.77%	90.00%
	37	76.37%	78.66%	80.96%	83.25%	85.62%	87.91%	90.21%	92.50%
	38	78.43%	80.79%	83.14%	85.50%	87.93%	90.29%	92.64%	95.00%
	39	80.50%	82.91%	85.33%	87.75%	90.25%	92.66%	95.08%	97.50%
	40	82.56%	85.04%	87.52%	90.00%	92.56%	95.04%	97.52%	100.00%

CHART C: Retirement Chart (ages 56-63).

This chart shows the amount of pension as a percentage of one's salary at the time of retirement depending on the number of years of service. SOURCE: PERS-PUB 3F (Feb. 2002)



under the various plans on the CalPERS website.

In the final analysis, thinking about one's pension in the percentage terms specified by the contract is simply a starting point. We have shown that to replace cash flow provided by a pre-retirement salary, an appropriate standard is not 100%, but rather 85% (or even 77% if one plans to move to a state with no income tax). Moreover even these benchmarks require further consideration to take into account additional financial requirements and the probable need to supplement pension income with other forms of retirement funding.