

Creating The Conditions for More Efficient Retirement Funding

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Building Blocks of More Secure Retirement

- ❑ **Explaining the cost of retirement to clients**
- ❑ **Improving the efficiency of fund management**
- ❑ **Explaining the downside of taking risk**
- ❑ **Keep investment management fees reasonable**
- ❑ **Confront “pension adequacy” i.e. possibility of outliving retirement assets**



Retirement Savings

Estimated Global Retirement Assets (DB & DC)

Country	US\$bn 2005 Total Assets	US\$000 Assets per capita	1 year 2005 Growth	6 year 2000-2005 Growth p.a.	10 year 1995-2005 Growth p.a
Switzerland	464	62	20%	11%	11%
Netherlands	764	46	20%	13%	12%
Canada	1,022	31	14%	7%	10%
Australia	592	29	17%	14%	14%
US	8,123	27	7%	2%	6%
UK	1,621	27	20%	6%	8%
Japan	3,235	25	22%	6%	6%
Ireland	90	22	21%	14%	15%
Hong Kong	49	7	5%	9%	9%
Germany	287	4	19%	10%	7%
France	133	2	19%	11%	9%

Source: Watson Wyatt, various secondary sources

Funding Retirement

❑ **People Live Longer**

- Used to work 40 years, be retired for 10
- Now work for 40 years, retired for 20

❑ **Want to retire earlier**

- Although “serial retirement” and “partial retirement” may become more common

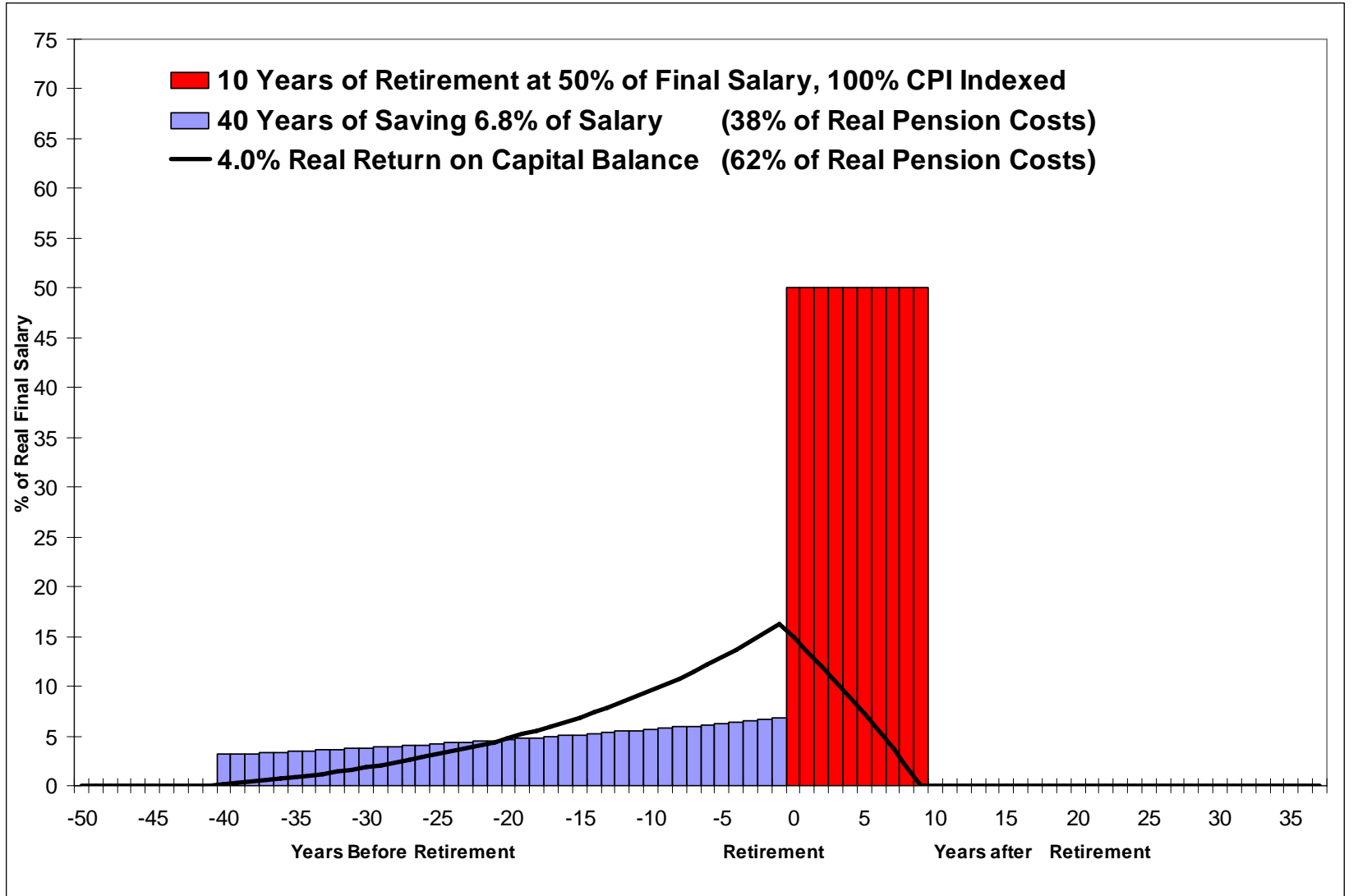


What Are Adequate Retirement Savings?

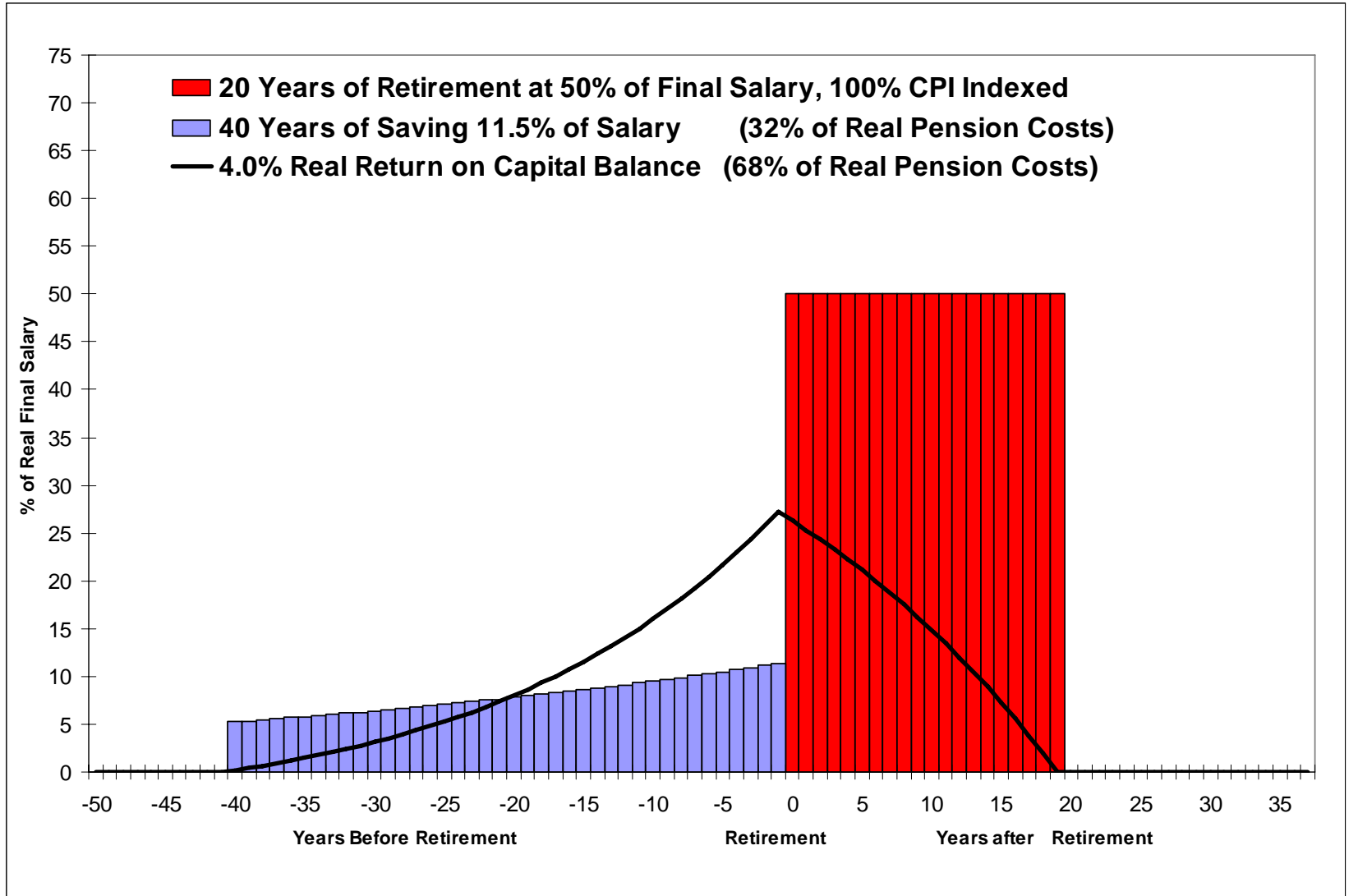
- ❑ **Assume that the goal is to replace 50% of pre-retirement final real purchasing power**
- ❑ **Real salary growth 2% per year**
- ❑ **Real portfolio return is 4%**
 - Long-term return from 50% stocks, 50% bonds
- ❑ **What Should Savings Be as % of Salary?**
 - For the moment, ignore taxes
 - All contributions, income and benefits in real \$



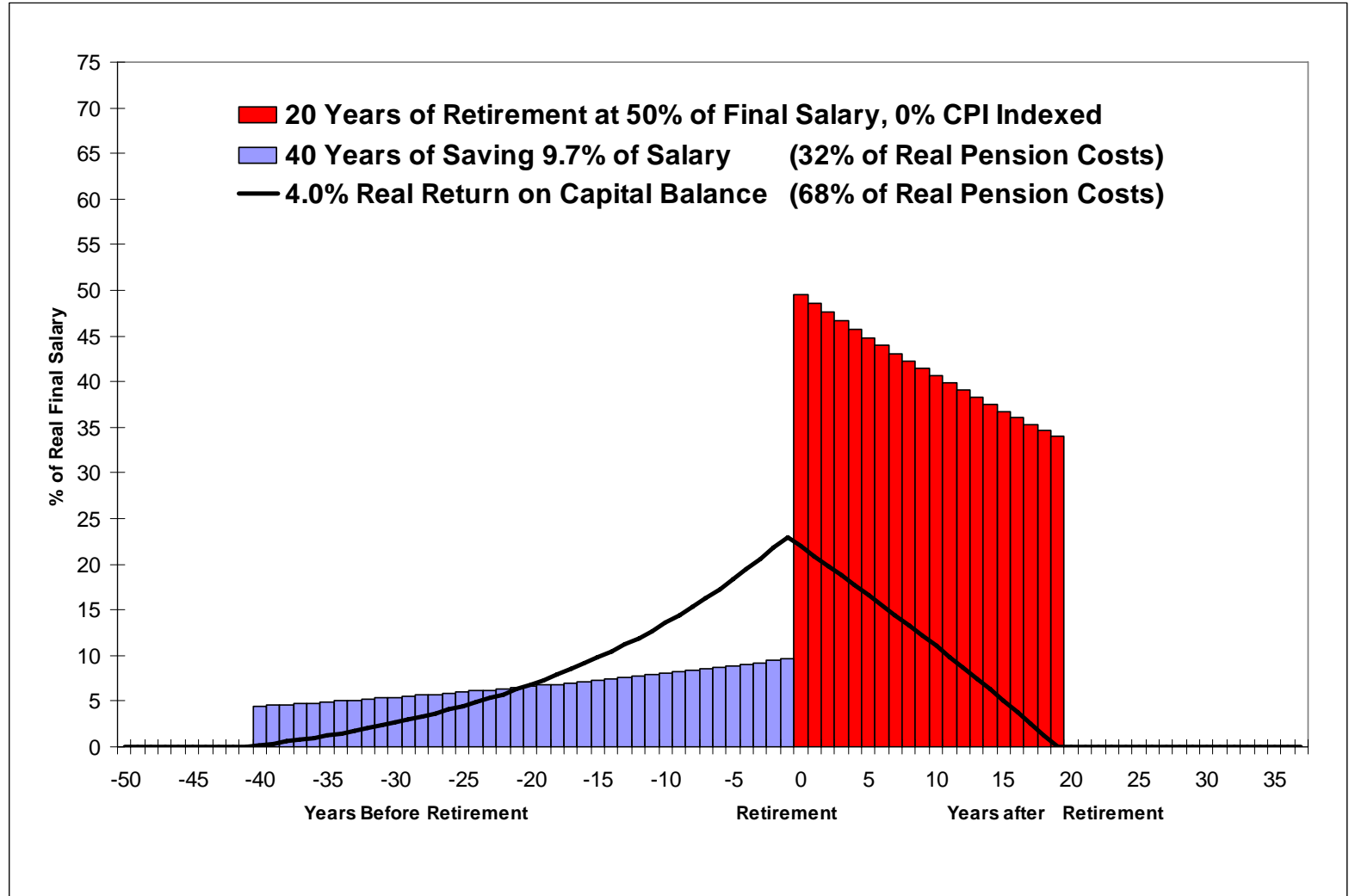
Retirement Savings Needed in 1950: 6.8%



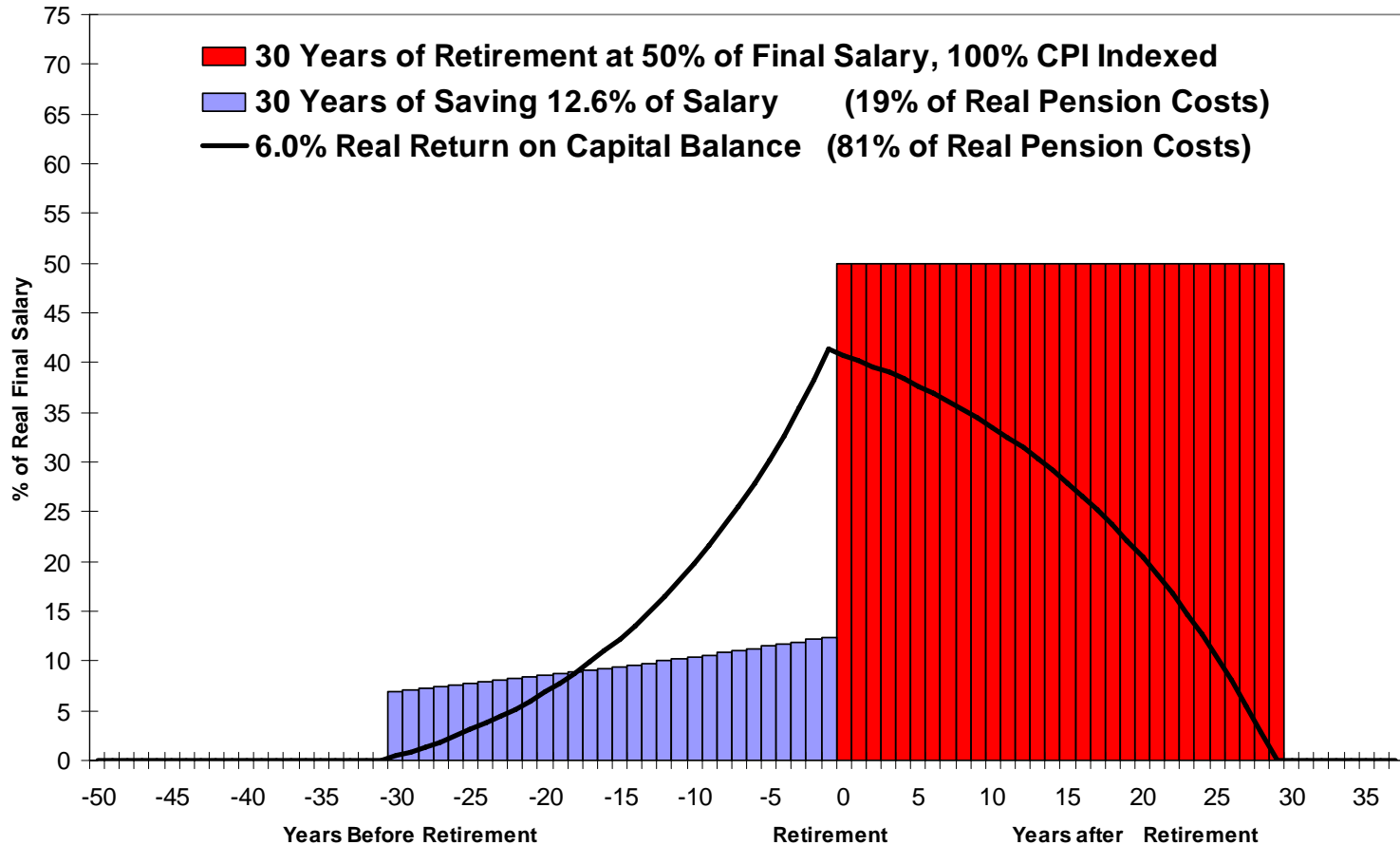
Retirement Savings Needed in 2007: 11.5%



Ignoring Inflation is False Economy



Retirement Dream 2007 Get 6% real return, Stop Work at 55



Cost of Retirement: Summary

Pension Contribution as % of Salary Needed to Replace 50% of Final Real Pre-Retirement Income									
				[1]	[2]	[3]	[4]	[5]	[6]
	Real Asset Return			0%	0%	2%	4%	6%	6%
	Real Wage Growth			0%	2%	2%	2%	2%	2%
	Pension CPI Indexation			100%	100%	100%	100%	100%	0%
	Retired Years	Working Years	Retired/Working						
1950	65-75	25-65	10/40=.25	12.5%	18.1%	11.3%	6.8%	4.0%	3.6%
1990	65-85	25-65	20/40=.50	25.0%	36.2%	20.6%	11.5%	6.2%	5.1%
Dream	55-85	25-55	30/30=1.0	50.0%	66.3%	37.7%	21.7%	12.6%	9.8%

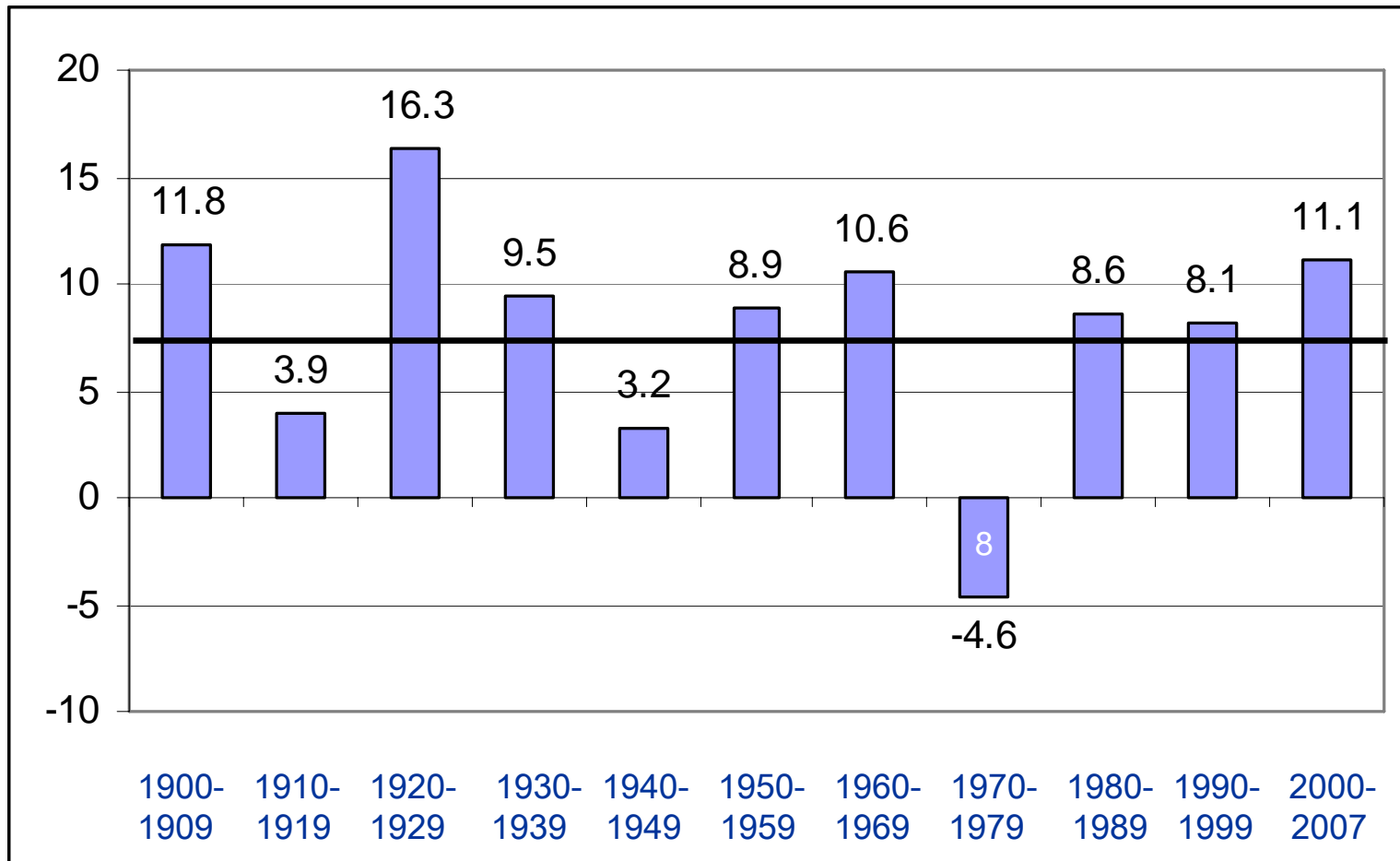


The Effect of Taxes

	Australia	Canada	Untaxed Unsubsidised
\$100 Contribution from after tax income	100	100	100
Tax Subsidy @ 30% tax rate	15%	30%	0
	= 115	= 130	= 100
4% real return for 40 years taxed@ 9%	x 4.18		
4% real return for 40 years untaxed		x 4.8	x 4.8
	= 481	= 624	= 480
Tax Rate	0%	30%	0%
After tax Balance	= 481	= 437	= 480



Real Australian Annual Equity Returns (%)

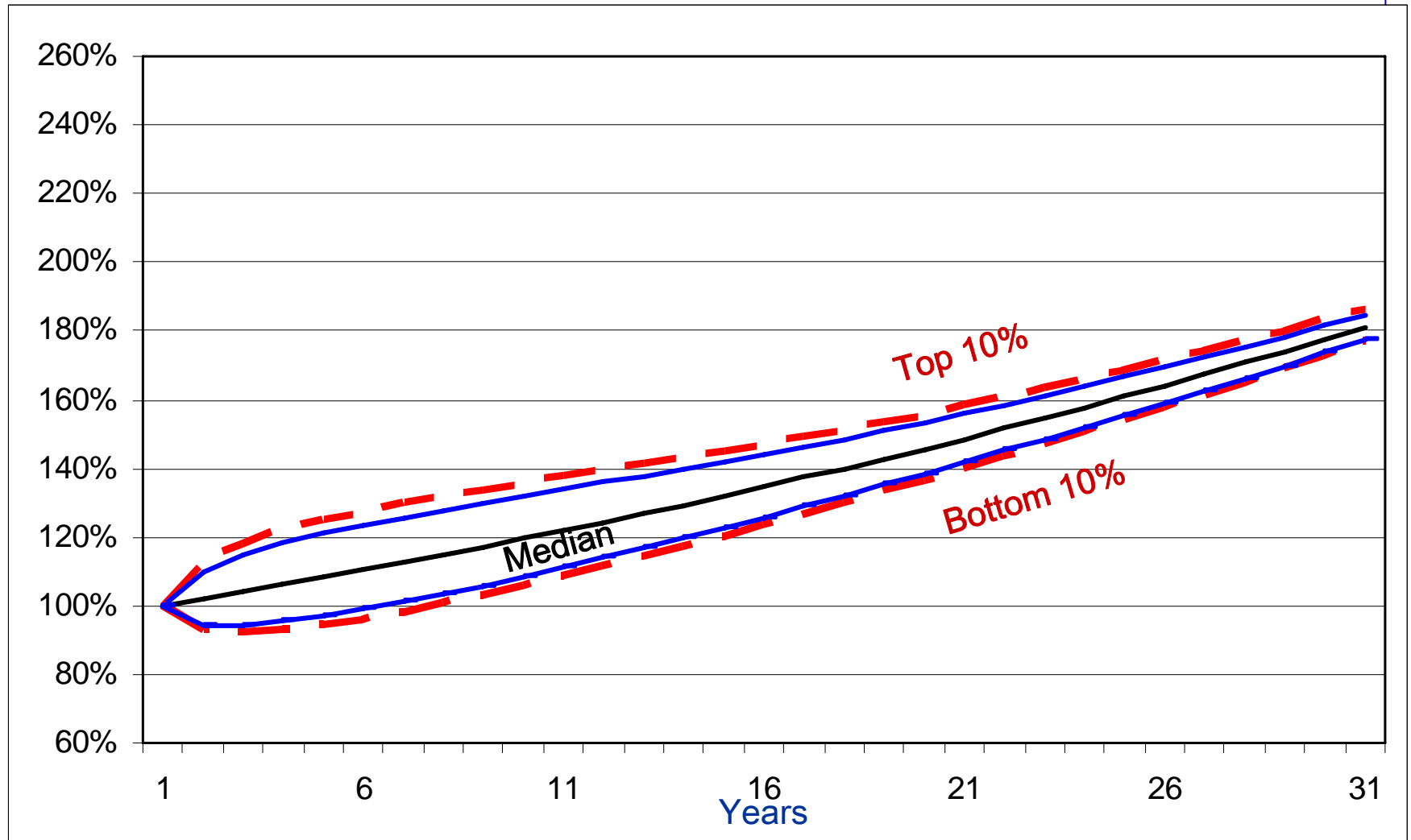


When will rain fall on this parade?



Perception of Return and Risk

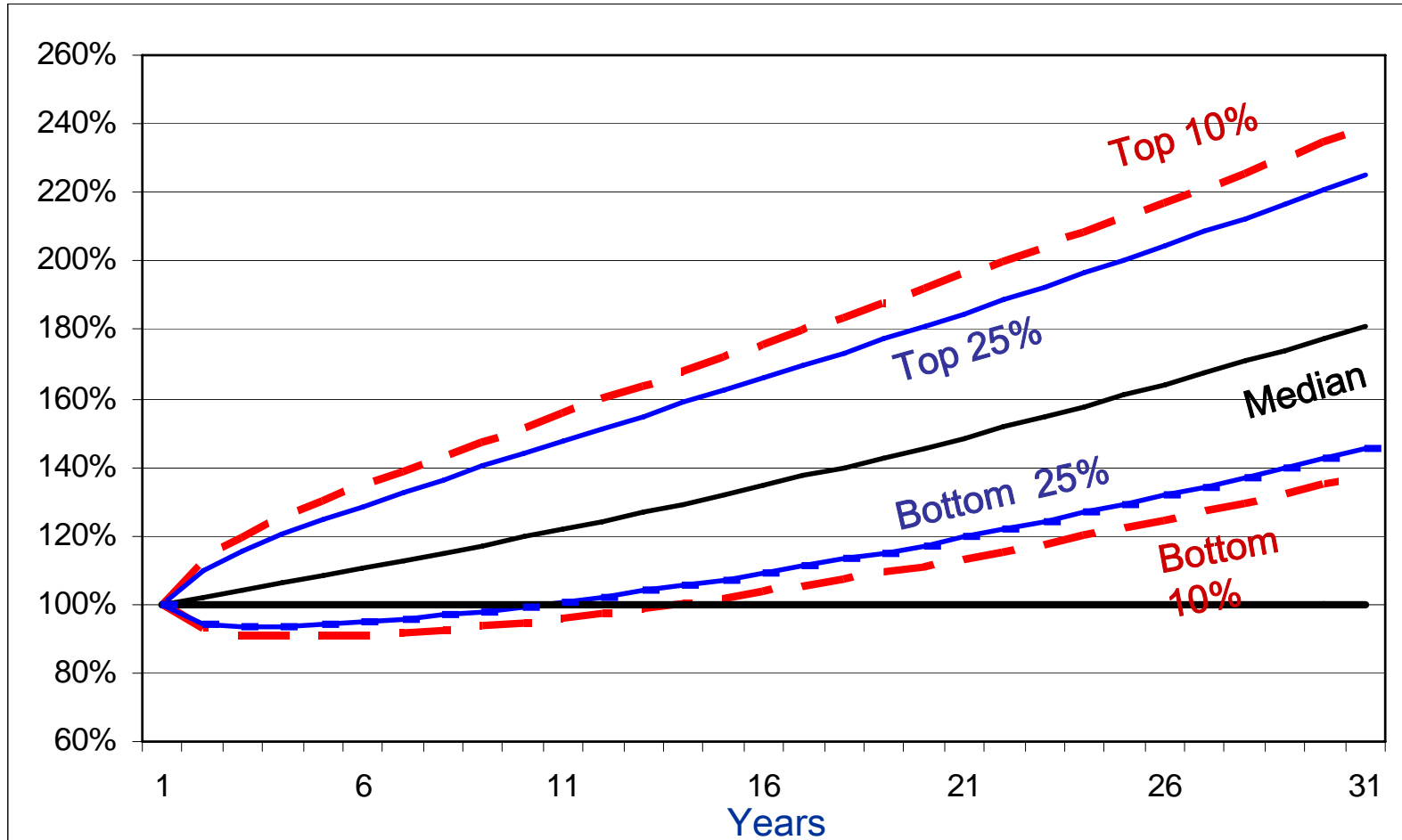
Funding ratio



The longer you take equity risk, the more certain the final outcome

High Expected Returns Are Uncertain

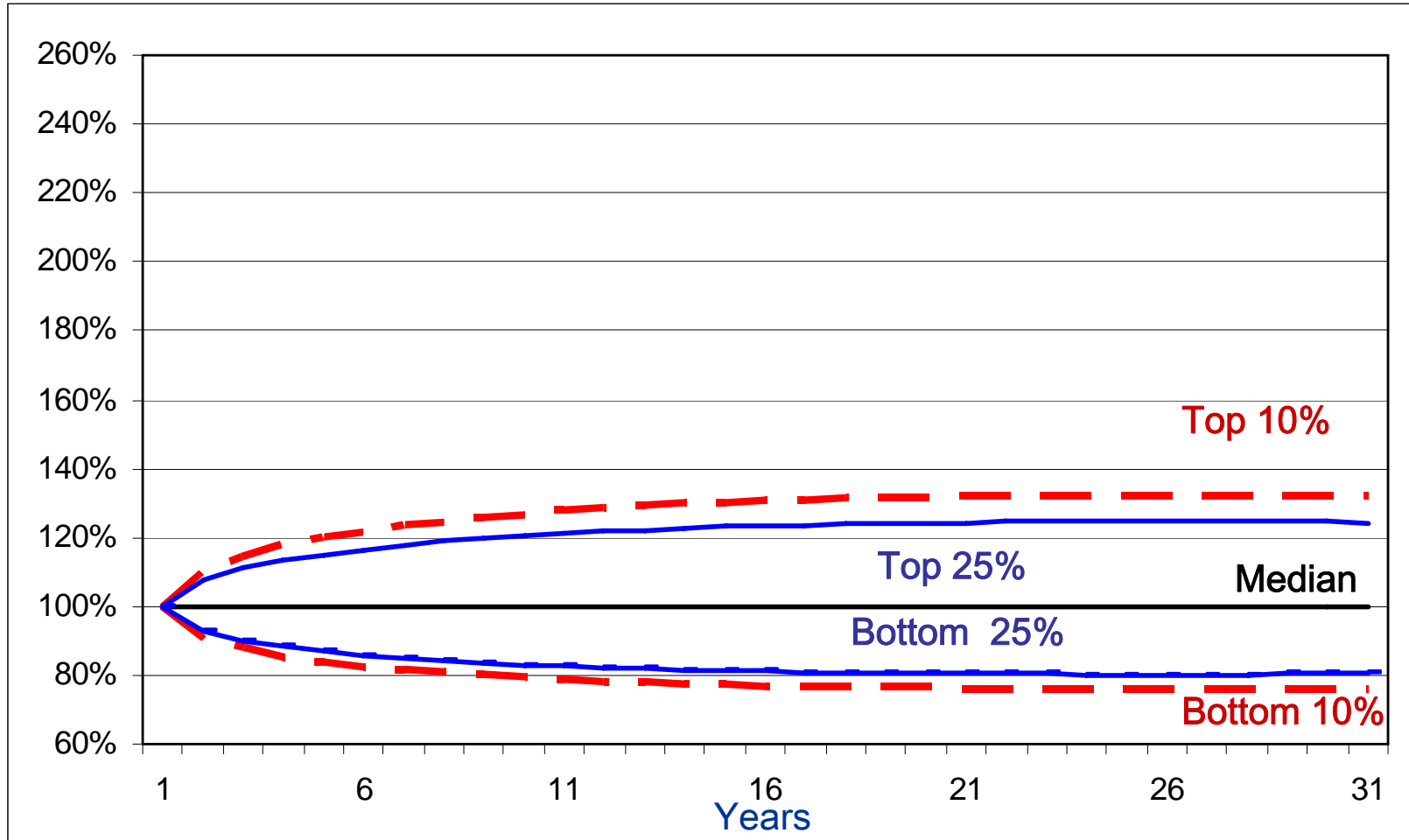
Funding ratio



Stocks typically outperform bonds with near-certainty after 20-25 years

Counting on Equity Premium Has Downside

Funding ratio



Assuming premium is realized creates 50% chance of underfunding



The Effect of Fees

- ❑ **Superannuation funds can be run for 0.4%**
 - Most are costing 0.7% or more – lack scale

- ❑ **Managed funds can have an MER over 2%**
 - Every 2% increase in net return cuts required contributions to 0.6 of their previous value

- ❑ **Australia lacks cheap DIY option**
 - Canada: Registered retirement savings plan
Costs are essentially 0. Can be populated with ETFs
 - Provides an accumulation option at the cost of a defined benefit plan



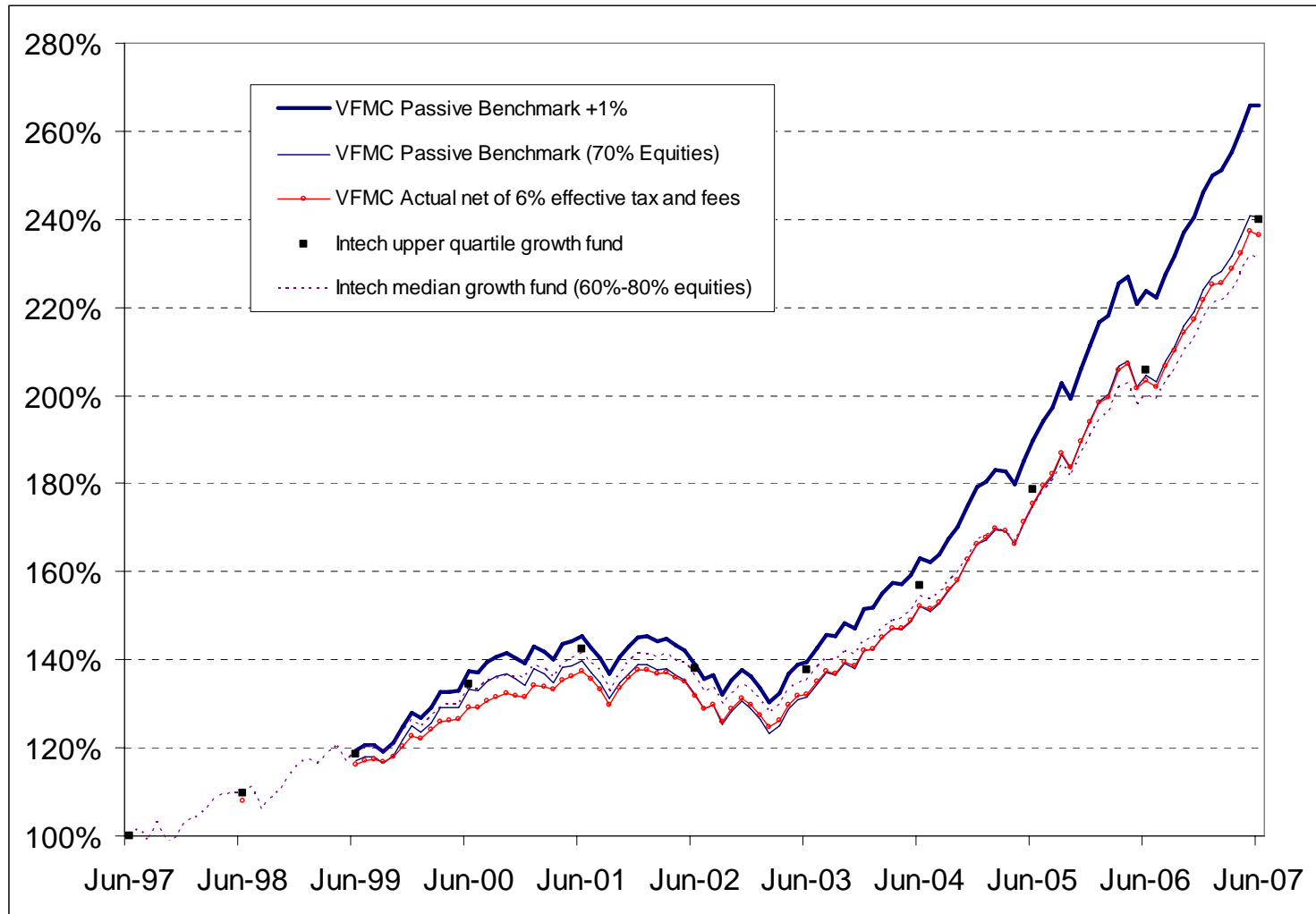
The Downside of Too Much Choice

- ❑ **Super funds competing for assets makes their investment policies biased to the short-term**
 - Also increases costs

- ❑ **International evidence shows people spread their choices too far, given a chance**
 - People tend to over-diversify if given the options to do so
 - Sweden has a fund with hundreds of choices
 - Only need two choices: a diversified portfolio and opportunity to invest in a risk free asset



It is hard to earn 1% more than index returns



*1st quartile results match a 70% equity benchmark net of 0.2% implementation cost
median results are 0.4% below that passive benchmark*



What it Takes to be Exceptional

❑ **Independent governance model**

- Strong board of trustees under “prudent man” model

❑ **Long term investment horizon**

- Willingness to invest in unusual opportunities

❑ **Cost-effective mix of internal and external mgt**

- Internal staff must be paid on commercial term

❑ **Strong portfolio and risk systems**

- Doing the basics better

❑ **Mgt focus on maximising return/risk**

- Management language for contrasting opportunities



Balancing Internal and External management

	Ontario Teachers'	VFMC Current	VFMC in 3 yrs
Investment staff Salaries	~2 bps	~1 bps	~2 bps
STI and LTI in bps of assets	~10 bps	~1 bps	~4 bps
External Fees (includes embedded fees)	~3 bps	~35 bps	~18 bps
Total Investment Costs	~15 bps	~37 bps	~24 bps
% managed externally	~10-15%	~100%	~50%
IT	~3 bps	~0.5 bps	~3 bps
Rent, Legal, Financial, Compliance, Custody, etc	~4 bps	~4bps	~4bps
Total Investment cost bps	~22bps	~42bps	~31bps
Value added/Assets last 5 yrs	~4%	none	~1%
Assets Under Mgt	AUD\$110B	AUD\$40	AUD\$60

Simple Quant: Doing Basics Better

- ❑ **The easiest way to make money is not having to spend it**
 - Not lowest cost, but aiming for best return/cost
- ❑ **Make sure passive index benchmarks are consistent with liability funding objectives**
 - Benchmarks motivate behaviour: they separate active (alpha) from passive (beta) returns
- ❑ **Managing cash effectively**
- ❑ **Exploiting economies of scale**
- ❑ **Eliminate unnecessary trading**
 - May be as high a \$50 million/year at VFMC



Improving Efficiency with Derivatives

- Can be far more cost-efficient than buying and selling physical securities**
- Must be supported by Board, senior management, corporate culture**
- Must be supported by strong accounting and risk control systems**
- Must address counterparty credit risk**
- Do not buy what you do not understand**



Motivating Better Asset-Liability Management

❑ Objective before the fact:

**Maximise long-term
(asset growth) – (liability growth)
within a risk tolerance limit**

❑ What gets measured after the fact:

Annual return on assets

❑ Investment “Heisenberg uncertainty principle”: How outcomes are measured affects strategy direction

- Managers respond to how they are evaluated
- Will factor in “career risk” in case of conflict with long-term goals



Investment Management is Risk management

- ❑ **All investments have return on risk**
Only some have return on assets
 - Same return/assets can imply very different return/risk
- ❑ **What ultimately matters is marginal return/risk**
 - Includes the effects of correlation and diversification
 - Must consider all active and passive risks together
- ❑ **Assets allocation imperfect way fix risk**
 - Same physical asset can have very different return/risk depending on contracts and gearing



Investment Optimization Process

- ❑ **Determine the nature of the liabilities**
 - Typically looks like some kind of nominal or index-linked bond
- ❑ **Find the closest risk free asset match to liability**
 - 100% match would eliminate any shortfall from capital target
 - The ideal long-dated asset looks like a bond
- ❑ **Pursue higher return by investing in “risky assets” typically index exposure to listed equities**
 - Accepting risk of a shortfall because of poor returns
- ❑ **Governance Issues:**
 - How much investment risk is acceptable?
 - Is that risk earning an appropriate return?



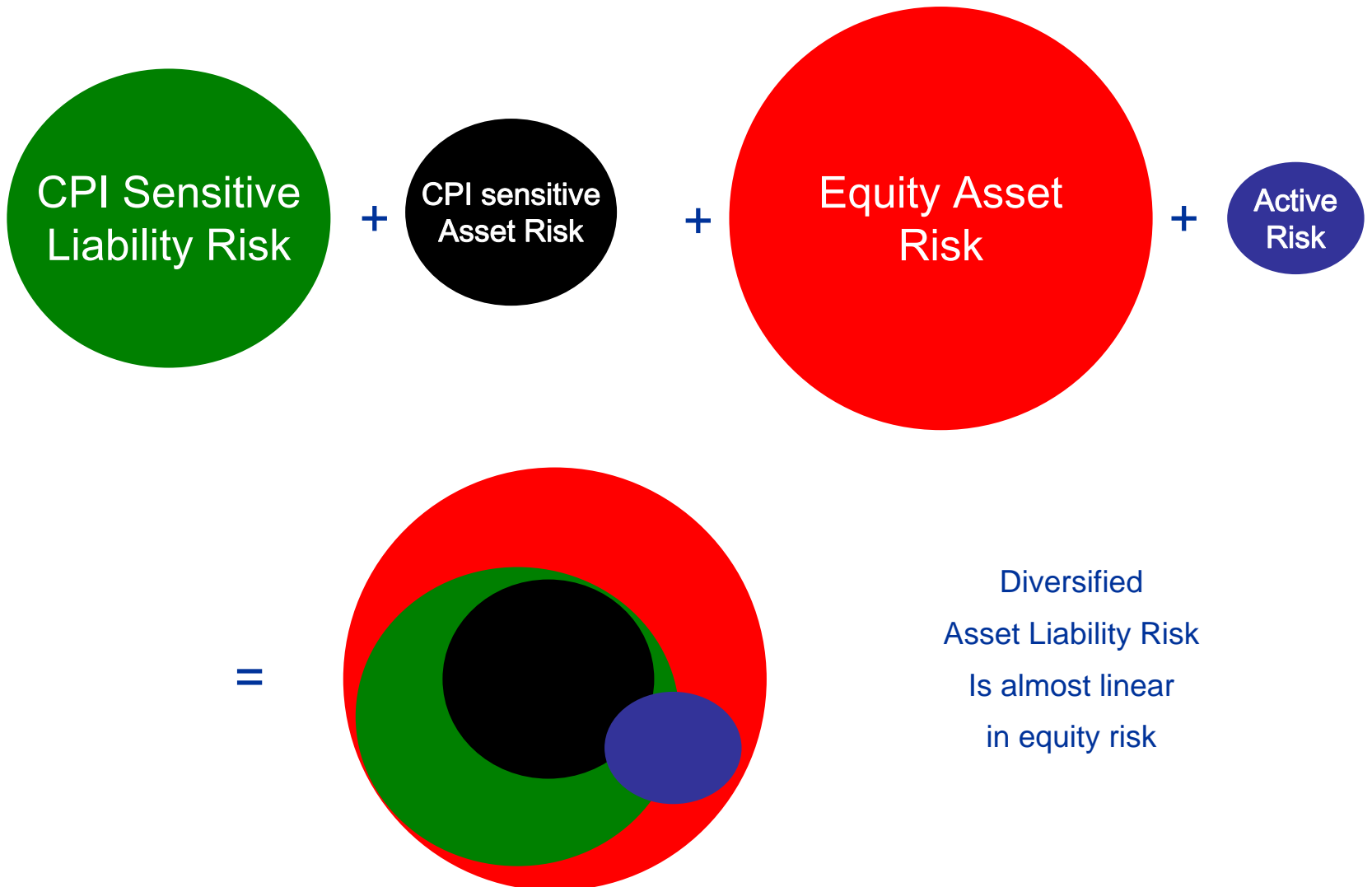
Understanding Risk

VFMC Risk Profile at \$40 Billion

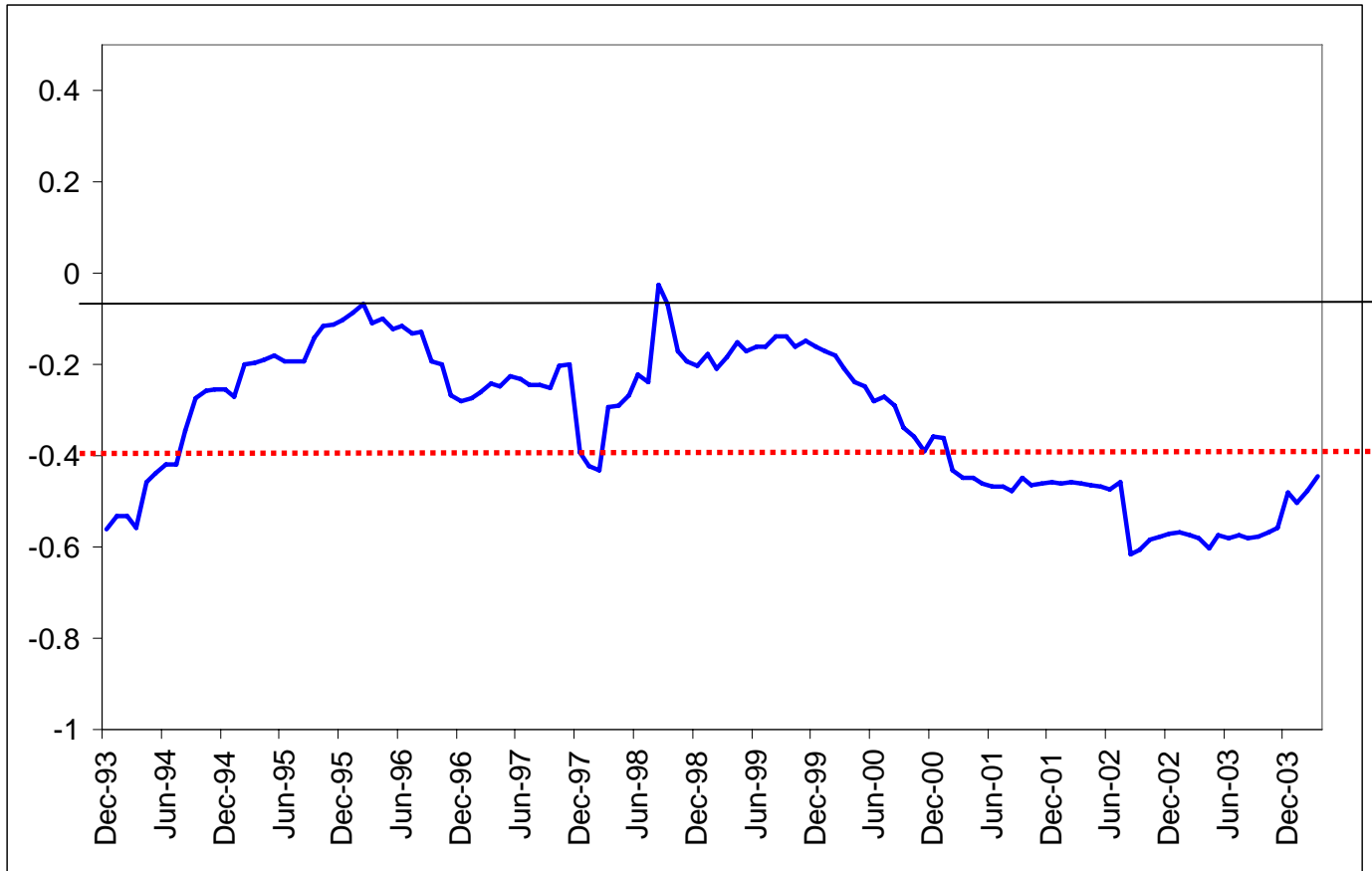
	1 in 6 Worst Outcome		1 in 100 Worst Outcome	
Annual	4000	10.0%	12000	30.0%
Monthly	1155	2.9%	3464	8.7%
Weekly	553	1.4%	1658	4.1%
Daily	250	0.6%	750	1.9%
Hourly	88	0.2%	265	0.7%



Managing The Right Risks (with real liabilities)



Active Risk Negatively Correlated with Passive Risk



Intuitively: good managers select assets that have higher return on risk than passive index



Raising Returns with Alternatives?

□ Includes wide range of assets and instruments

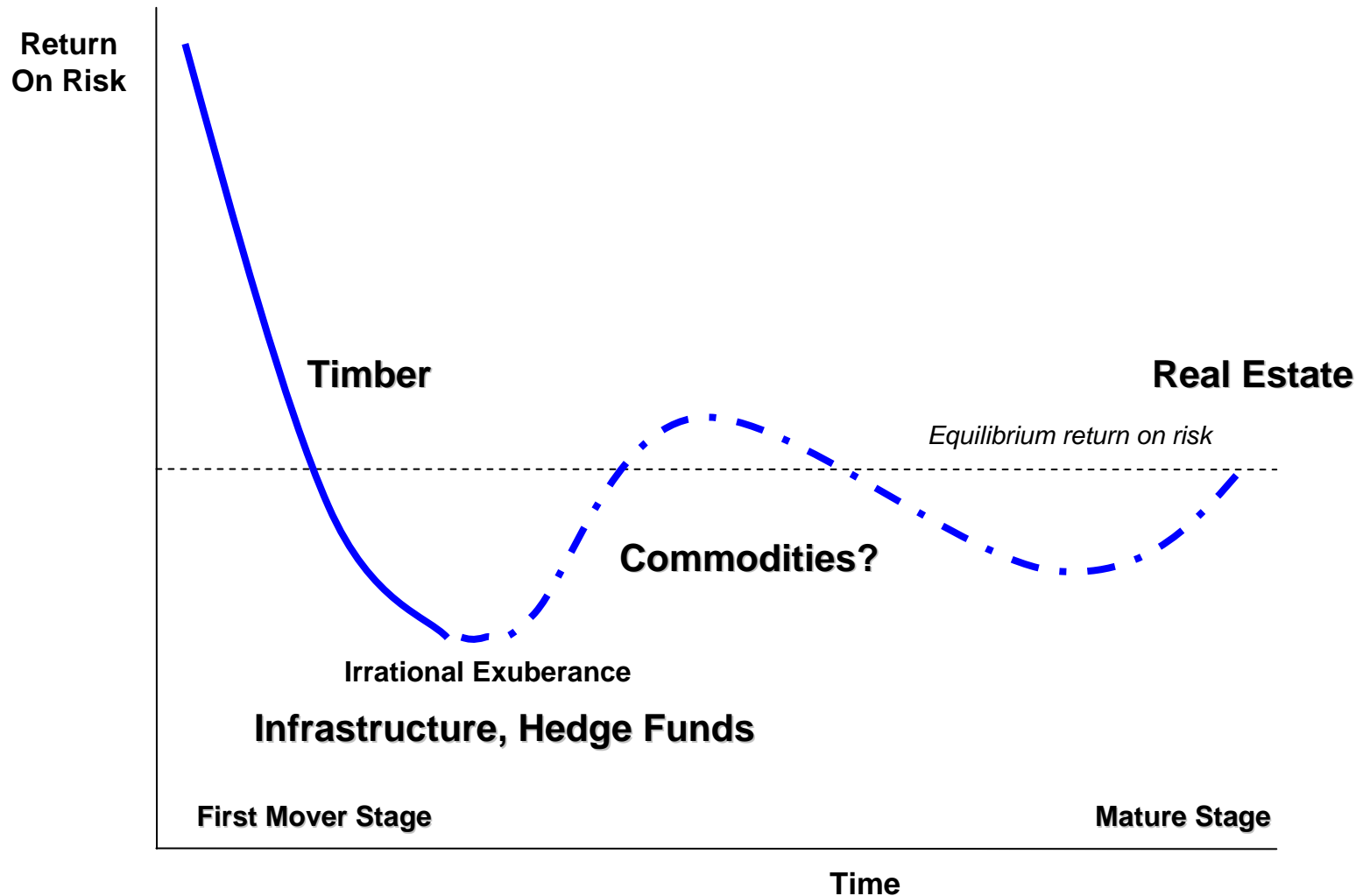
- Property, Infrastructure and Timberland
- Commodities
- Private equity
- Absolute Return Strategies

□ Alternatives: a matter of perspective

- Investments that promise better return on risk than long-only holdings of stocks and bonds
- Investments in inefficient markets lacking history to get a good fix on return/risk



Alternative Assets: Stages of Maturity



Pension Adequacy

- ❑ **Current generation will have to work longer than they may want to because they did not save enough**
- ❑ **People in their 20s and 30s who manage their 9% superannuation contributions properly will *on average* be OK**
- ❑ **Averages include some people who outlive their assets and some who leave inheritances**



Replacing the Longevity Hedge of DB plans

- ❑ **DB is in principle a better model if risk is priced well and governance is good**
- ❑ **DC or Accumulation is more expensive and lacks the self-insurance against longevity risk**
- ❑ **DC should include a longevity risk feature: covers all payments after age 85**
 - Cost should be manageable, particularly if funds can cooperate on self-insurance



Conclusion

- ❑ **Current savings insufficient for boomers**
- ❑ **Clients must temper return expectations**
- ❑ **Need more efficient superannuation management**
- ❑ **Must find solution to longevity risk issue**

