Towards a Sustainable Retirement Plan

Key variables, common pitfalls & “safe” guidelines

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Investment Research

Please note that the following material (tables and graphs) shown in the presentation are based on my own research and analyses.

The Basic (and simple) Premise…

"Designing" a sustainable retirement plan

What are reasonable net return expectations, savings rates and contribution periods?

Targeted replacement rate = 75%

The net real return required for different savings rates & contribution periods

Contribution period (years)	Savings rate (% of gross income)				
	10.0%	12.5%	15.0%	17.5%	20.0%
30	8.1%	6.9%	6.0%	5.1%	4.4%
35	6.3%	5.2%	4.4%	3.7%	3.0%
40	4.9%	4.0%	3.3%	2.6%	2.1%
45	4.0%	3.2%	2.5%	1.9%	1.4%

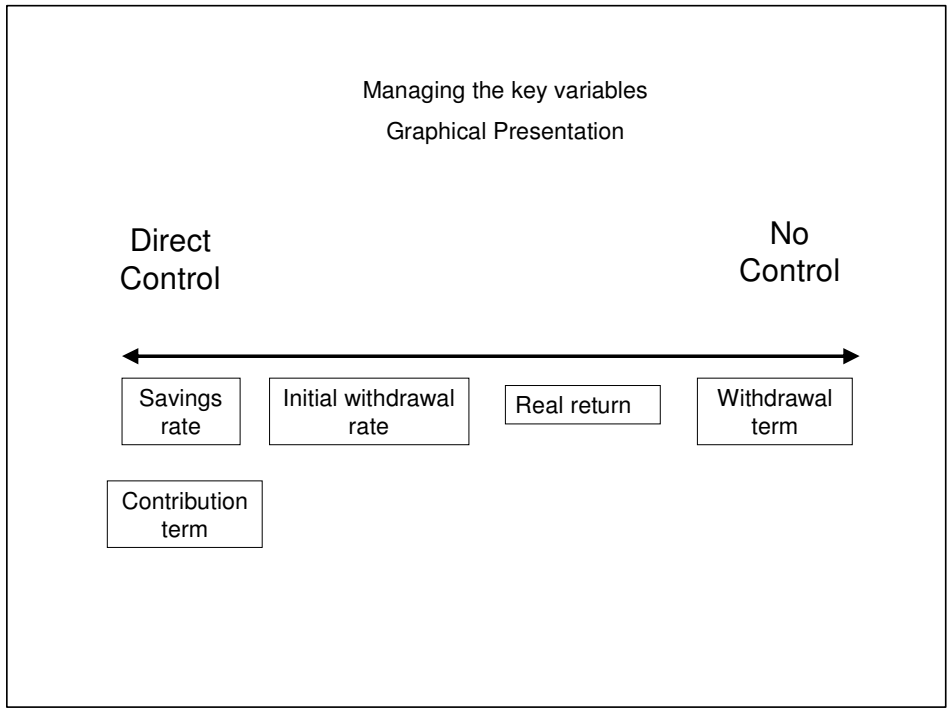
The Basic Premise…

Targeted replacement rate = 100%

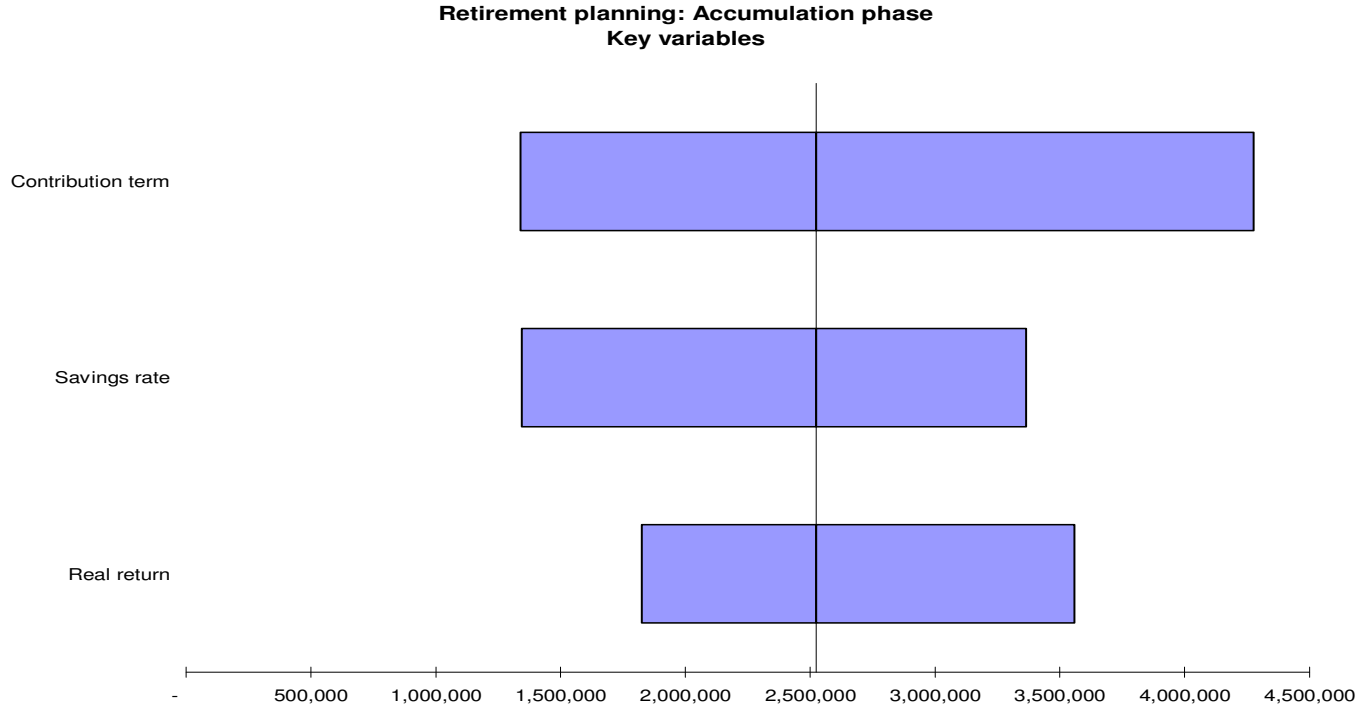
The net real return required for different savings rates & contribution periods

Contribution period (years)	Savings rate (% of gross income)				
	10.0%	12.5%	15.0%	17.5%	20.0%
30	9.6%	8.4%	7.5%	6.7%	6.0%
35	7.5%	6.5%	5.7%	5.0%	4.4%
40	6.1%	5.2%	4.5%	3.8%	3.3%
45	5.0%	4.2%	3.6%	3.0%	2.5%

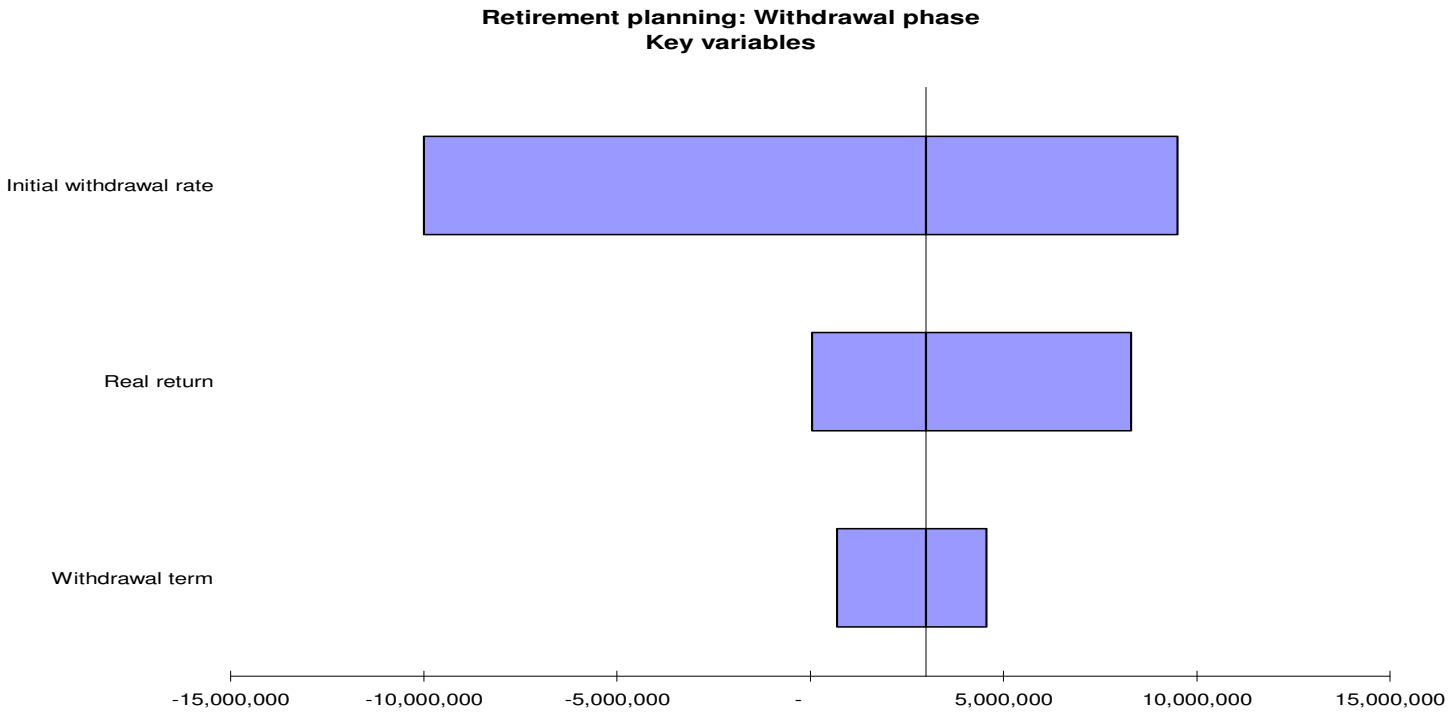
Retirement planning:
The key variables at play…



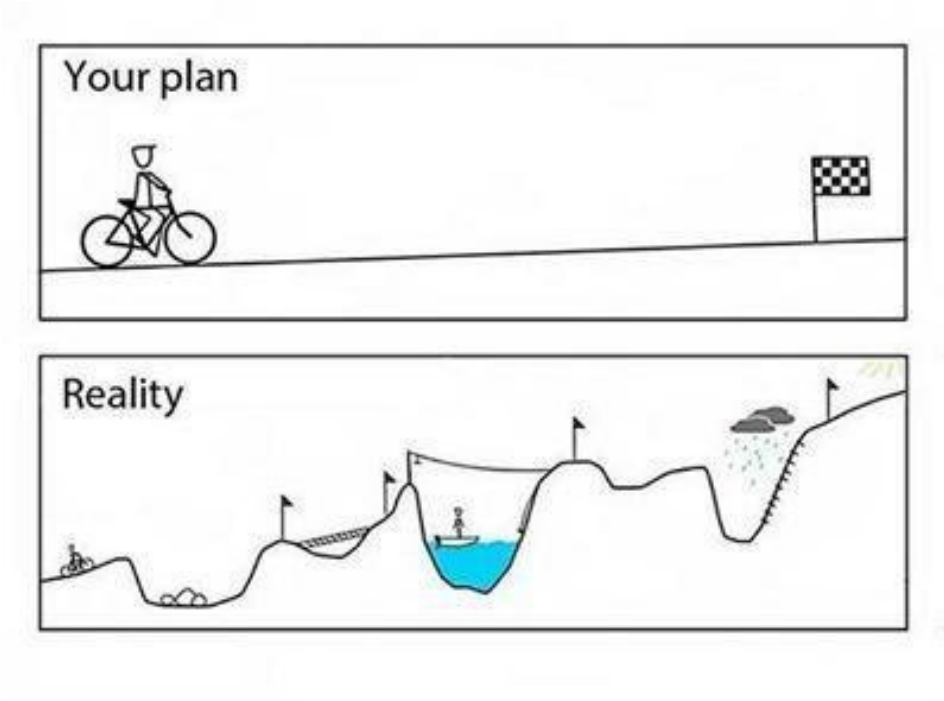
The relative importance of key variables – Pre-retirement phase



The relative importance of key variables – Post-retirement phase



A plan is a plan, and not necessarily how the reality will unfold…



Beware of the many pitfalls (and ambitious assumptions)…

- Early withdrawals & investment costs
- Real return assumptions
- Targeting X retirement capital at retirement
- Inadequate savings rates and contribution periods
- Retiring too early
- “De-risking” one’s pre- and post-retirement portfolio
- Initial drawdown rate at retirement

Pitfalls of retirement planning…

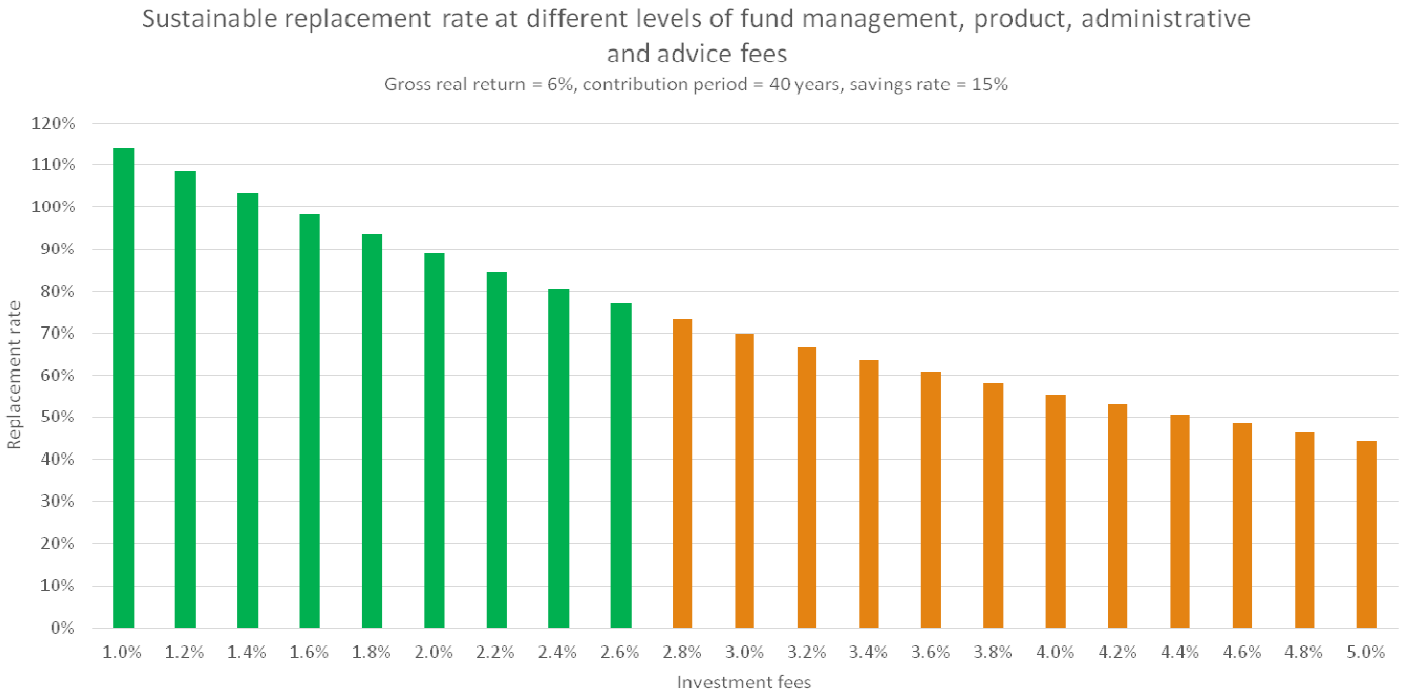
- How early withdrawals and investment costs (no value added) can wreck your retirement plan

  Graphical illustration:

- Green bars = at least a 75% replacement rate at retirement
- Orange bars = not meeting a 75% replacement rate at retirement

“Party spoilers”….early withdrawals *n* years prior to retirement…

“Party spoilers”…investment costs#



Assuming no value added

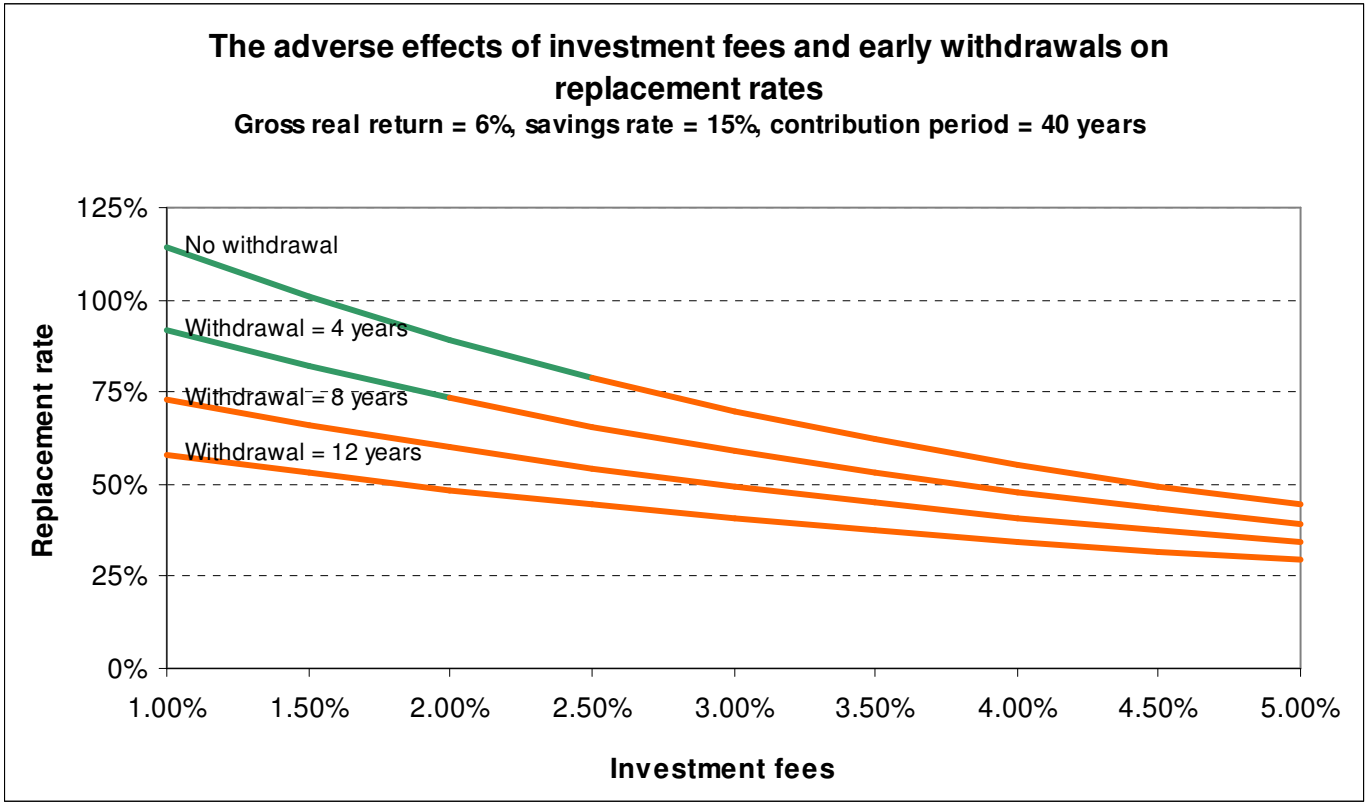
And when combined…

For example, gross real return = 6% p.a., contribution period = 40 years, savings rate = 15%

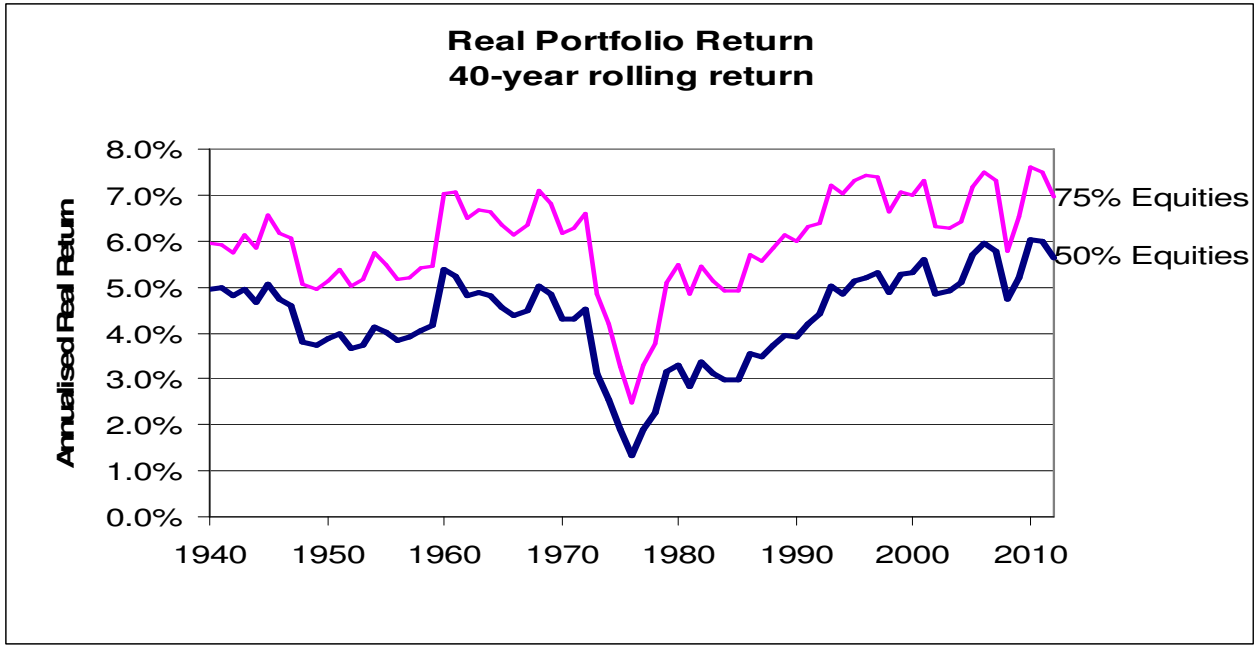
Replacement rate attained

Charges	1.0%	1.5%	2.0%	2.5%	3.0%
No withdrawal	114%	101%	89%	79%	70%
Withdrawal after two years	102%	91%	81%	72%	64%
Withdrawal after four years	92%	82%	73%	66%	59%
Withdrawal after six years	82%	74%	66%	60%	54%
Withdrawal after eight years	73%	66%	60%	54%	49%
Withdrawal after ten years	65%	59%	54%	49%	45%
Withdrawal after twelve years	58%	53%	48%	44%	41%
Withdrawal after fourteen years	51%	47%	43%	40%	37%

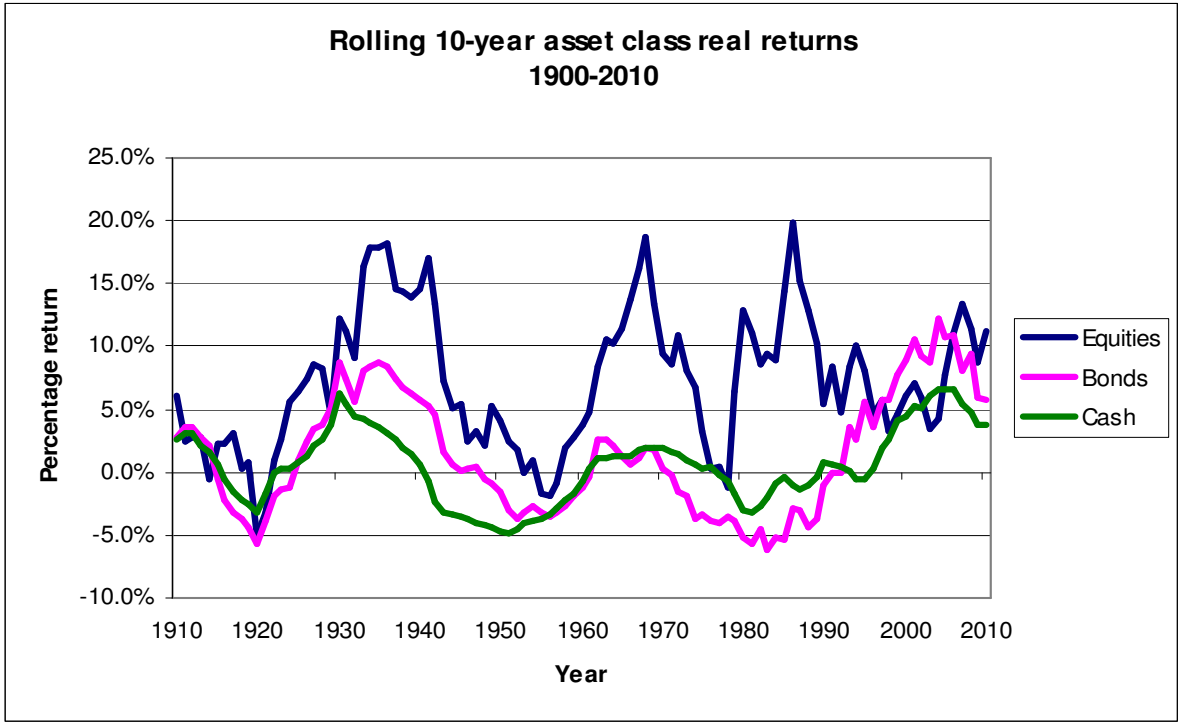
Party spoilers…



Faulty assumptions…long-term portfolio returns… not a constant!



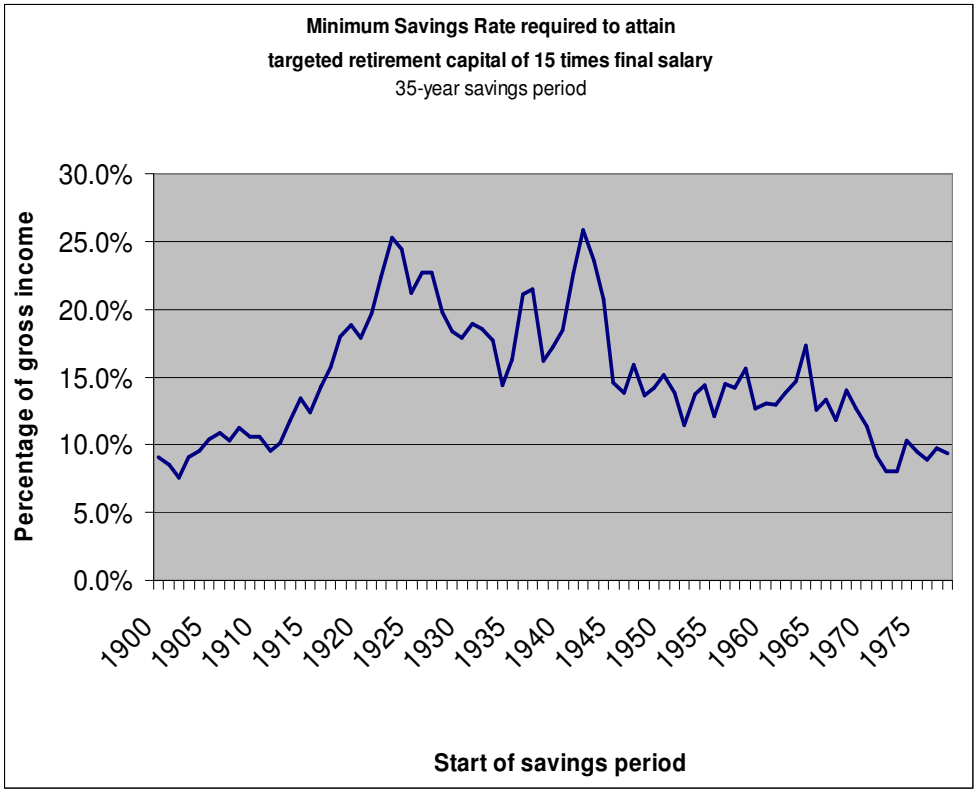
Long-term asset class real returns

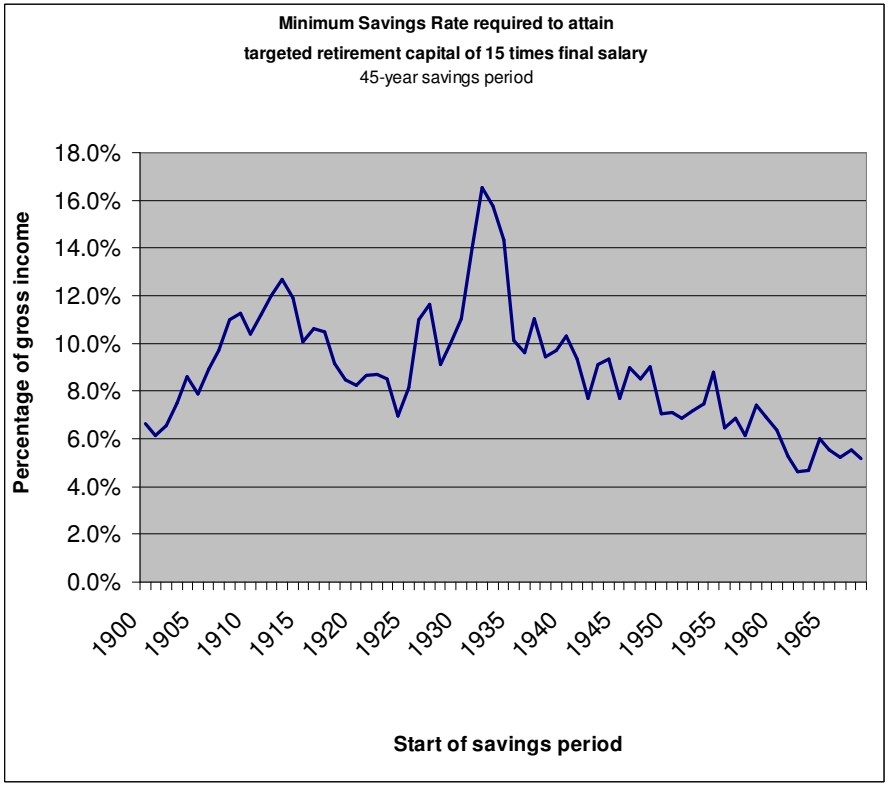


Note, when planning for retirement, financial planners often use constant return assumptions, but the reality is very different!

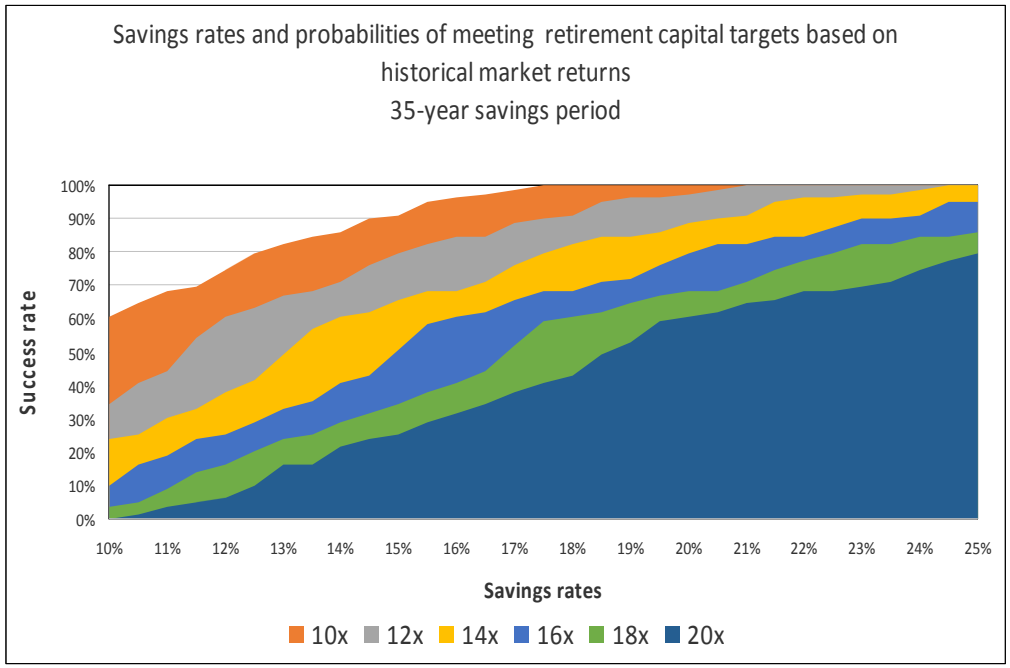
e.g. How much to save to reach certain amount of retirement capital (or factor of final salary) at retirement *n* years from now?

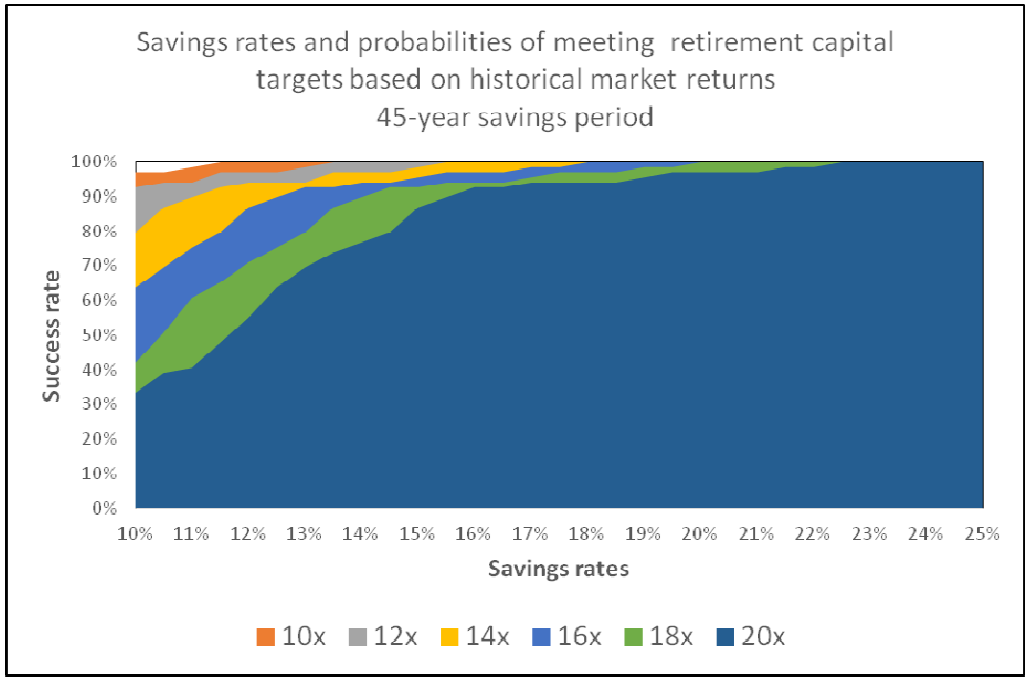
Targeting *x* amount of retirement capital at retirement…



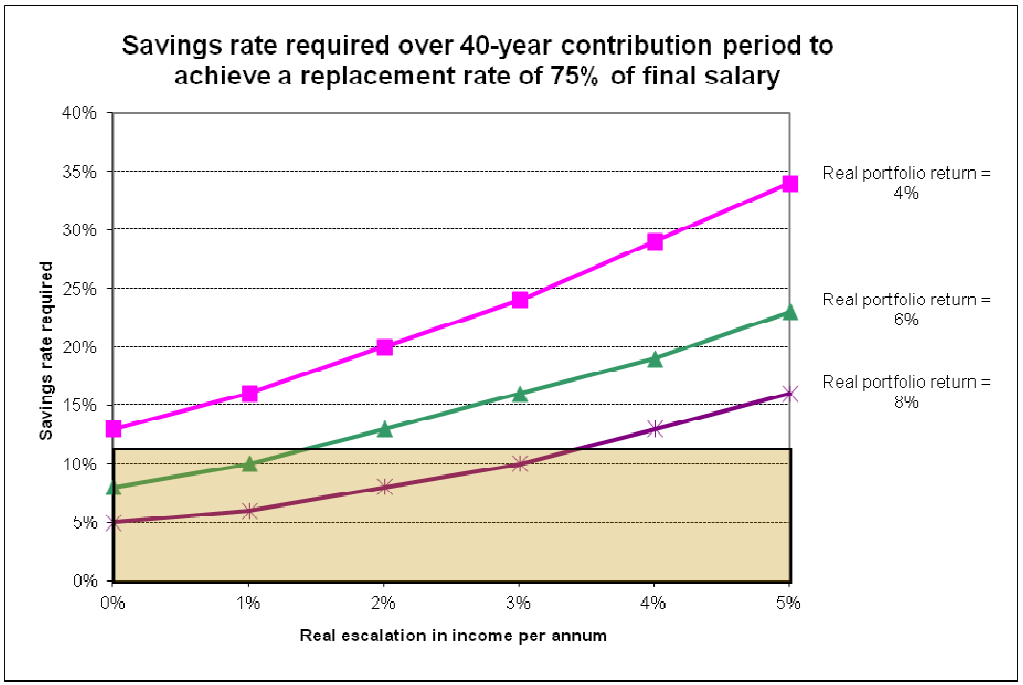


Saving for retirement…contribution period (term) is the key…

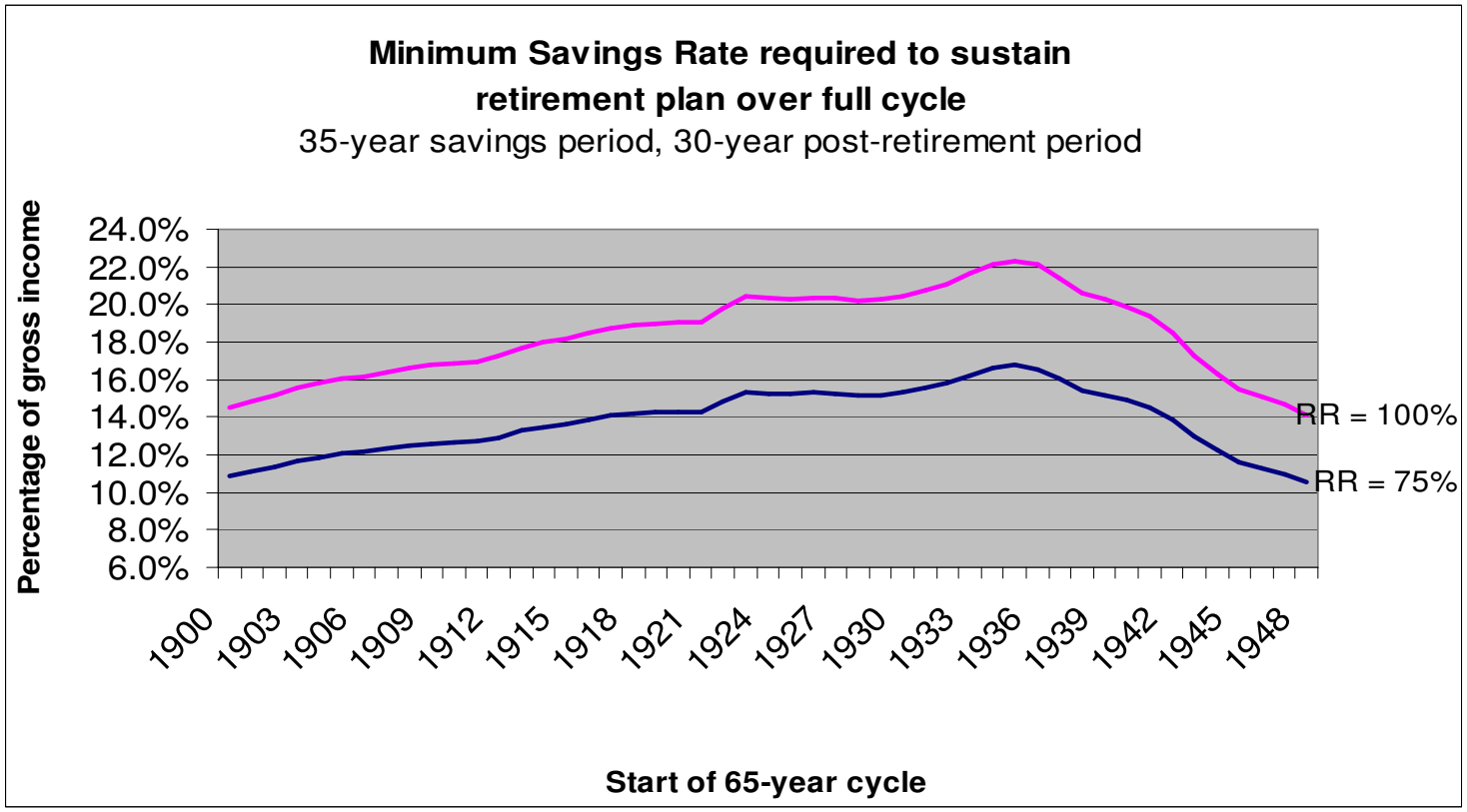




Saving for retirement…what if my annual gross income escalates faster than the inflation rate?



“Safe” savings rates…



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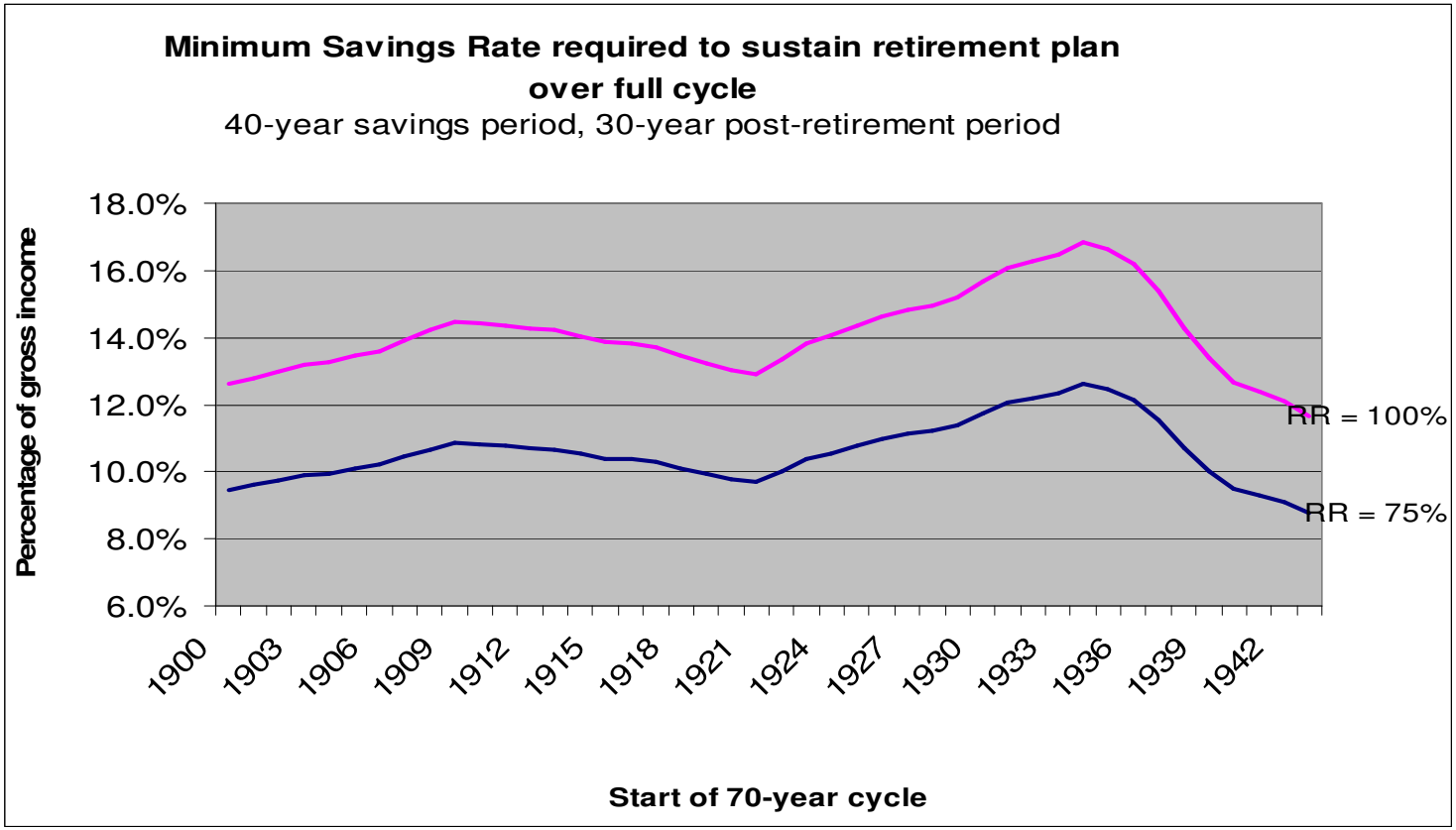

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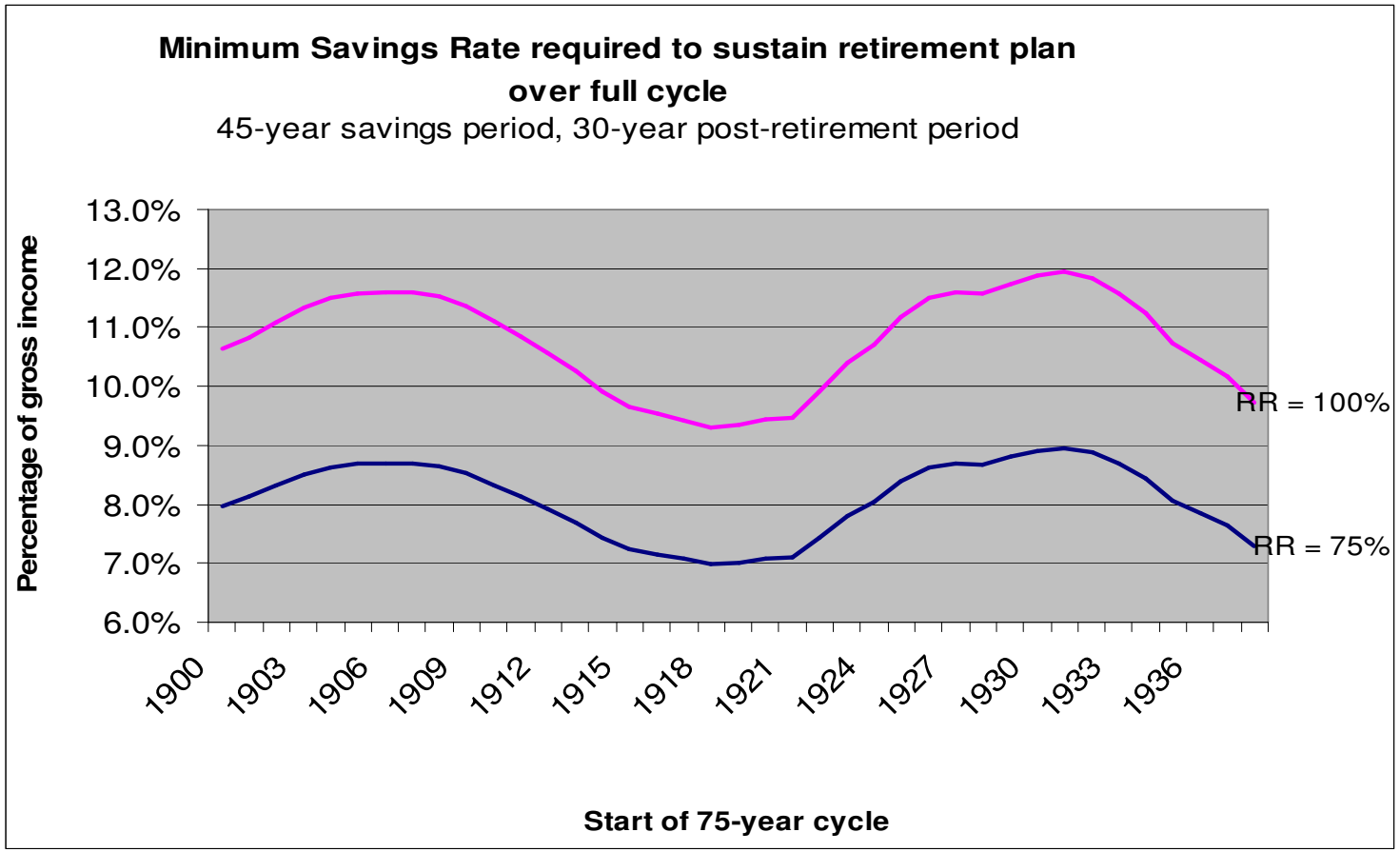
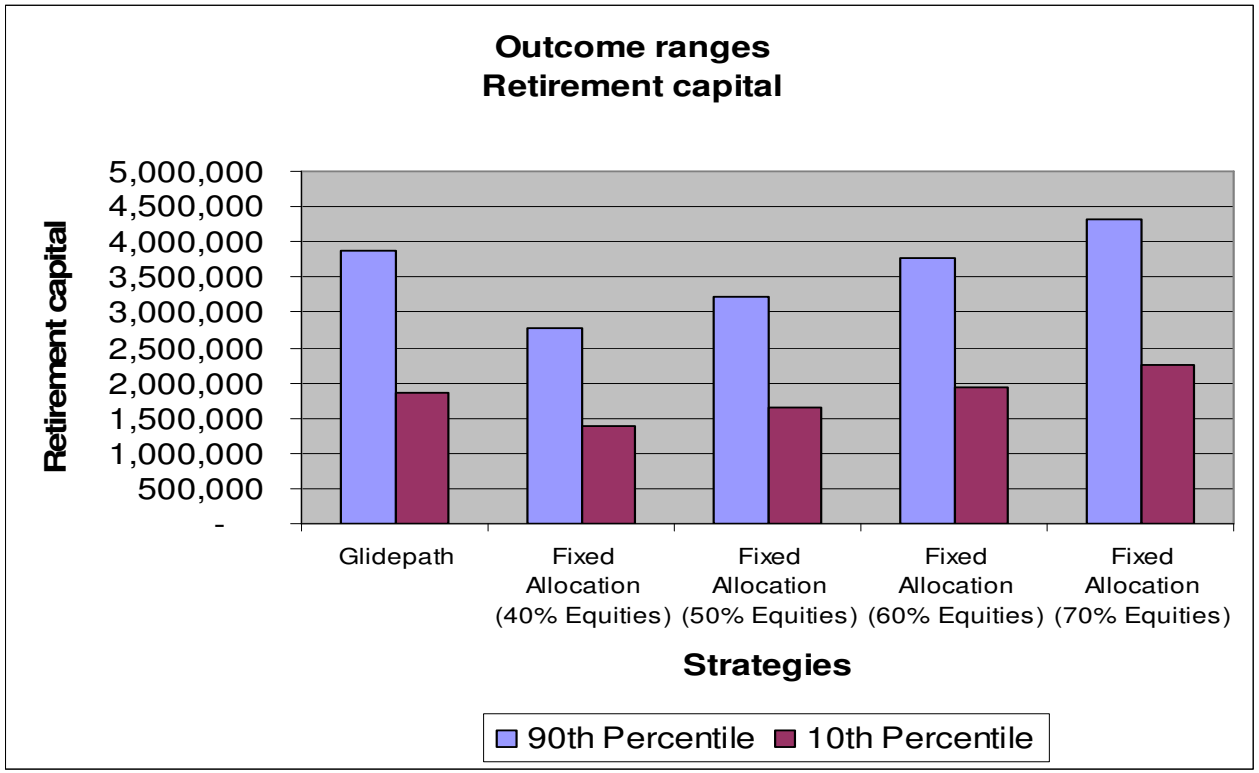


Nearing retirement…
"Life-stage" (glide-path) approach?

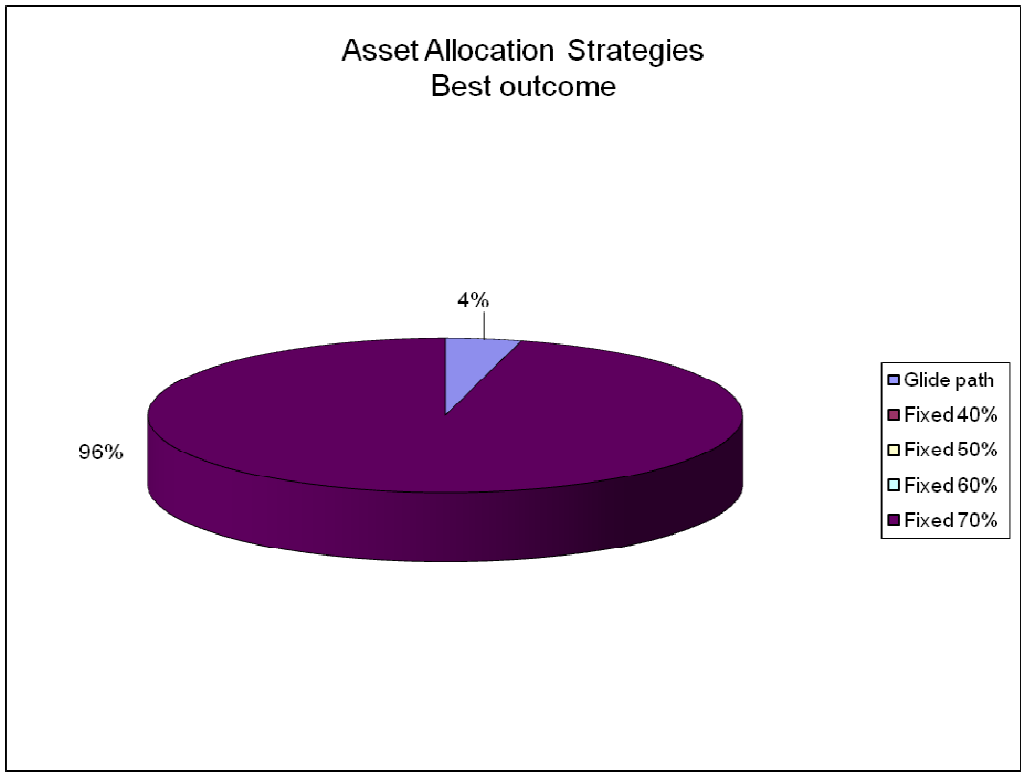
"De-risking" your investment portfolio

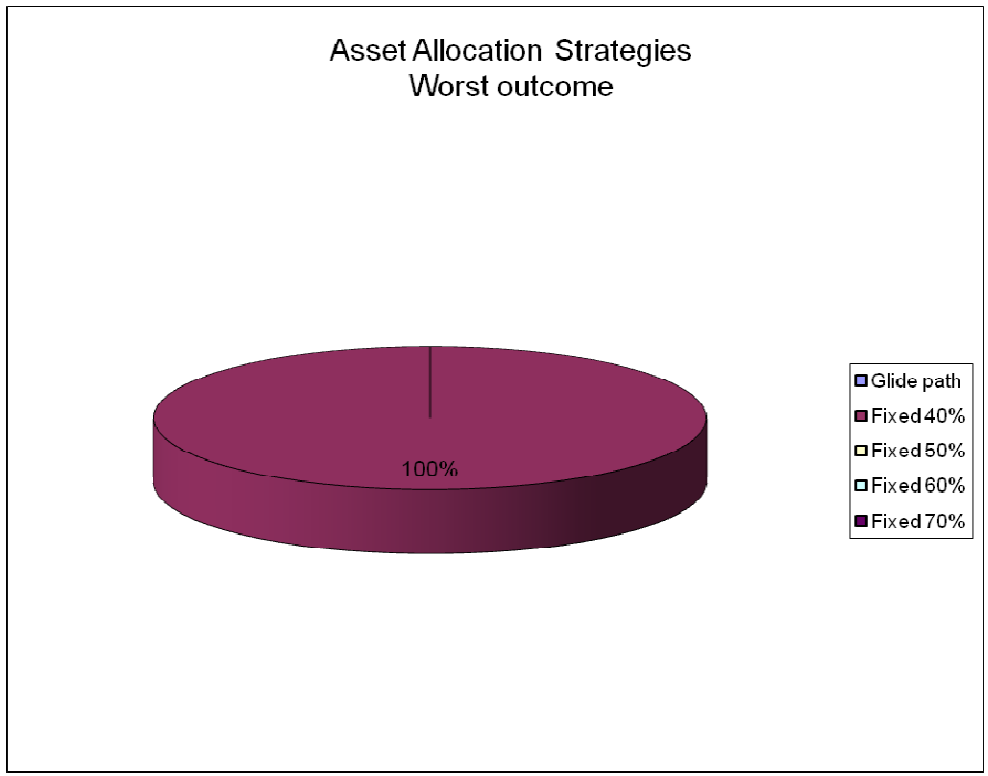
- "Risk comes from not knowing what you're doing" [Warren Buffett]
- "In investing, what is comfortable is rarely profitable" [Robert Arnott]
- "To be alive at all involves some risk" [Harold MacMillan]
- "Adventure without risk is Disneyland" [Doug Coupland]
- "Investing means putting your money on something that has a good chance of winning in the short to medium term, and an even better, if not dead-certain, chance of winning in the long term" [Paul Clitheroe]

“Life-stage” versus a fixed asset allocation approach…

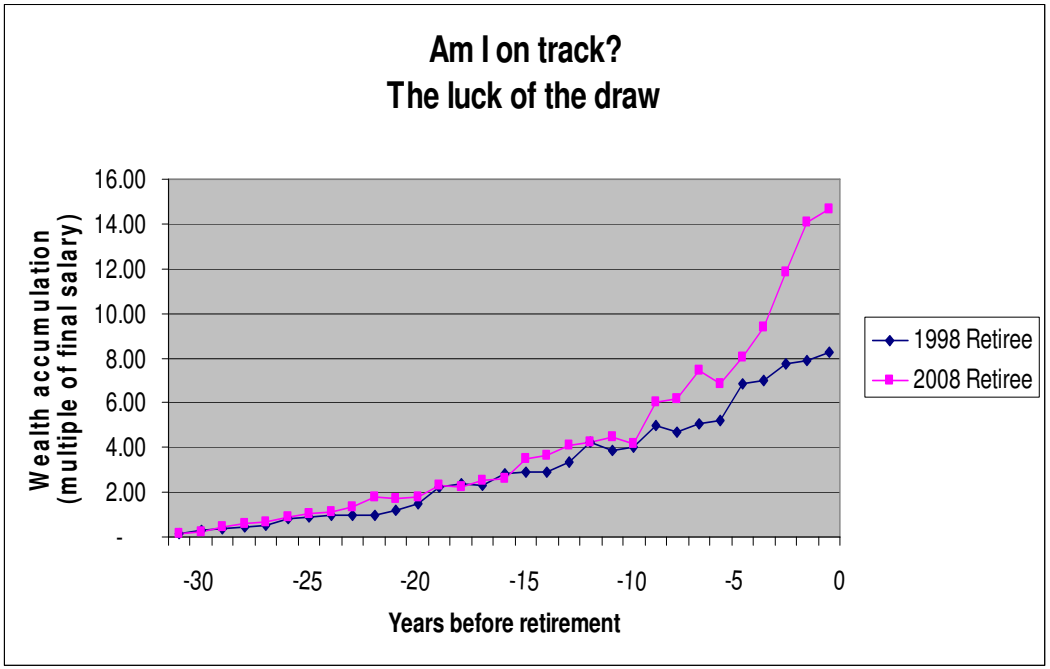


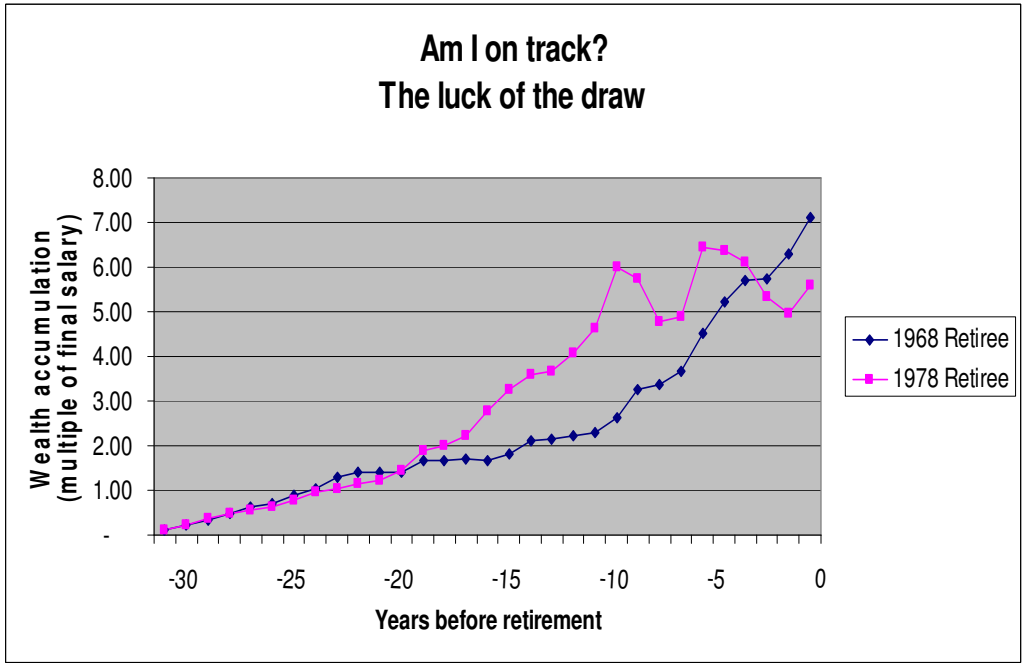
“Life-stage” versus a fixed asset allocation approach…





Nearing retirement…what do we know?
Actually not a lot…





Nearing retirement…predictability of final retirement values *n* years from retirement…

Years prior to retirement	Portfolio exposure to risky assets					
	0%	25%	50%	60%	75%	100%
-10	0.20	0.14	0.10	0.10	0.08	0.07
-9	0.29	0.20	0.13	0.13	0.10	0.07
-8	0.39	0.28	0.17	0.16	0.12	0.09
-7	0.50	0.37	0.23	0.21	0.15	0.12
-6	0.60	0.47	0.29	0.26	0.19	0.15
-5	0.70	0.56	0.36	0.31	0.23	0.17
-4	0.79	0.66	0.45	0.39	0.28	0.20
-3	0.86	0.75	0.55	0.49	0.38	0.29
-2	0.92	0.85	0.69	0.64	0.54	0.44
-1	0.97	0.94	0.86	0.83	0.76	0.69

“Safe” retirement age…current age & accumulated retirement savings

90% Success Rate (based on historical market returns)

Safe Retirement Age	Age						
Retirement wealth multiple	**Age 40**	**Age 45**	**Age 50**	**Age 55**	**Age 60**	**Age 65**	**Age 70**
-	77	78	81	83	85	86	88
3	71	73	76	78	81	83	85
5	66	69	72	74	78	80	83
8	62	65	69	72	75	78	81
11	59	63	67	70	73	76	78
13	57	61	64	68	71	74	76
16	54	58	62	65	69	72	73
19	52	56	60	63	67	69	71
21	50	54	58	61	64	66	70
24	48	52	55	59	62	65	70
27	45	49	53	56	60	65	70
29	43	47	51	55	60	65	70
32	41	45	50	55	60	65	70

At retirement….
“Safe” drawdown rates

Success rate…based on historical market returns

Low-equity portfolio

25% equities, 75% bonds and cash

Withdrawal rate	9%	8%	7%	6%	5%	4%	3%	2.50%
After 5 years	91%	100%	100%	100%	100%	100%	100%	100%
After 10 years	23%	39%	60%	87%	100%	100%	100%	100%
After 15 year	4%	16%	24%	46%	71%	100%	100%	100%
After 20 years	2%	2%	10%	20%	48%	78%	100%	100%
After 25 years	1%	2%	2%	10%	29%	65%	96%	100%
After 30 years	0%	1%	2%	4%	17%	55%	89%	100%

Success rate…initial drawdown rate at retirement

Medium-equity portfolio

50% equities, 50% bonds and cash

Withdrawal rate	9%	8%	7%	6%	5%	4%	3%	2.50%
After 5 years	91%	100%	100%	100%	100%	100%	100%	100%
After 10 years	34%	55%	76%	90%	100%	100%	100%	100%
After 15 year	21%	29%	39%	65%	87%	100%	100%	100%
After 20 years	7%	18%	30%	49%	68%	96%	100%	100%
After 25 years	2%	6%	18%	35%	59%	85%	100%	100%
After 30 years	2%	2%	11%	30%	54%	78%	99%	100%

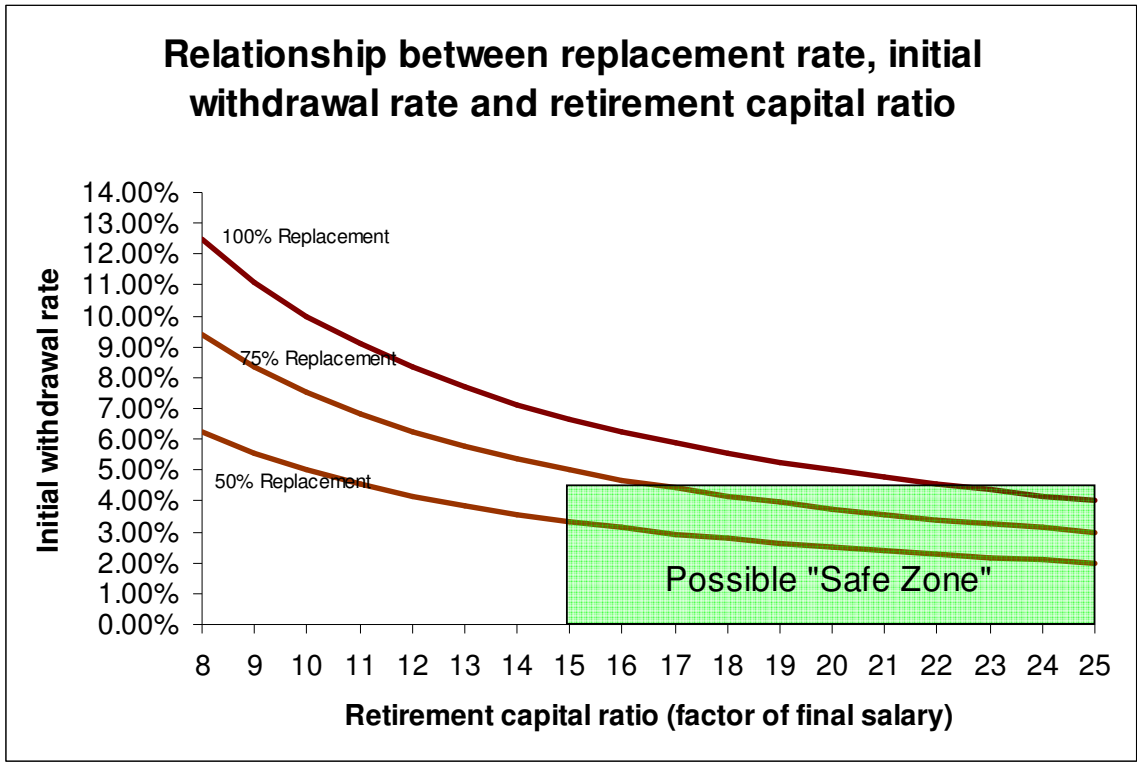
Success rate…initial drawdown rate at retirement

High-equity portfolio

75% equities, 25% bonds and cash

Withdrawal rate	9%	8%	7%	6%	5%	4%	3%	2.50%
After 5 years	89%	99%	100%	100%	100%	100%	100%	100%
After 10 years	46%	63%	79%	94%	100%	100%	100%	100%
After 15 year	29%	38%	55%	74%	91%	100%	100%	100%
After 20 years	26%	30%	45%	62%	79%	98%	100%	100%
After 25 years	18%	27%	37%	54%	72%	98%	100%	100%
After 30 years	11%	23%	35%	54%	70%	95%	100%	100%

“When do I’ve enough?”



Thinking about “retirement reforms”…

•Consider the cyclical nature of real returns over time and beware that we experienced in recent times relatively high real returns (prosperous times) …check assumptions…

•Cost-effective investment strategies, contribution periods, savings rates, drawdown rates

•But don’t focus only on the cost aspect of investing without addressing issues regarding capital preservation, e.g. unnecessary early withdrawals from existing retirement funds. Then again, irresponsible, unsecured borrowing (via the unsecured lending industry) funding lavish lifestyles is perhaps a greater “sin” than so-called “expensive” investments…

THANK YOU

DRW Investment Research

Disclaimer: