

What do investors think?

Risk-Aversion, Loss-Aversion and the Annuities Puzzle

Meir Statman
Glenn Klimek Professor of Finance
Santa Clara University

Annuities

Annuities are good for you.

Lessons from economists.

Yaari (1965), Brown et al (2006)

You should annuatized all your wealth.

**Without an annuity you might run out
of money.**

Annuities are good for you.

The probability of running out of money when the time horizon is 30 years with a 4.5% withdrawal rate, adjusted for inflation

No 50%

Portfolio	Annuity	Annuitized
Conservative	67.4%	18.7%
Balanced	23.7%	5.5%
Growth	12.6%	3.3%
Aggressive	8.4%	2.5%

Source: Ameriks, Veres & Warshawsky (2001)

Annuities are good for you

Lessons from psychologists

People without annuities are unhappy

**Retirees earning more than \$50K
without annuities are:**

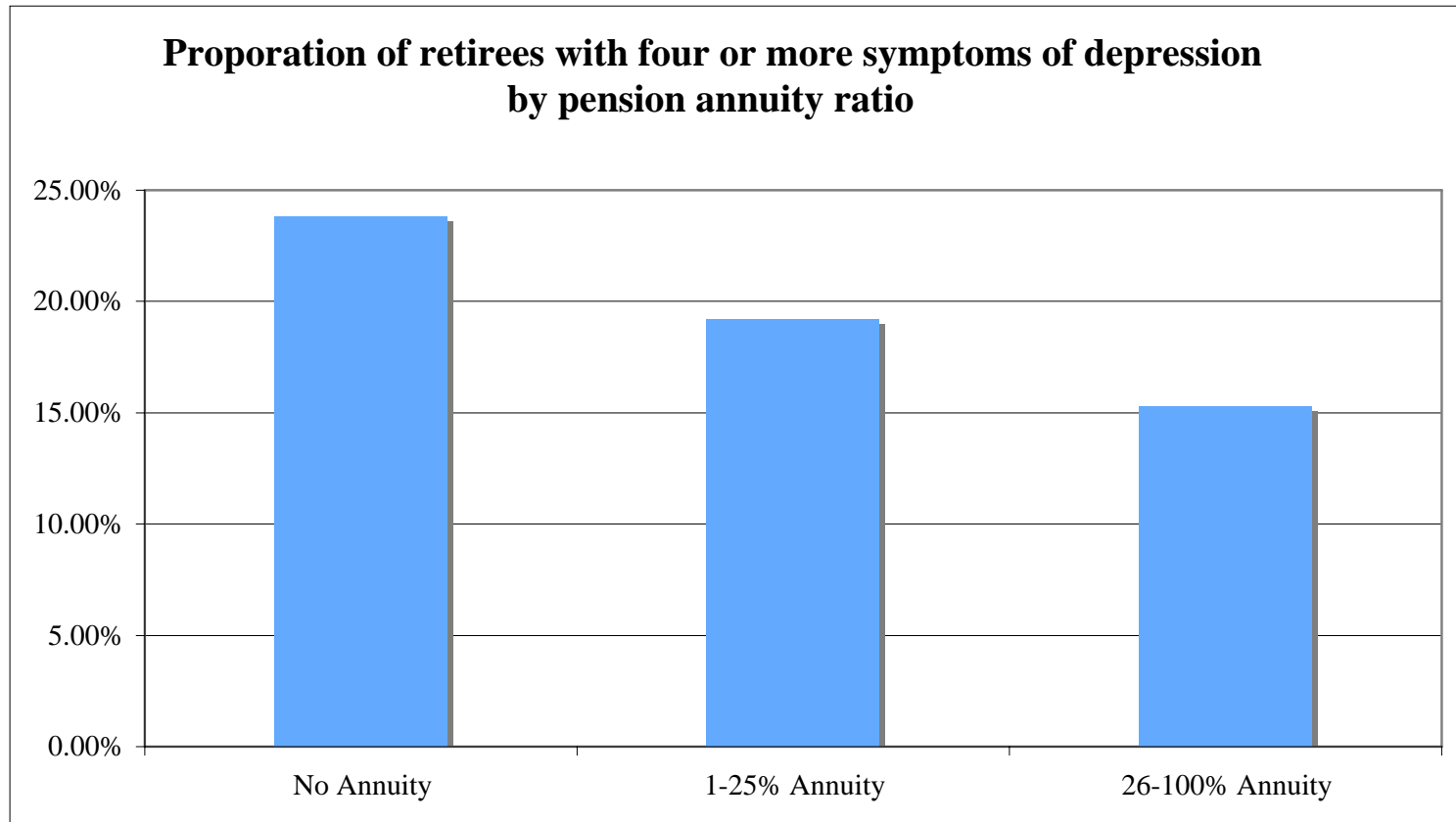
less satisfied than

**retirees who earn \$30-50K *with*
annuities**

Annuities are good for you

Lessons from psychologists

People without annuities are depressed



The annuities puzzle

**Annuities are good for you
So why don't you buy them?**

Standard reasons not to buy annuities

- **Bequest motive**
- **Loss of liquidity**
- **High insurance company fees**
- **Asymmetric mortality expectations between buyers and sellers.**
- **Crowding out by Social Security or employer-sponsored pensions**
- **Pooling longevity risk within families**

The annuities puzzle

Annuities are good for you

So why don't you buy them?

Behavioral reasons not to buy annuities

- **Smell-of-death**
- **Behavioral portfolio theory**
- **Framing and money illusion**
- **Aversion to losses**
- **Aversion to regret**
- **Aversion to dipping into capital**
- **Subjective and objective probabilities**

Behavioral reasons not to buy annuities

Smell-of-death

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Behavioral reasons not to buy annuities

Smell-of-death



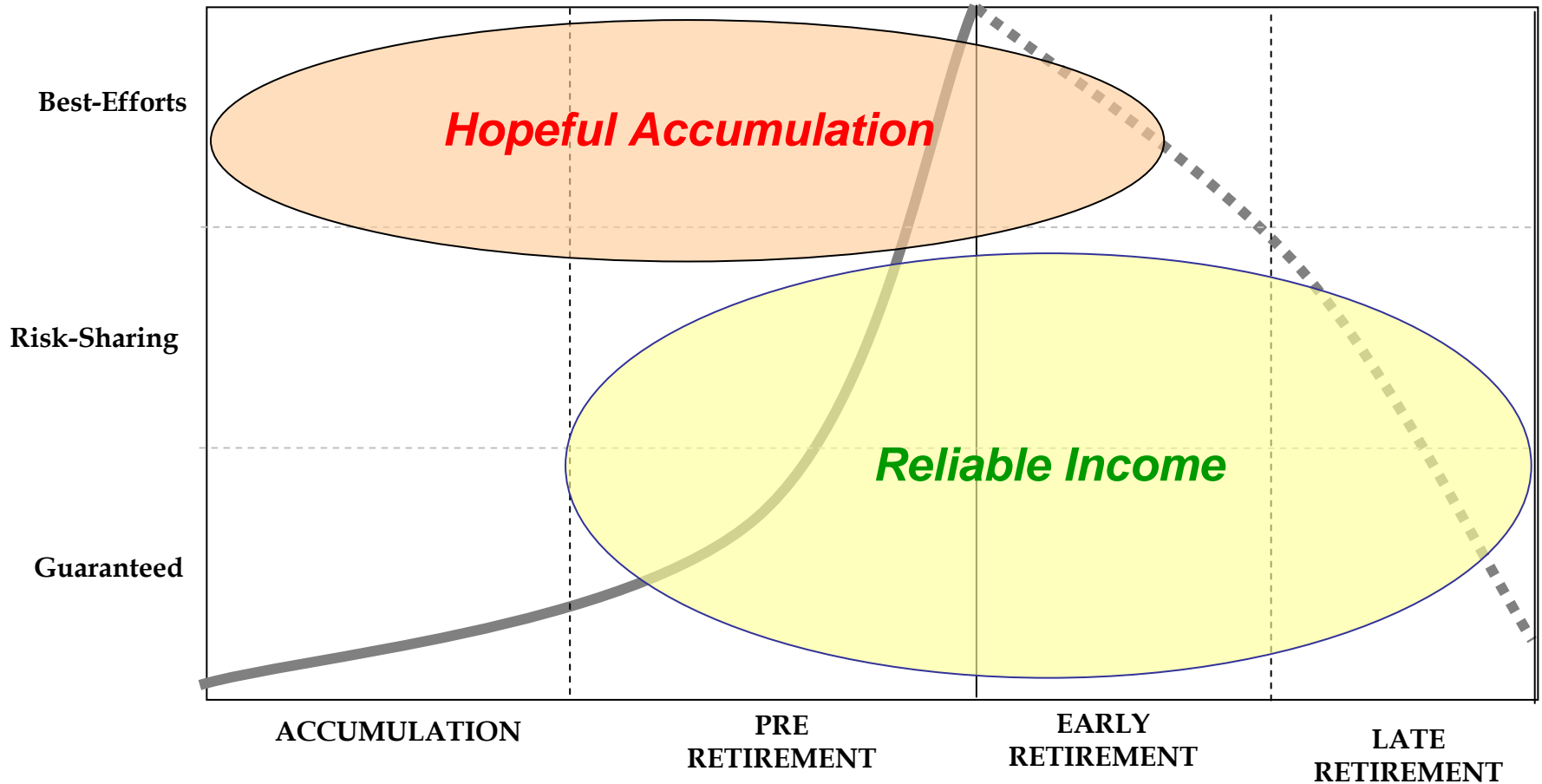
Behavioral reasons not to buy annuities

Smell-of-death



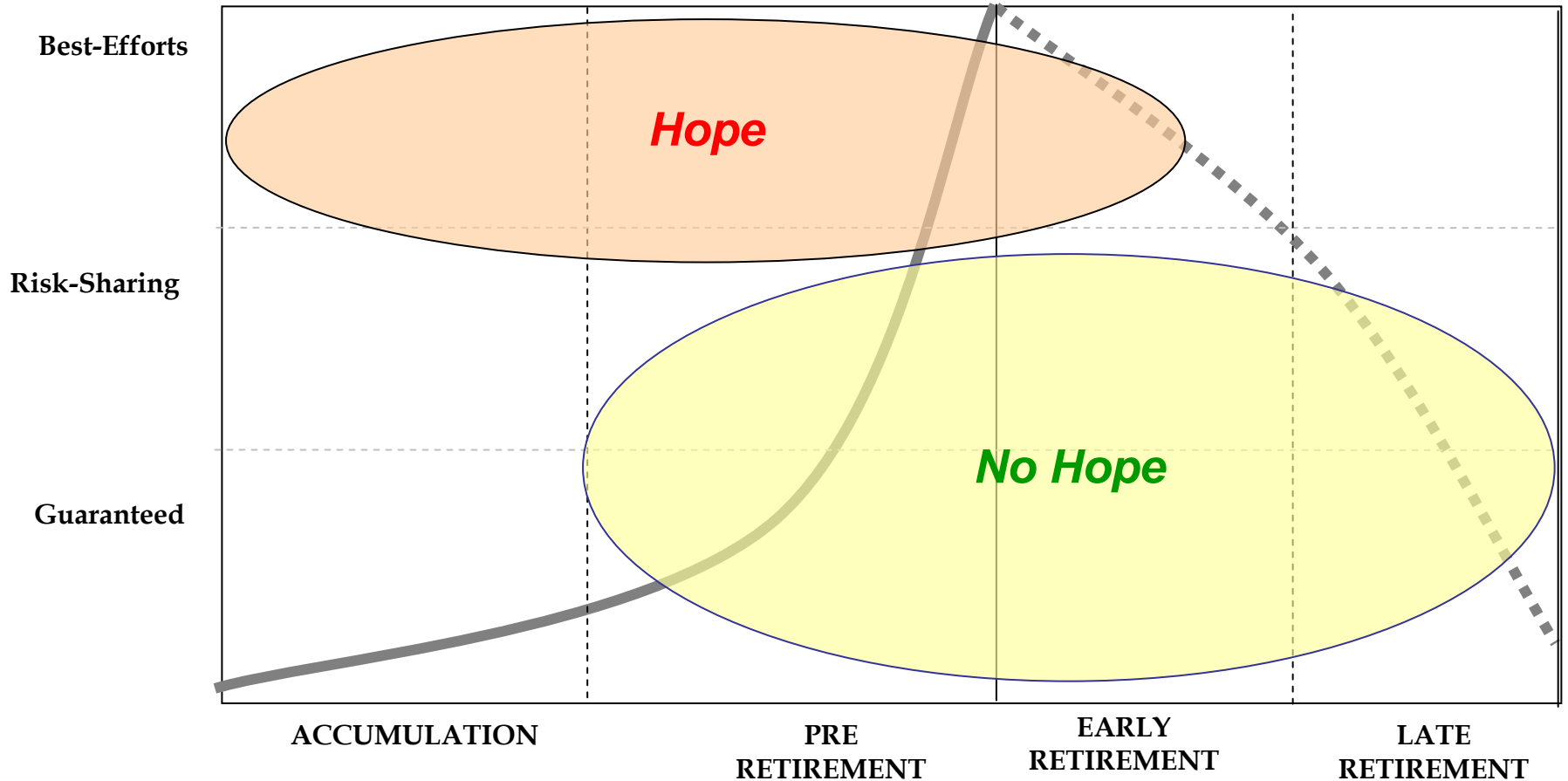
**Why do they
call death
insurance life
insurance?**

Behavioral reasons not to buy annuities



Behavioral reasons not to buy annuities

Too much focus on fear, too little on hope

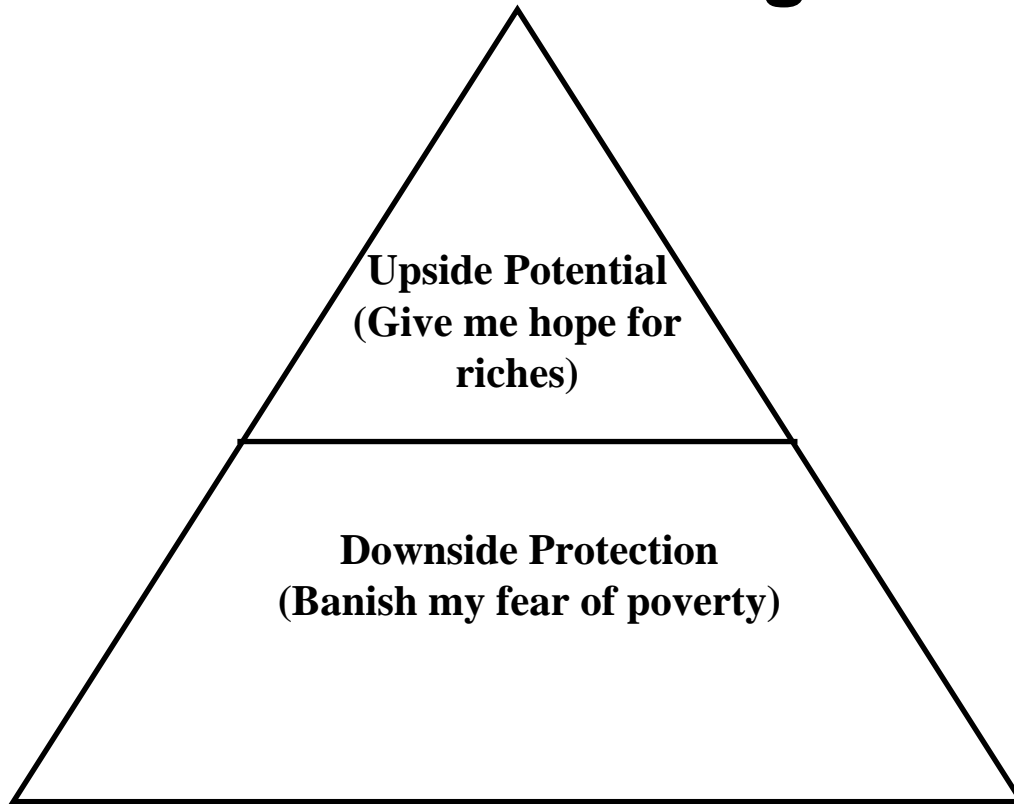


Behavioral Portfolio Theory

Goal-based theory

Hope and fear

Risk seeking and risk aversion



Upside Potential
(Give me hope for
riches)

Downside Protection
(Banish my fear of poverty)

Lottery tickets
Options
Stocks
(Risk-seeking?)

Bonds
Annuities
Pensions
Social Security
(Risk-averse?)

Behavioral Portfolio Theory

Goal-based theory

**Give me hope
Banish my fear**

Retirees buy lottery tickets

Retirees want hope

**Pay for daughter's wedding
Buy a car for a son
Retire the mortgage**

Behavioral reasons not to buy annuities

Suggestions

Do not extinguish hope

Combine downside protection with upside potential

Combine annuities with a growth portfolio

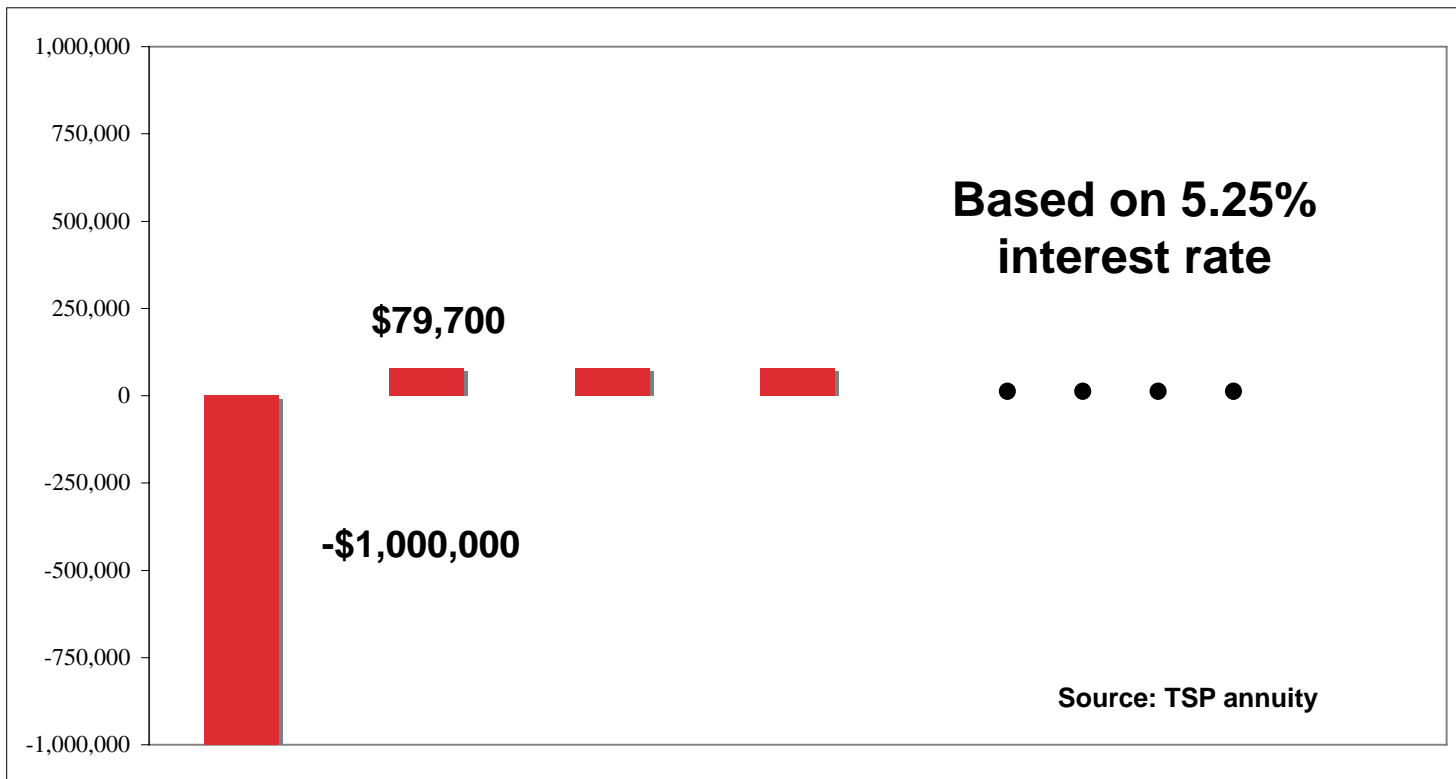
Behavioral reasons not to buy annuities

Framing

Annuity income seems puny relative to capital

I used to be a millionaire

Now I live on \$79,700 per year



Behavioral reasons not to buy annuities

Save the best for last

1. Which would you prefer if both were free?

- A. Dinner at a fancy French restaurants (86%)
- B. Dinner at a local Greek restaurant (14%)

For those who prefer French

2. Which would you prefer?

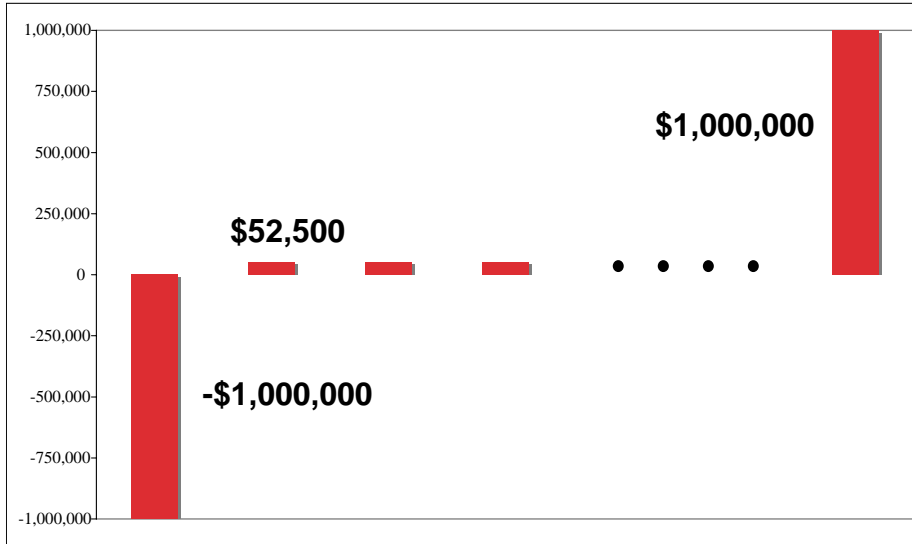
- C. Dinner at the French restaurant on Friday in 1 month (80%)
- D. Dinner at the French restaurant on Friday in 2 months (20%)

3. Which would you prefer?

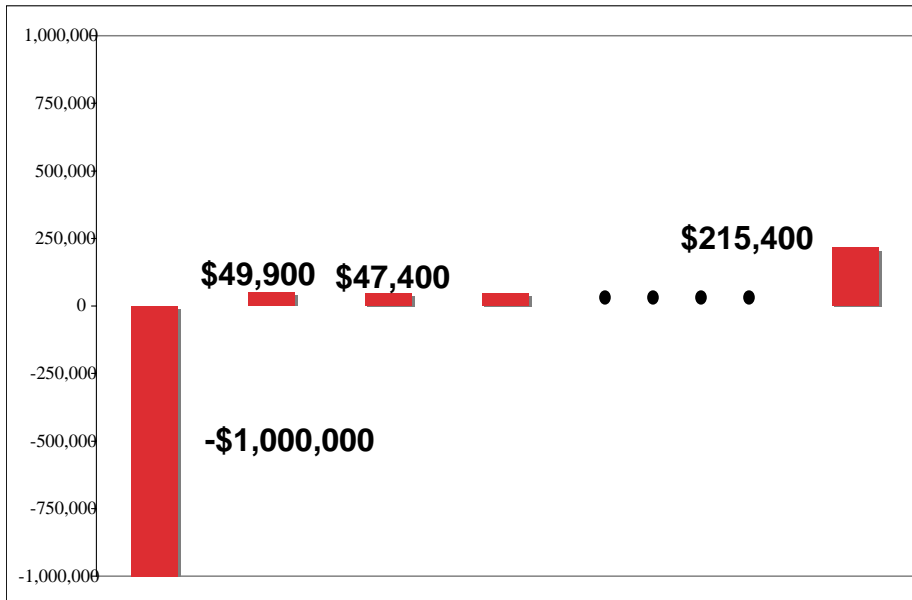
- E. Dinner at the French restaurant on Friday in 1 month and dinner at the Greek restaurant on Friday in 2 months?
- F. Dinner at the Greek restaurant on Friday in 1 month and dinner at the French restaurant on Friday in 2 months.

Behavioral reasons not to buy annuities

\$1 million in 30 years seems like \$1 million today
But its present value is different



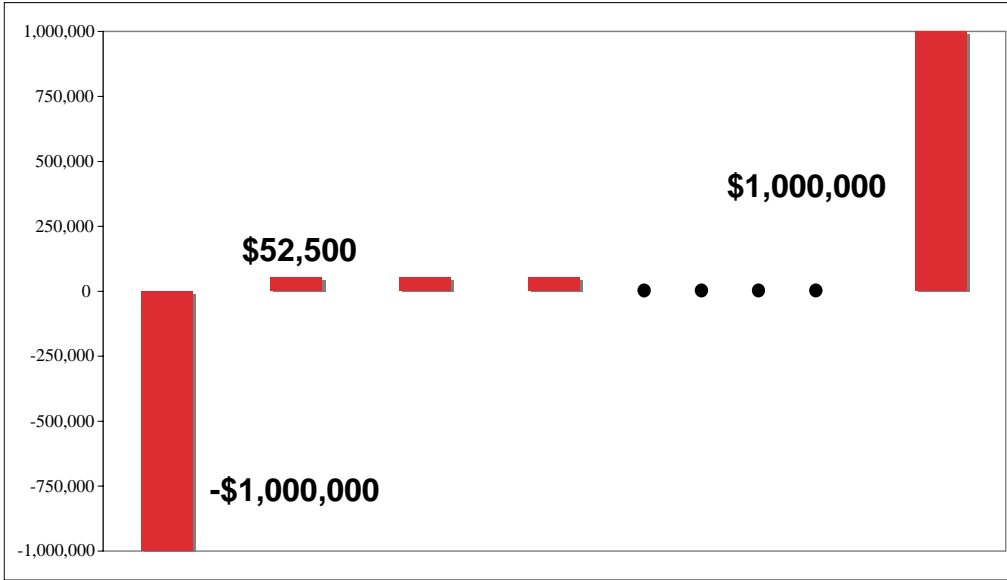
Framing
Money Illusion
Cash flows of a 30-
year bond in
dollars



Cash flow of a bond
in present value
dollars

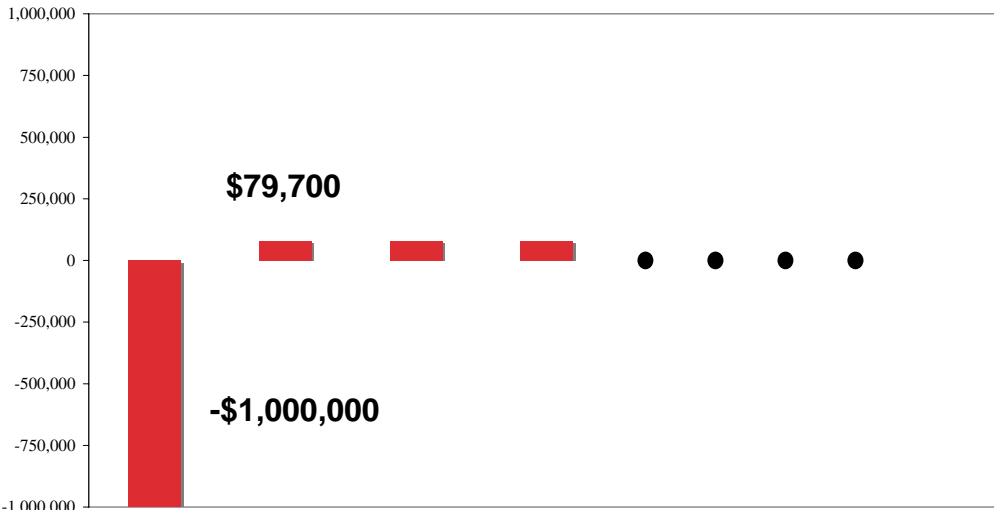
Behavioral reasons not to buy annuities

Aversion to losses



A bond

You will break-even or better



A single-life annuity

You might lose

Behavioral reasons not to buy annuities

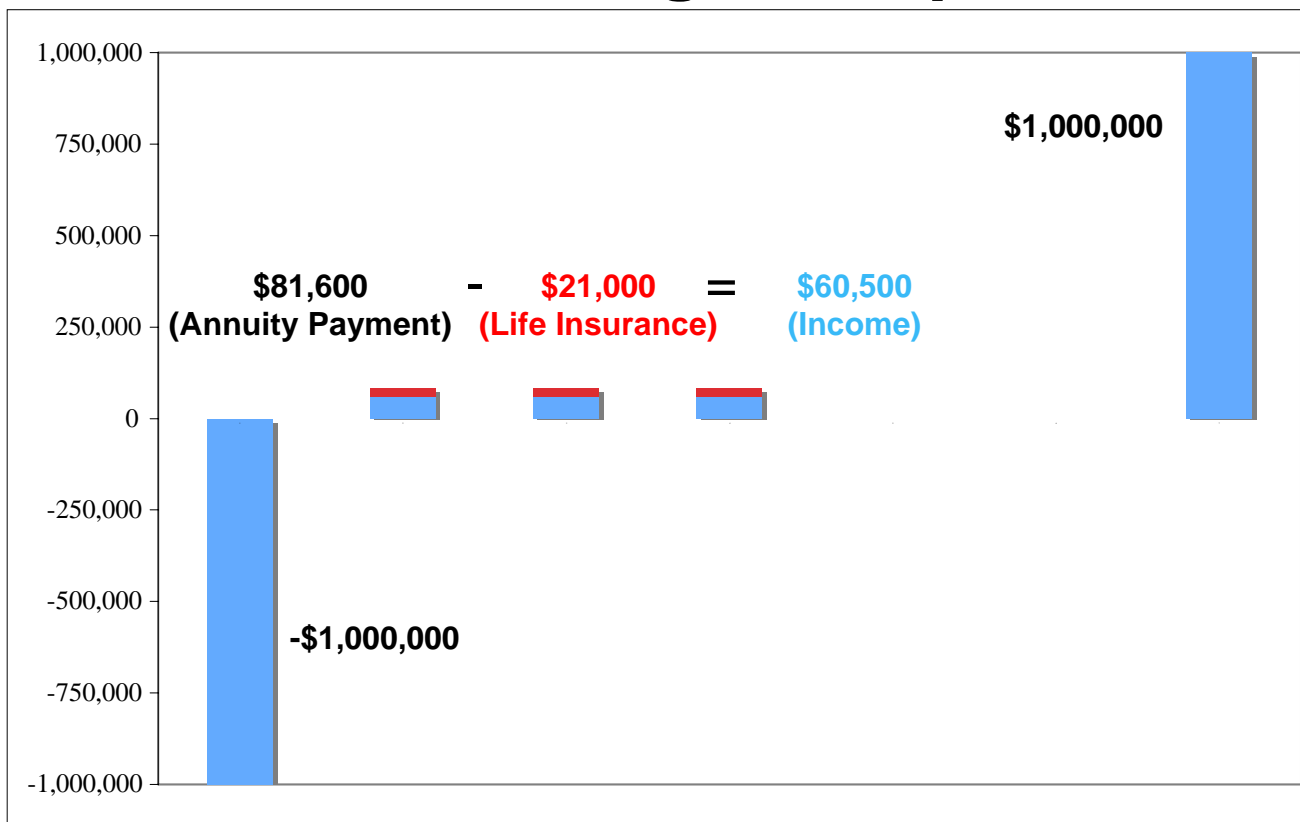
Suggestions

**Cash refund assures breaking even
(Better than a guaranteed period)**

A Wealth2K solution

A Wealth2K solution

Divide \$2 million into two pots
\$1 million in annuity plus life insurance
\$1 million in a growth portfolio



\$1,000,000 @ 7% annually during 20 years will grow to \$3,870,000

Behavioral reasons not to buy annuities

Aversion to regret

- **You sell your stocks to buy an annuity.**
- **Stocks zoom on the following day.**
- **Regret kicks in. You kick yourself.**

Behavioral reasons not to buy annuities

Suggestions

Use windfall money to buy annuities

Use bond money to buy annuities

Employ dollar-cost-averaging in buying annuities

If you can, make annuitization mandatory

(There is no regret when there is no responsibility for choice)

Behavioral reasons not to buy annuities

Dipping-into-capital

Annuities dip into capital to generate income

The story of Dorothy Mulvi

- **82-year former bond trader at the Golden West Manor retirement home.**
- **Advising fellow retirees about stretching savings to pay for retirement.**
- **Advising dipping into capital. “That pains me,” she said, tightening the grip on her cane. “I’m a conservative person.**

**Source: Leonhardt and Markels
(2003)**

Behavioral reasons not to buy annuities

Dipping-into-capital

Annuities dip into capital to generate income

We use current income as a guide for consumption.

There is little income in retirement so we spend little.

Behavioral reasons not to buy annuities

Dipping-into-capital

Annuities dip into capital to generate income

**As we grow up we acquire self-control to
delay the gratification of spending.**

We learn to save.

Can we unlearn delayed gratification?

Can we learn to spend?

Behavioral reasons not to buy annuities

Suggestions

Obscure dips into capital

Equity Option Strategies - Covered Calls

“[T]he covered call generates income from the premium received from the call contract’s sale that can supplement any divided income paid to eligible underlying stockholders.”

Source: CBOE

Behavioral reasons not to buy annuities

Cognitive and emotional reactions to small probabilities

- **There is an objective probability that I might run out of money**
- **There is an objective probability that I might win the lottery.**

Cognition

Does my subjective probability equal the objective probability?

Emotion

Do I savor lottery winnings?

Do I dread running out of money?

Behavioral reasons not to buy annuities

Suggestions

**Make running out of money as vividly
dreadful as lottery ads make winning vividly
wonderful**

Conclusion

The annuities puzzle

Annuities are good for you

So why don't you buy them?

Standard reasons not to buy annuities

- **Bequest motive**
- **Loss of liquidity**
- **High insurance company fees**
- **Asymmetric mortality expectations between buyers and sellers.**
- **Crowding out by Social Security or employer-sponsored pensions**
- **Pooling longevity risk within families**

The annuities puzzle

Annuities are good for you

So why don't you buy them?

Behavioral reasons not to buy annuities

- **Smell-of-death**
- **Behavioral portfolio theory**
- **Framing and money illusion**
- **Aversion to losses**
- **Aversion to regret**
- **Aversion to dipping into capital**
- **Subjective and objective probabilities**

The annuities puzzle

Annuities are good for you

**Perhaps the problem is that retirees do not
spend enough**

**Annuities are one way to increase
consumption**

We need other ways