Session 15: The Science Behind a Successful Retirement

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OLIVER WYMAN

The Science Behind a Successful Retirement

2019 Society of Actuaries – Life and Annuity Symposium

Tampa, May 20th, 2019

Nicholas Carbo, FSA, MAAA

MARSH & McLENNAN COMPANIES

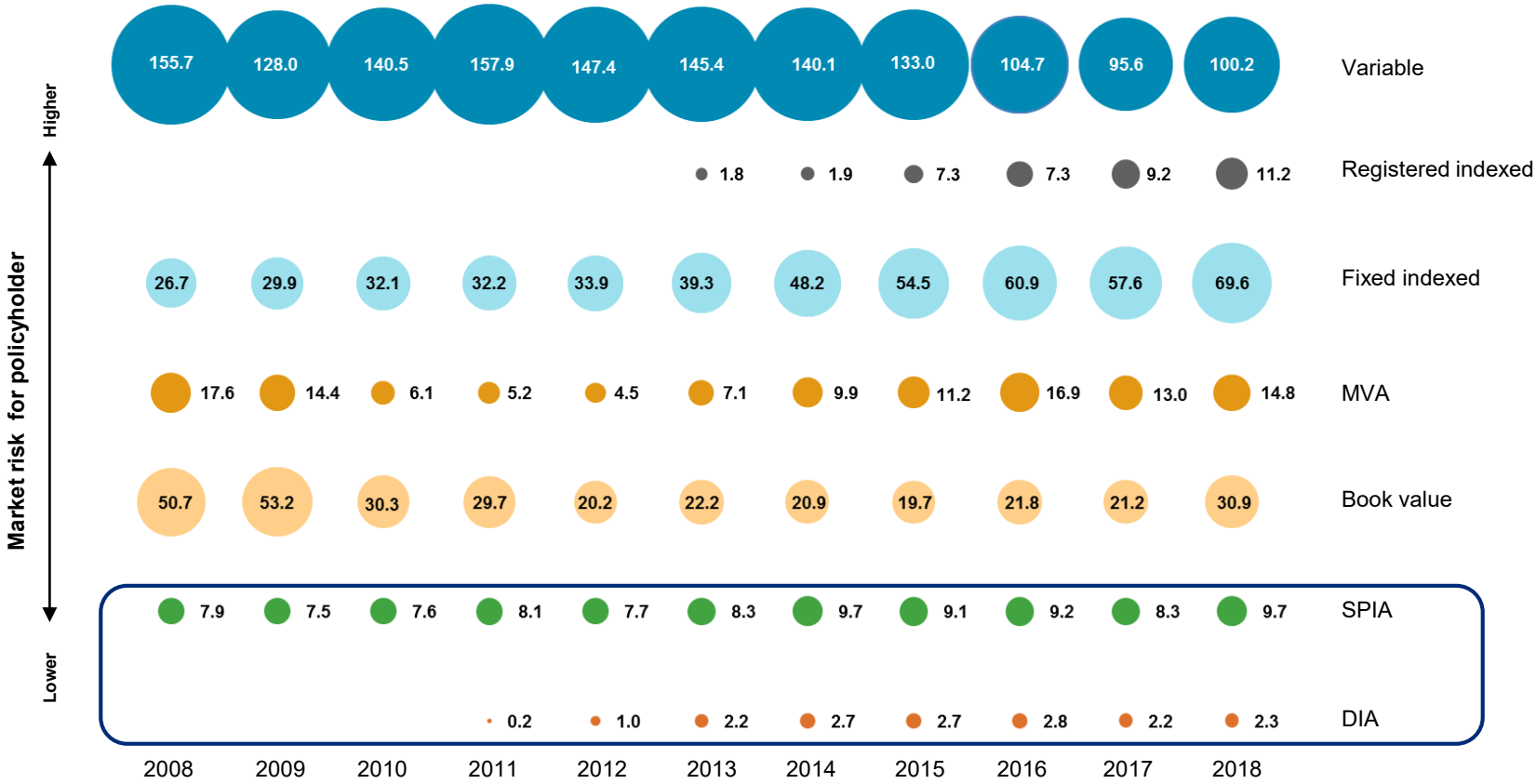
Agenda

1 **Annuity market and income trends**

2 **Income guarantee products**

3 **Product risks**

Industry annuity sales 2008 – 2018
Pure income annuity sales remain low



 Source: LIMRA. Variable sales shown are inclusive of registered indexed sales.

Top 10 annuity writers

In 2008, top annuity writers were stock companies with significant VA sales

2008 Top 10 annuity writers

Rank	Company	Structure	Sales	% VA
1	MetLife	Stock	20.0	70%
2	AIG	Stock	19.2	43%
3	ING	Foreign	16.2	86%
4	TIAA	Non-profit	14.4	100%
5	Lincoln	Stock	13.5	82%
6	AXA	Stock	13.4	100%
7	John Hancock	Foreign	11.3	84%
8	Prudential	Stock	11.3	91%
9	New York Life	Mutual	10.7	16%
10	Hartford Life	Stock	10.7	74%

2018 Top 10 annuity writers

Rank	Company	Structure	Sales	% VA
1	AIG	Stock	18.4	37%
2	Jackson National	Foreign	17.4	96%
3	New York Life	Mutual	14.2	20%
4	Lincoln	Stock	12.7	72%
5	Allianz	Foreign	11.5	21%
6	AXA	Stock	10.7	100%
7	TIAA	Mutual	10.4	100%
8	Nationwide	Mutual	10.3	45%
9	Pacific Life	Mutual	9.3	35%
10	Prudential	Stock	9.2	86%

The top 10 annuity writers continue to make up slightly more than 50% of the industry sales

Source: LIMRA

Top 10 annuity writers

Top writers now include writers who sell less VAs than in 2008

2008 Top 10 annuity writers

Rank	Company	Structure	Sales	% VA
1	MetLife	Stock	20.0	70%
2	AIG	Stock	19.2	43%
3	ING	Foreign	16.2	86%
4	TIAA	Non-profit	14.4	100%
5	Lincoln	Stock	13.5	82%
6	AXA	Stock	13.4	100%
7	John Hancock	Foreign	11.3	84%
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9	New York Life	Mutual	10.7	16%
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2018 Top 10 annuity writers

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8	Nationwide	Mutual	10.3	45%
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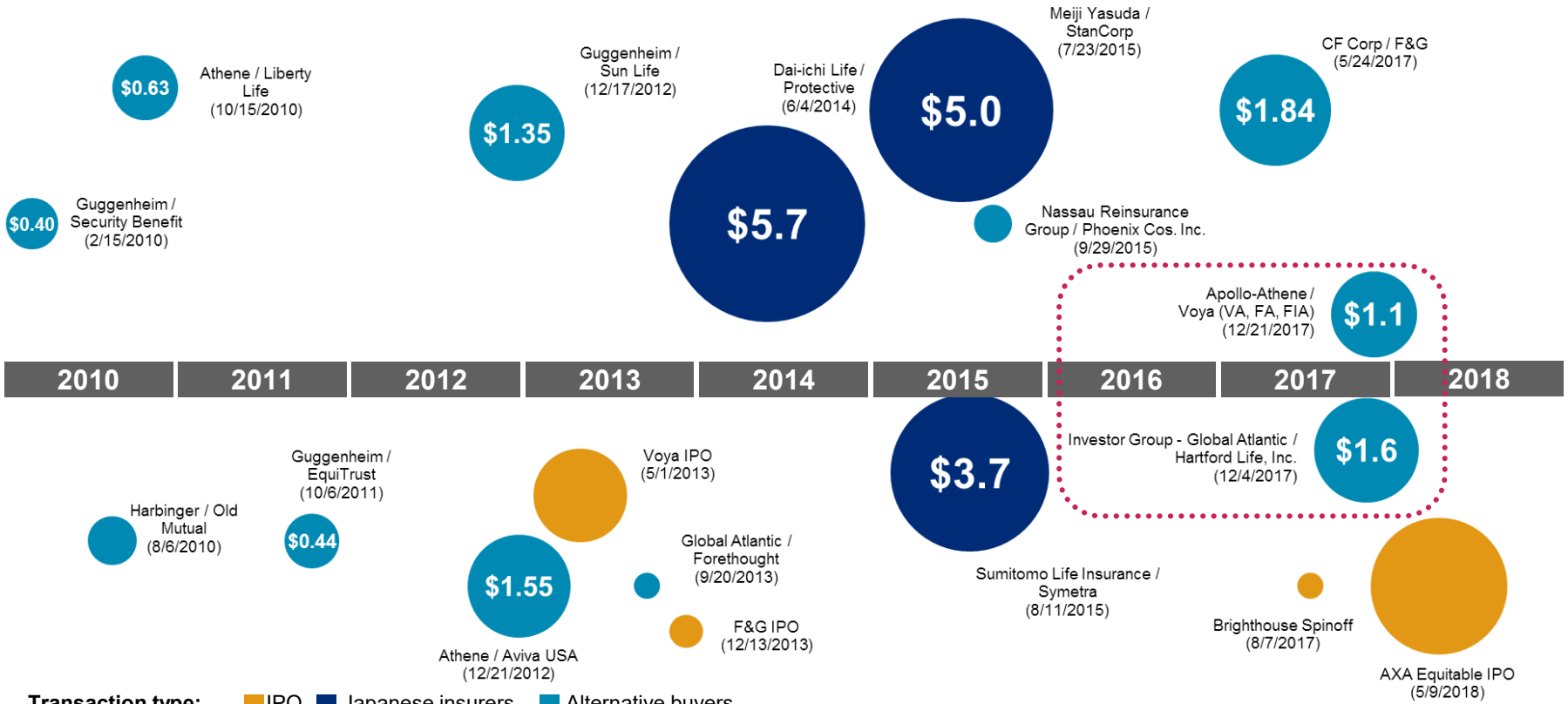
Exits from the top 10

Entrants into top 10

Source: LIMRA

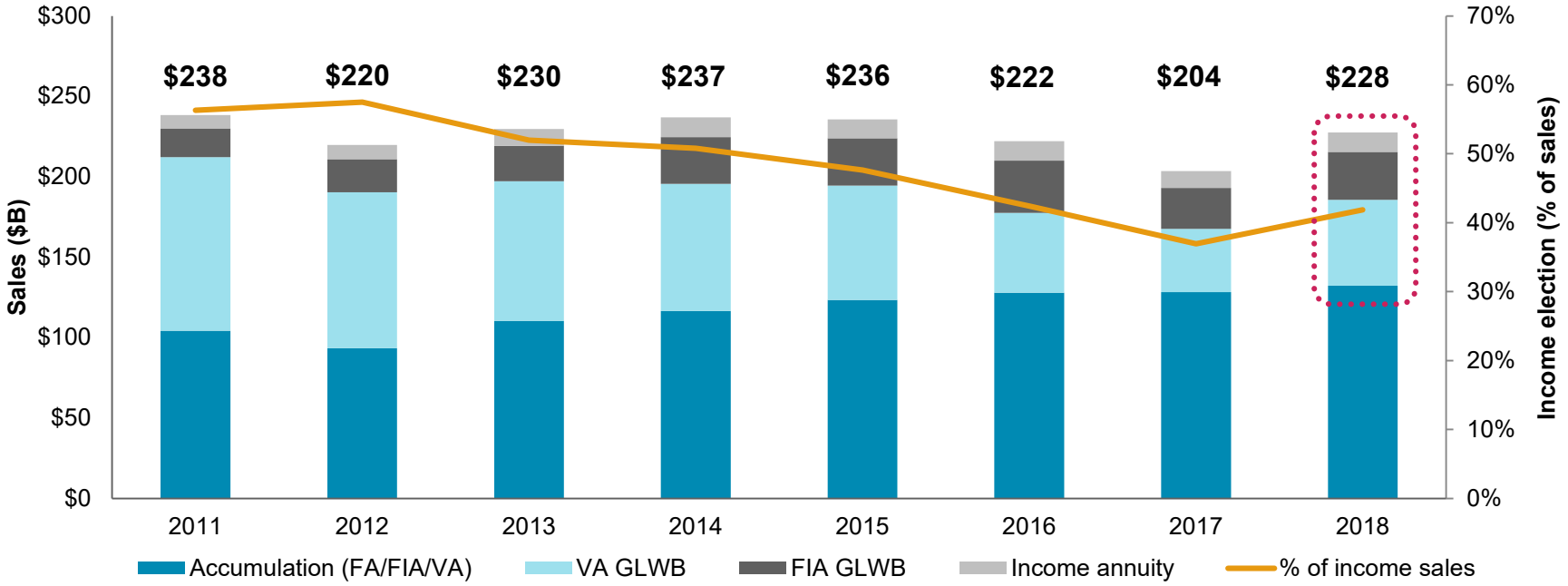
Recent acquisitions reshaped the FIA and VA markets

Acquirer/Seller (date)



Income vs. accumulation sales

2018 income sales saw a slight increase in VAGLBs, FIA GLWB and income annuities



VA GLWB sales declined sharply due to de-risking. Until 2016, this was partially compensated by rising FIA GLWB sales.

Source: LIMRA (GLWB election for 2018 is based on Q3 2018 election rates)

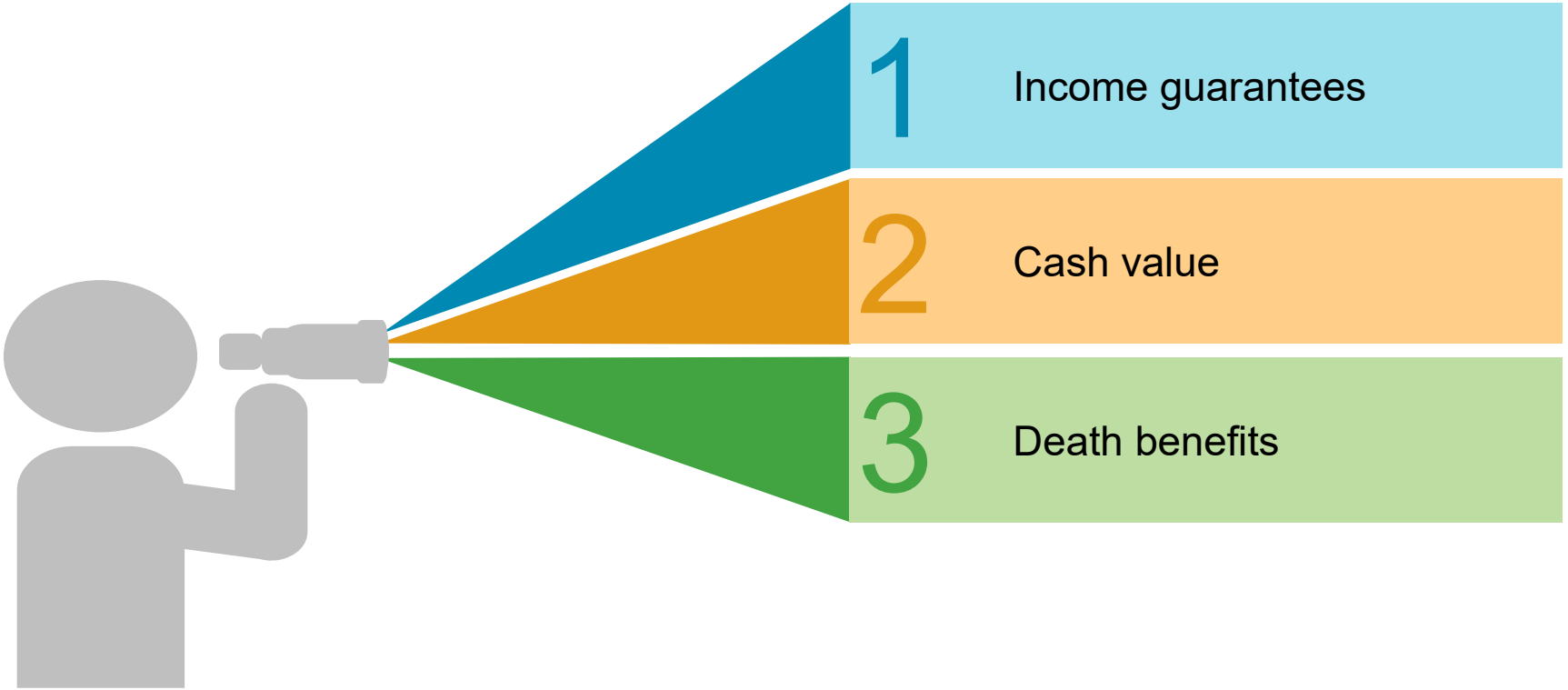
Customer options for guaranteed income

There are three major guaranteed income products in the market

		1 Income annuities	2 FIA GLWB	3 VA GLWB
Product features	**Income**	• Guaranteed income • Various payout structures available • Gender specific rates	• Guaranteed income • Single and joint life options • Unisex rates	• Guaranteed income • Single and joint life options • Unisex rates
	Cash value	• Cash value options limited	• GMSV (Guaranteed minimum surrender value) • Modest upside potential	• Full participation in market returns less fees • Subject to downside risk
	Death benefits	• Various death benefit options or no death benefit	• Account value returned on death • GMSV guaranteed upon death	• Account value returned on death • Most VA GLWB have no guaranteed death benefits • GMDB typically available
Pricing regime	**Primary pricing methodology**	• Real world	• Real world	• Risk neutral

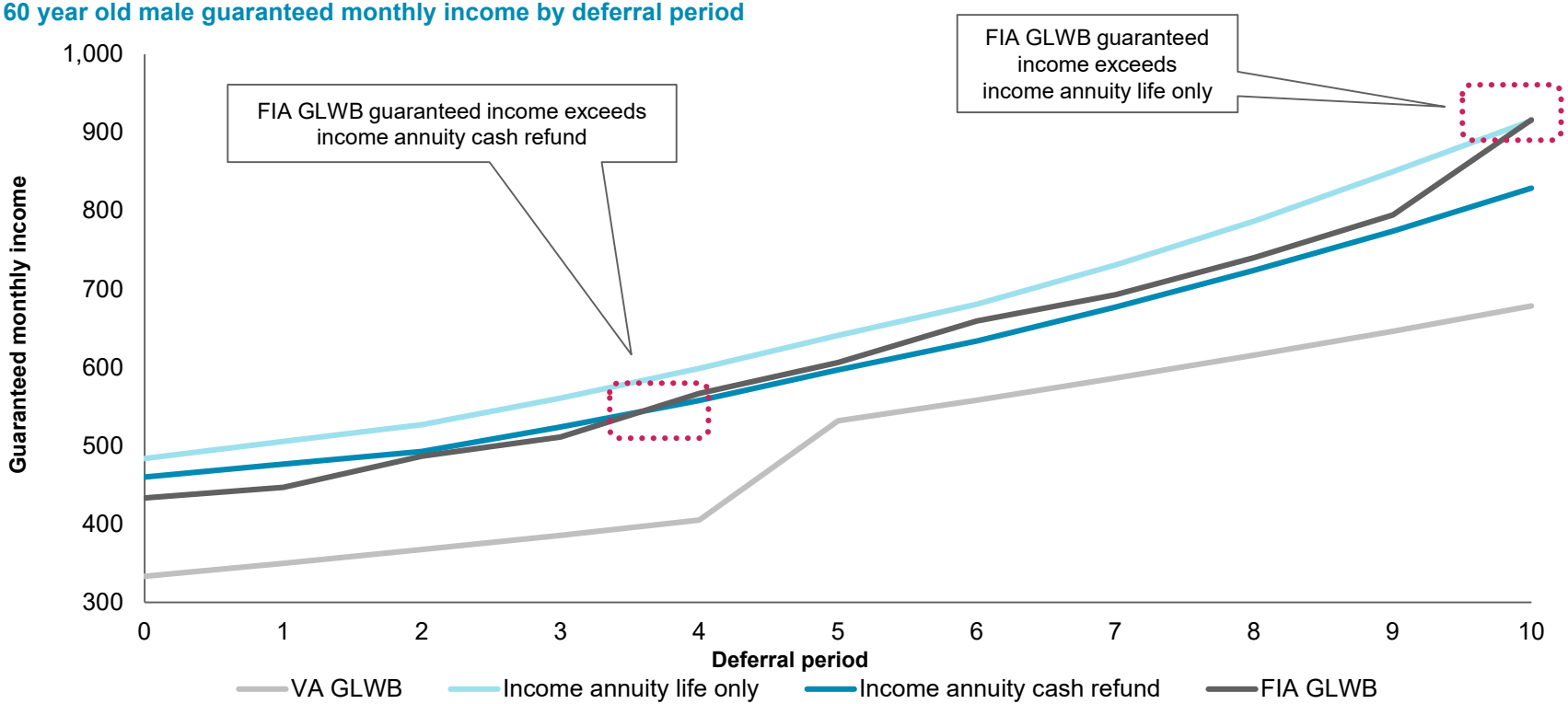
Product features analysis

We will sequentially examine product features from a consumer view



Guaranteed income rates by product and deferral
FIA GLWB income can exceed pure income annuities

60 year old male guaranteed monthly income by deferral period

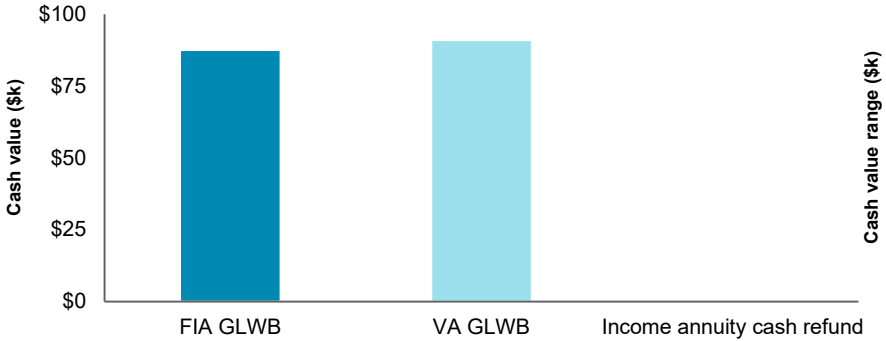


1.Income illustrated for a single premium of $100k
2. Rates based on common products in the marketplace

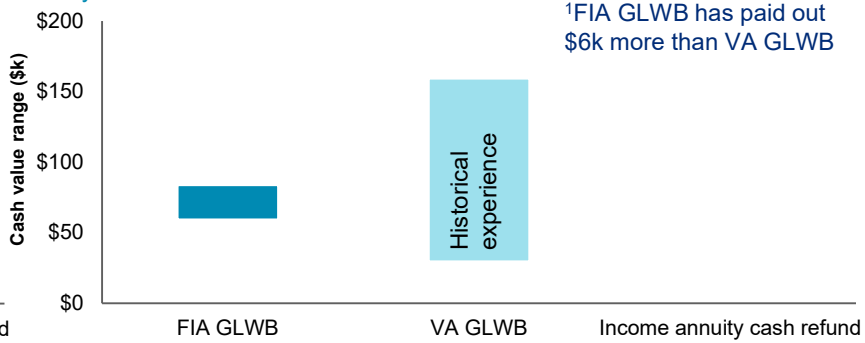
Cash value (immediate income scenario)
FIA provide stronger cash value guarantees but with very limited upside relative to VA

60 year old male with income starting at issue

At issue

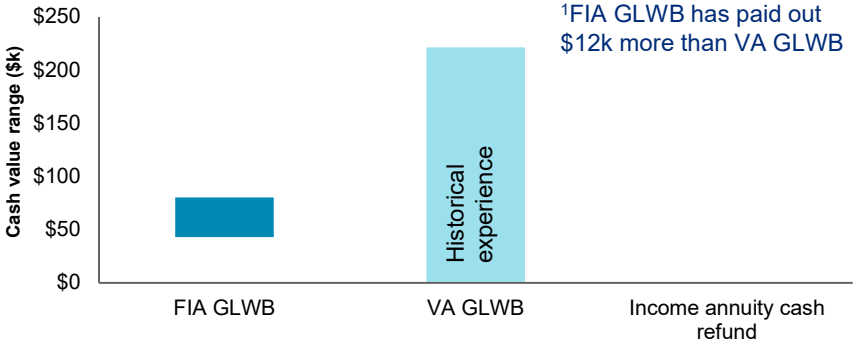


5 years from issue



[1]FIA GLWB has paid out $6k more than VA GLWB

10 years from issue



[1]FIA GLWB has paid out $12k more than VA GLWB

Product	Cash value commentary
Income annuity cash refund	No cash value offered, cash refund is only a death benefit
FIA GLWB	Narrow range of possible cash values, with guarantee
VA GLWB	Wide range of possible cash values

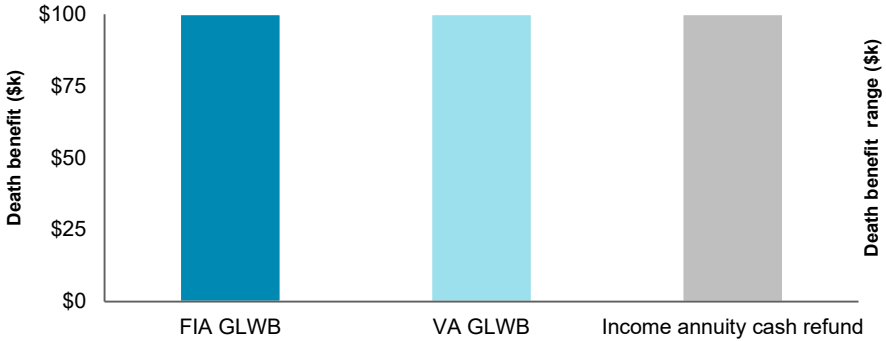
1.Income illustrated for a single premium of $100k
2.Range based on S&P returns from 1/1/87- 1/1/2017, using the best and worst results for the number of years of experience

Death benefit (immediate income scenario)

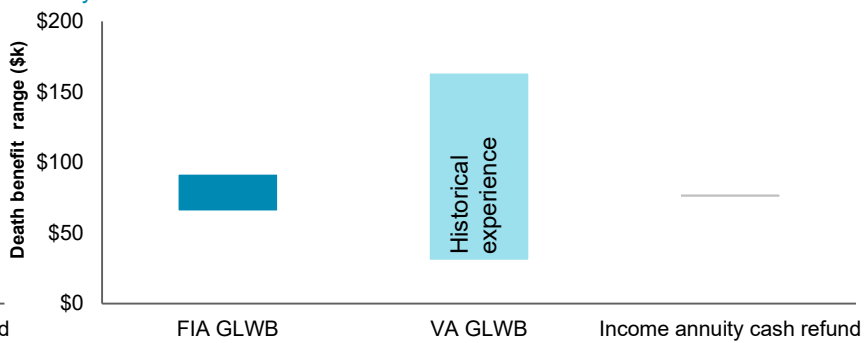
FIA offers strong guaranteed death benefit; assuming a GMDB is not present, VA have significant downside risk

60 year old male with income starting at issue

At issue

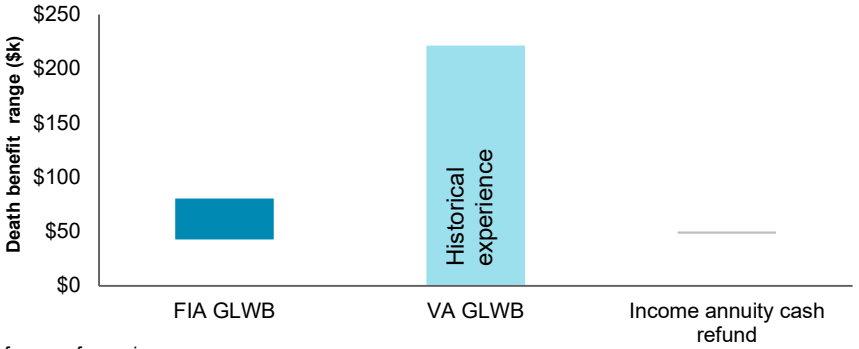


5 years from issue



Product	Death benefits commentary
Income annuity cash refund	Death benefit slightly higher than FIA guarantees
FIA GLWB	Narrow range of possible death benefits, with guarantee
VA GLWB	Wide range of possible death benefits

10 years from issue



1.Income illustrated for a single premium of $100k
2.Range based on S&P returns from 1/1/87- 1/1/2017, using the best and worst results for the number of years of experience

Rankings of the three benefits
FIA GLWB offers strong guaranteed income while preserving flexibility

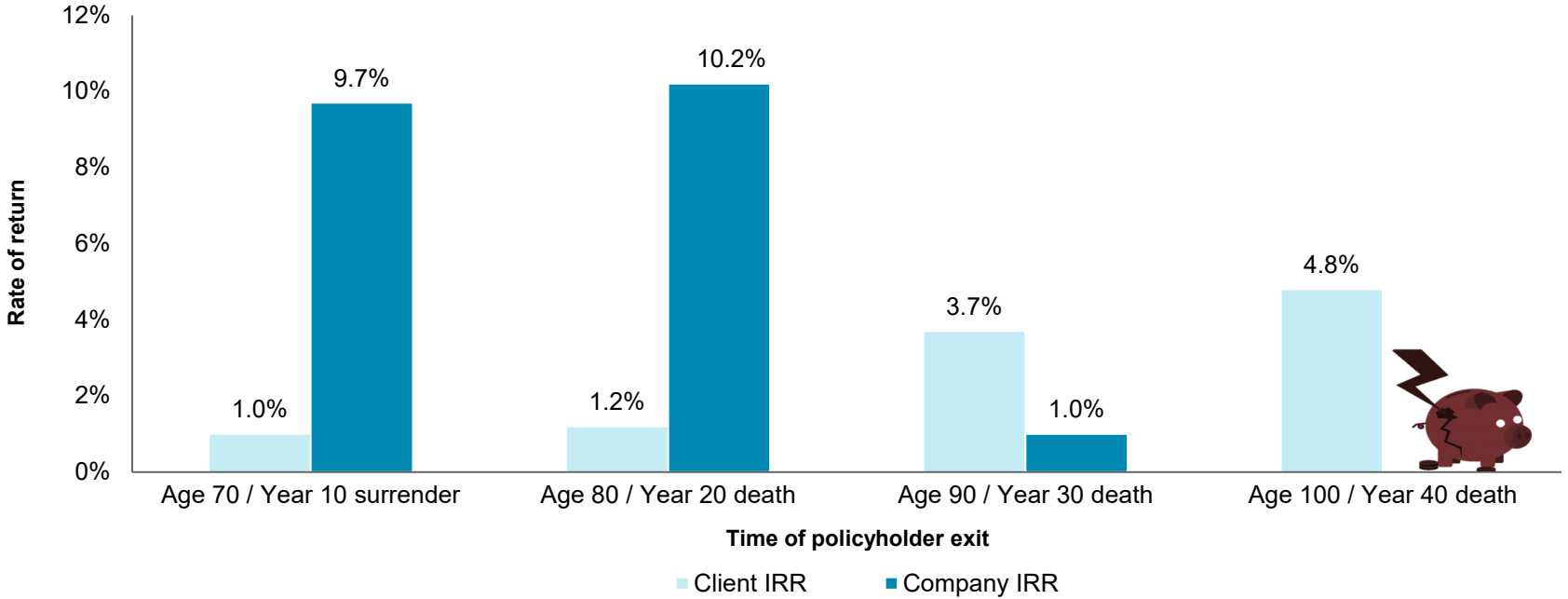
	1 Income annuities	2 FIA GLWB	3 VA GLWB
Income	**1** • Life only income guarantees are very strong	**2** • The income guarantee is very strong	**3** • The income guarantee is weakest of the three options
Cash value (strong equity market)	**3** • Limited or no cash value	**2** • Modest upside potential	**1** • The cash value is invested in the market less fees
Cash value (weak equity market)	**3** • Limited or no cash value	**1** • Minimum of GMSV	**2** • The cash value is invested in the market less fees
Death benefits	**2** • Various death benefit guarantees can be purchased	**1** • GMSV paid on death • Modest upside potential	**3** • The death benefit value is invested in the market less fees (assuming no GMDB rider)

Industry sales indicate that the flexibility of a GLWB is valued by consumers

Client and company IRR for an FIA with GLWB starting income immediately

Timing of surrender or death determines the rate of return achieved by the client and the company

60 year old male starting income at issue



1.Client IRR represents pre-tax return on invested cash flow (premium)
2.Company IRR represents the internal rate of return on after-tax distributable earnings

Risks and profitability drivers for FIA GLWB

Policyholder behavior and interest rates are the two largest risks for FIA GLWB

Policyholder behavior

- GLWB utilization
- Lapses and dynamic lapses

Interest rate risk

- Asset liability interactions
- Management actions
- Interest sensitive policyholder behavior

"Index lift"

- Benefit / risk from over-hedging
- Volatility strike skew and equity risk premium

Statutory reserves

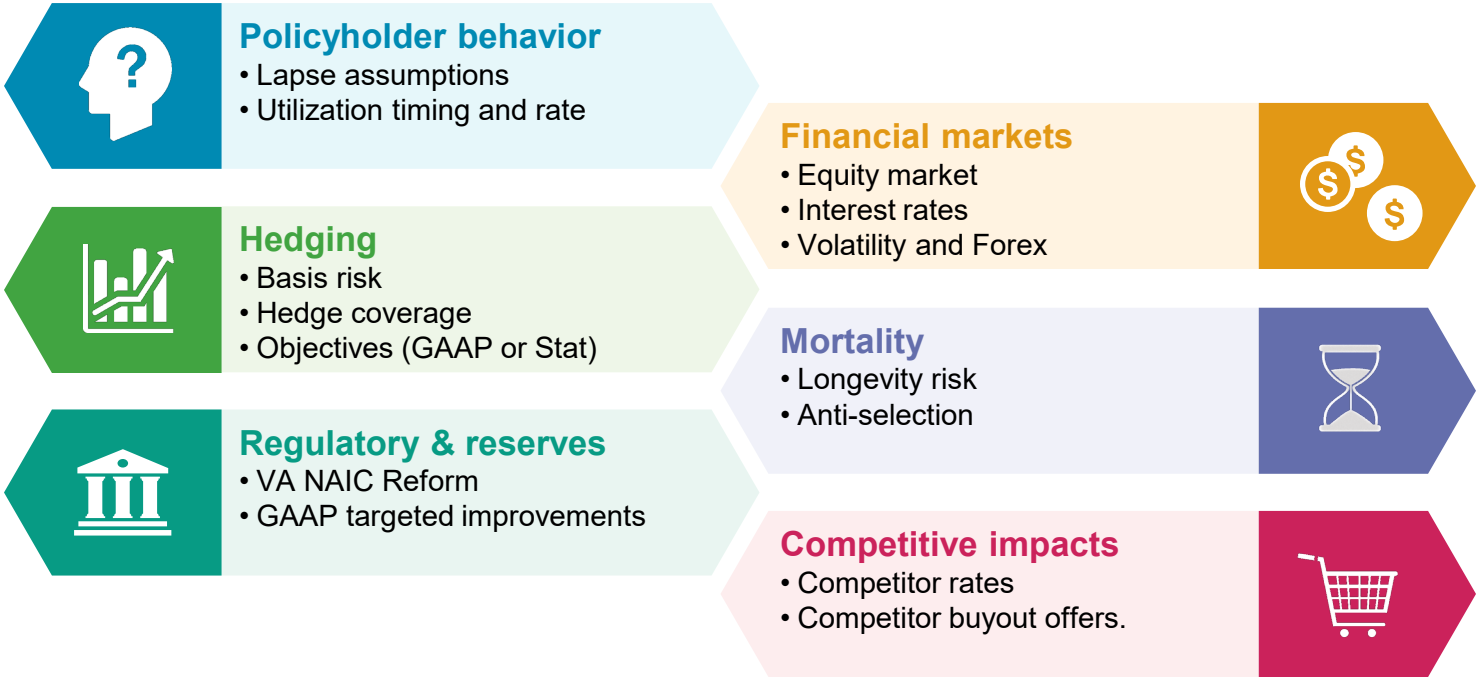
- Correct calculation
- Hedging interaction
- Relief in select states

Mortality

- Base mortality
- Mortality improvement
- Anti-selective lapses?

Risk and profitability drivers for VA GLWB

VAs expose the insurance company to significantly higher risk than FIAs



The risks associated with VAs need to be monitored closely by the carrier

Risks and profitability drivers for income annuities

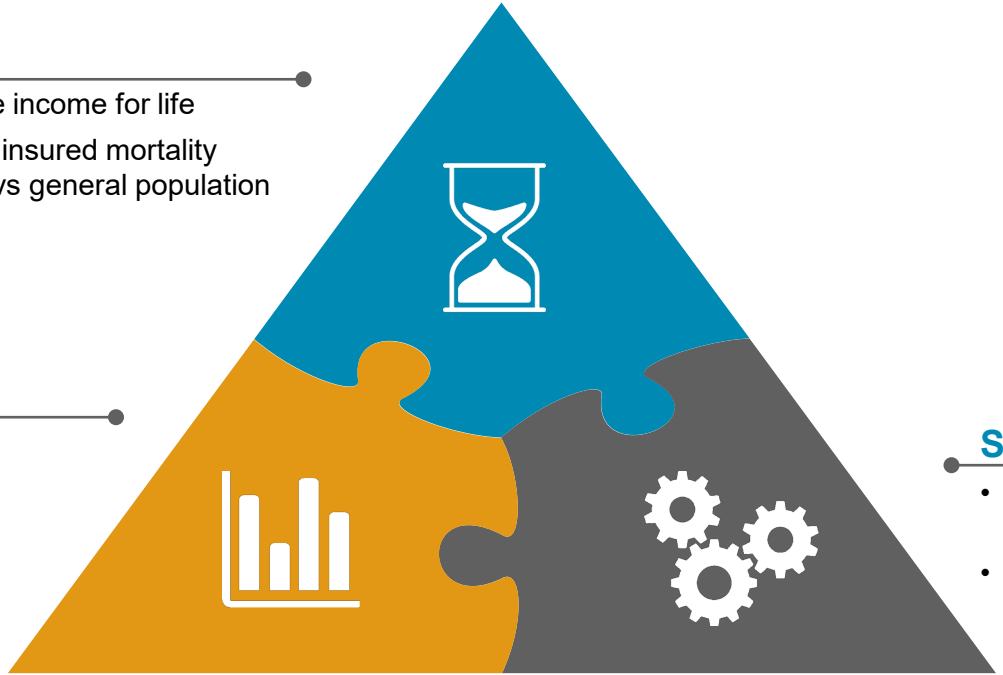
Mortality and investment income determine profitability for income annuities

Mortality

- Certain to take income for life
- Differences in insured mortality improvement vs general population

Investment income

- Long term liabilities
- Reinvestment risk



Statutory reserves

- New discount rate method
- Mortality table changes

Key takeaways

1 **FIA GLWBs offer strong income guarantees while preserving flexibility**

2 **There is correlation between sales and product de-risking**

3 **The decrease in income annuity sales remains at odds with demographic trends**

Questions

2019 LIFE & ANNUITY SYMPOSIUM

Session 015 – The Science Behind a Successful Retirement

Moderator: **Joshua Chee, FSA, MAAA**
Senior Consultant, Oliver Wyman

Presenters: **Nicholas Carbo, FSA, MAAA**
Senior Consultant, Oliver Wyman

Douglas Robbins, FSA, MAAA
AVP, Pacific Life

May 20, 2019

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- Do not discuss what you or other entities plan to do in a particular geographic or product markets or with particular customers.
- Do not speak on behalf of the SOA or any of its committees unless specifically authorized to do so.
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The Science Behind a Successful Retirement

Douglas L. Robbins

May 20, 2019

Topics

- Where We Are Today
- Should I Just “Dance with the One that Brung Me”?
- Changing the Odds
- Educating “The People”

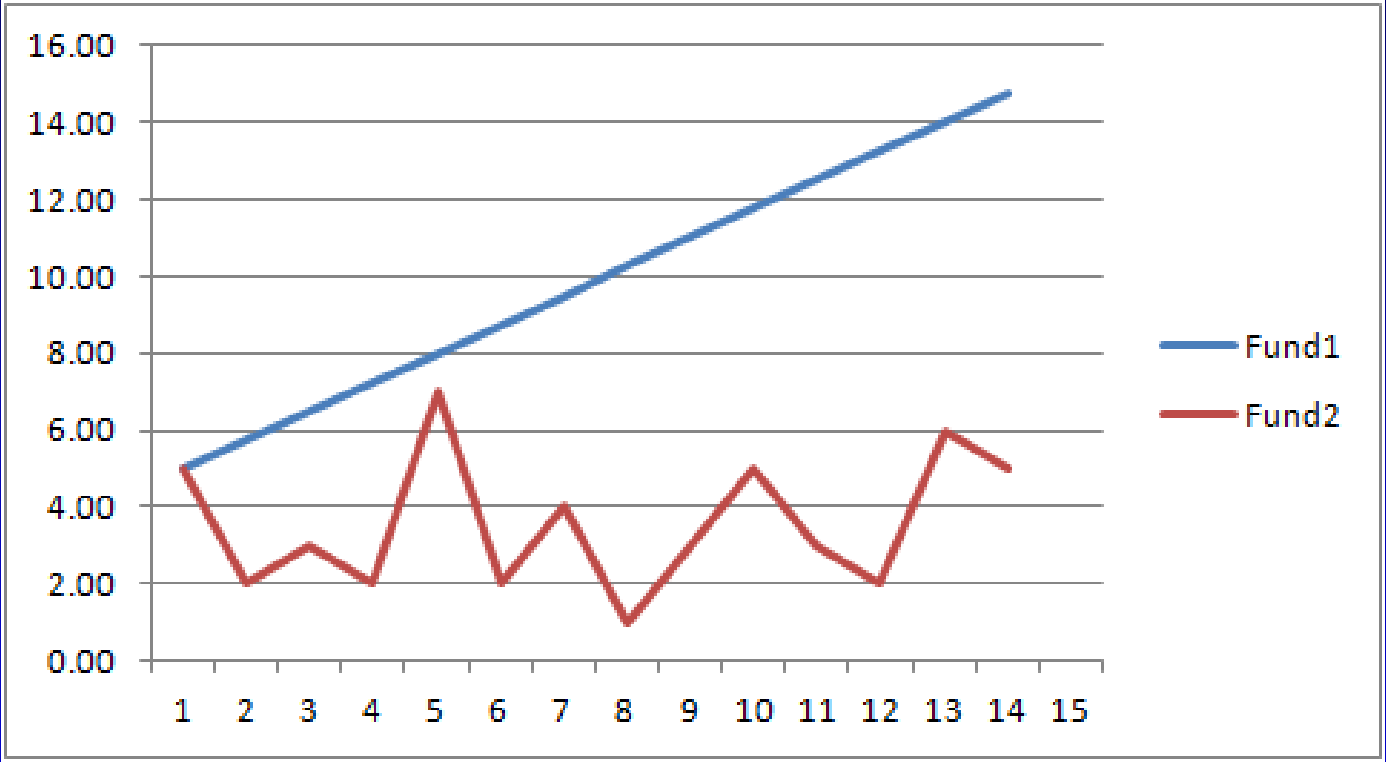
Topics

- Where We Are Today

Financial Planning Strategy

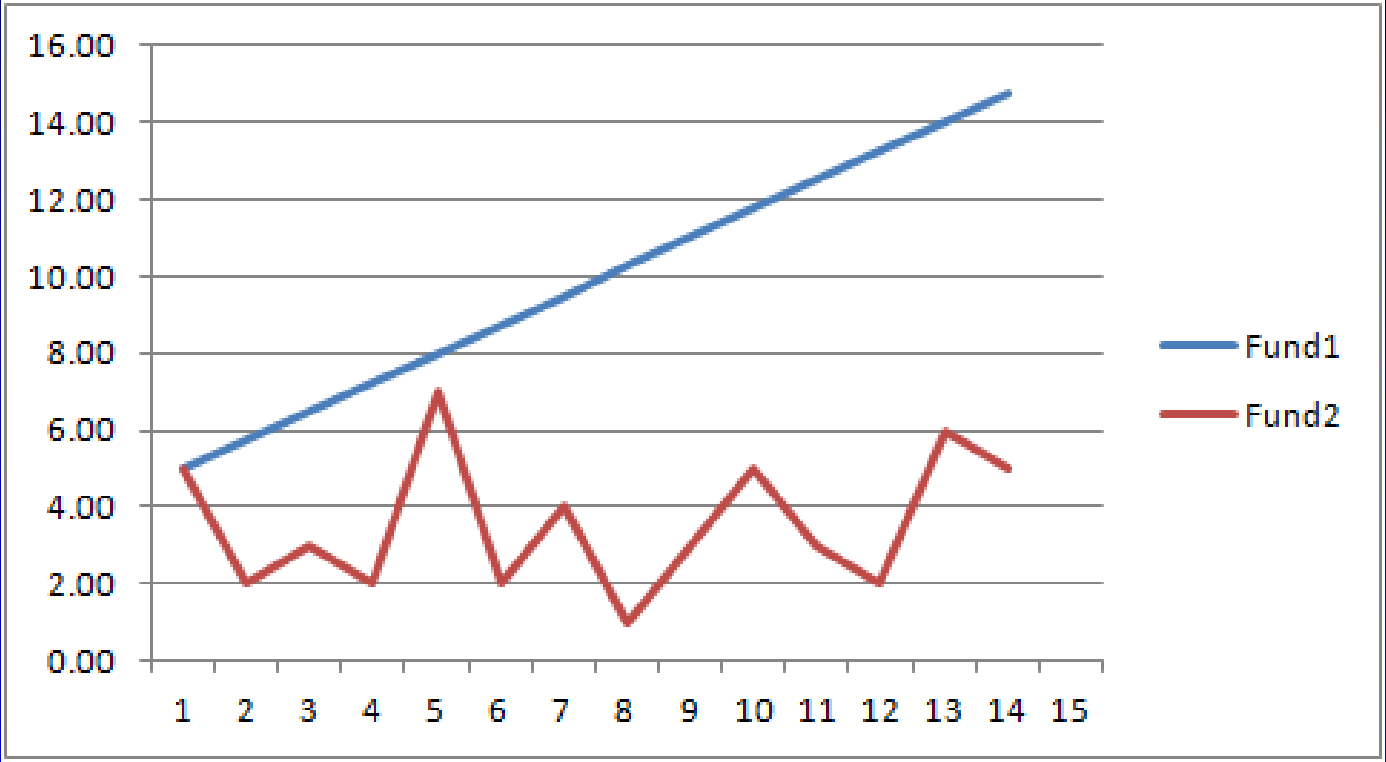
- Golden Age of Financial Planning
  - ~1985+: Baby Boomers' huge pot of money
  - Accumulation goal predominant
- Financial Planners also had obvious goals, leading to a couple key questions:
  - How do I keep the money coming in?
  - How can I foster a long-term relationship?
  - This led to presentations like the following . . . .

Two patterns of Fund Unit Values



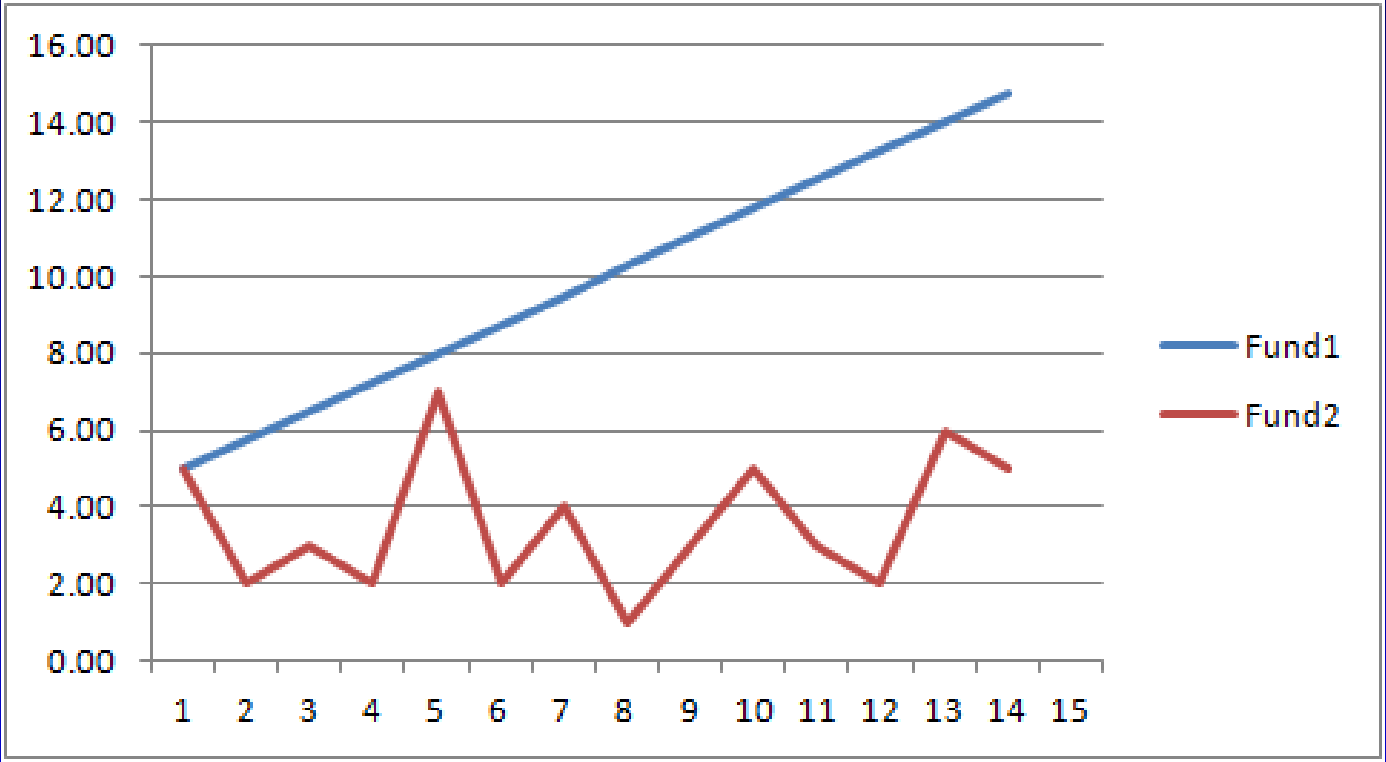
Two patterns of Fund Unit Values

- Which one is better? Why?

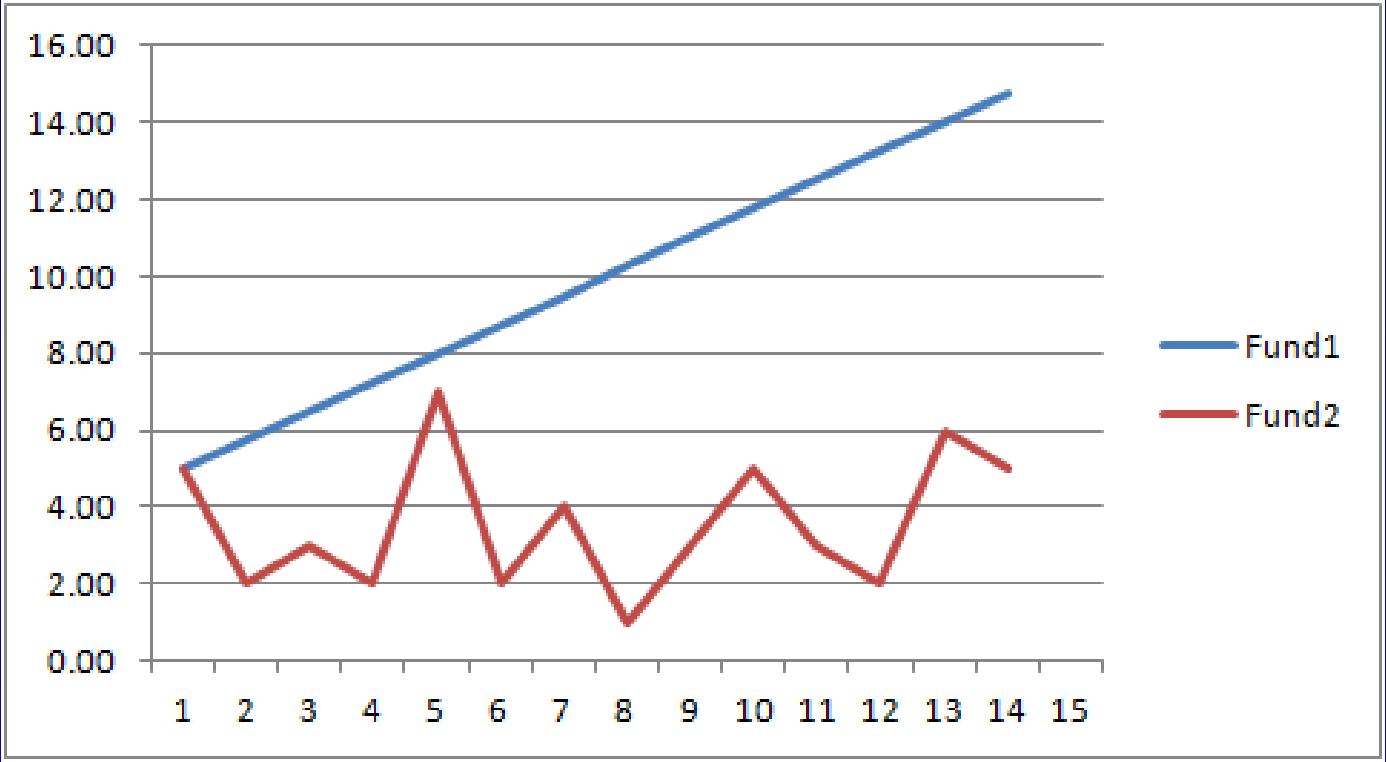


The answer is obvious, right?

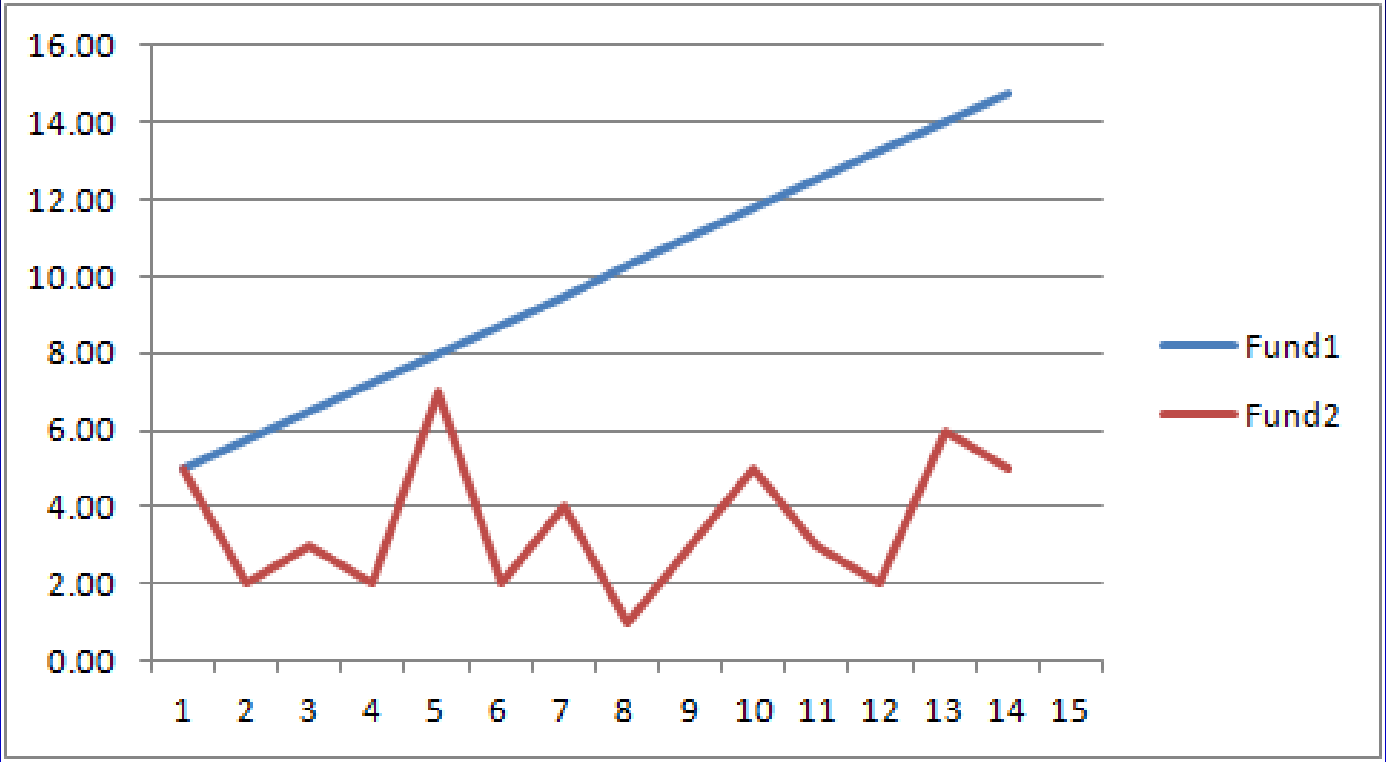
- If I invest only upfront dollars, Fund1 is surely better



The answer is actually

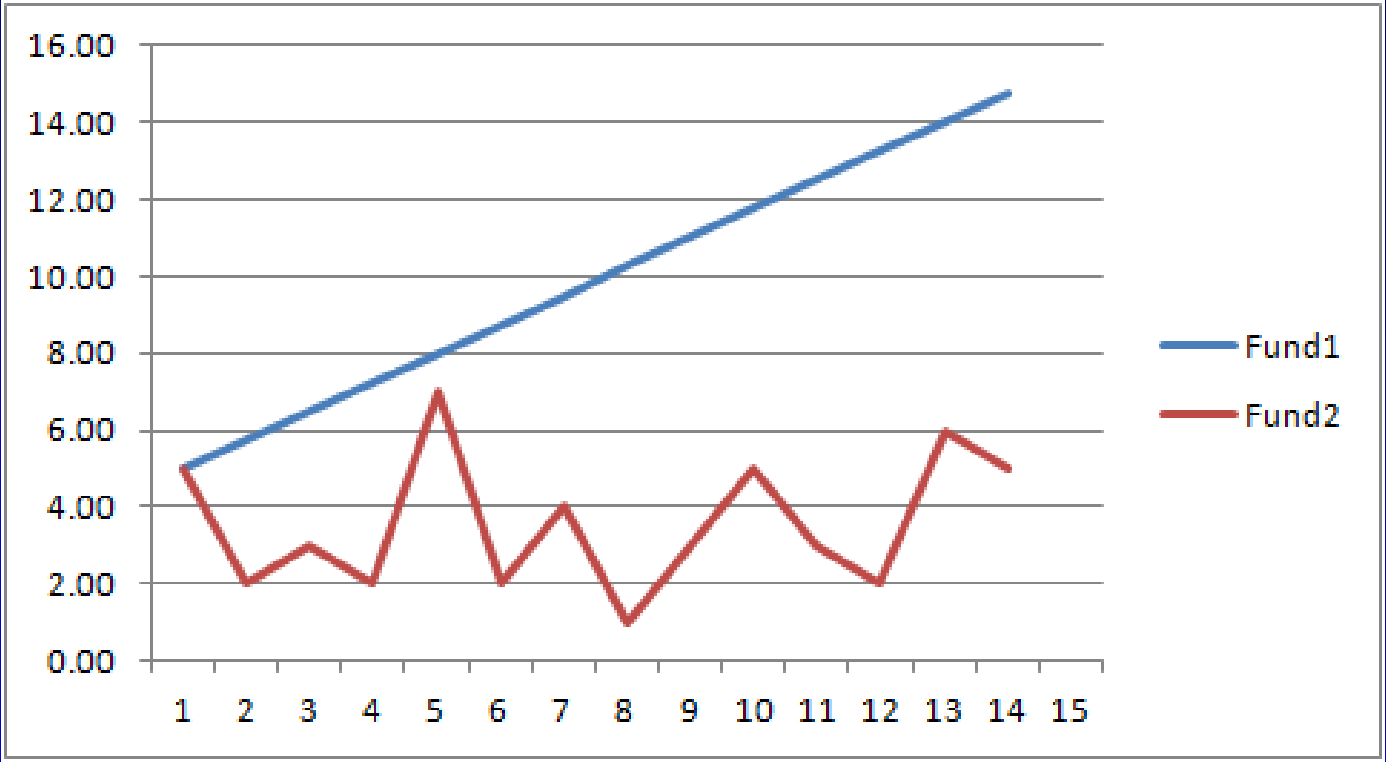


The answer is actually, it depends!



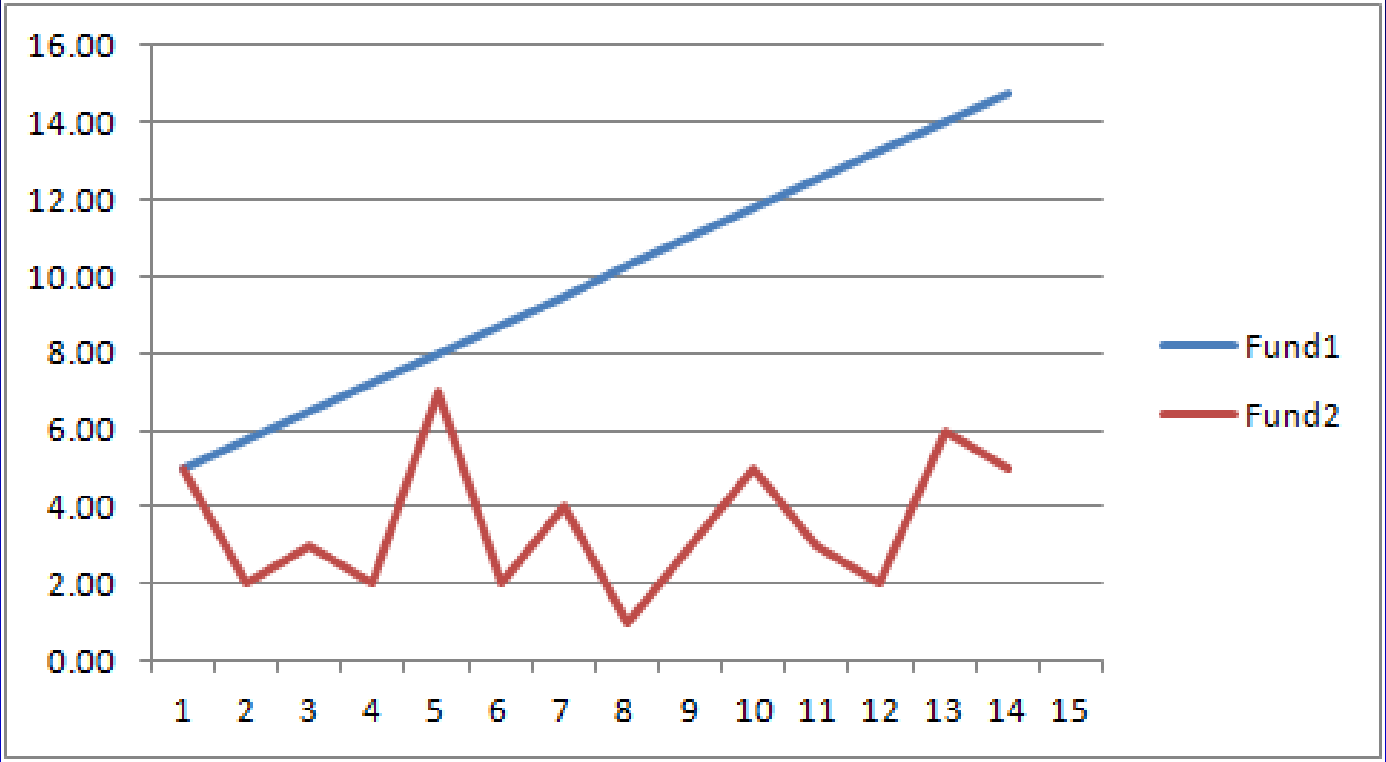
The answer is actually, it depends!

- What if I invest $10k a year?



The answer is actually, it depends!

- I'd then end up with $233k from Fund1, and $258k from Fund2!!



“Dollar Cost Averaging”

- A standard investors’ goal should be buy low, sell high:
  - Sounds good in theory
  - Easier said than done
  - “Market timing” can be treacherous
- But by investing equal amounts over time, you’ll tend to naturally get more units for which you’ve bought low and eventually sold high, than vice versa

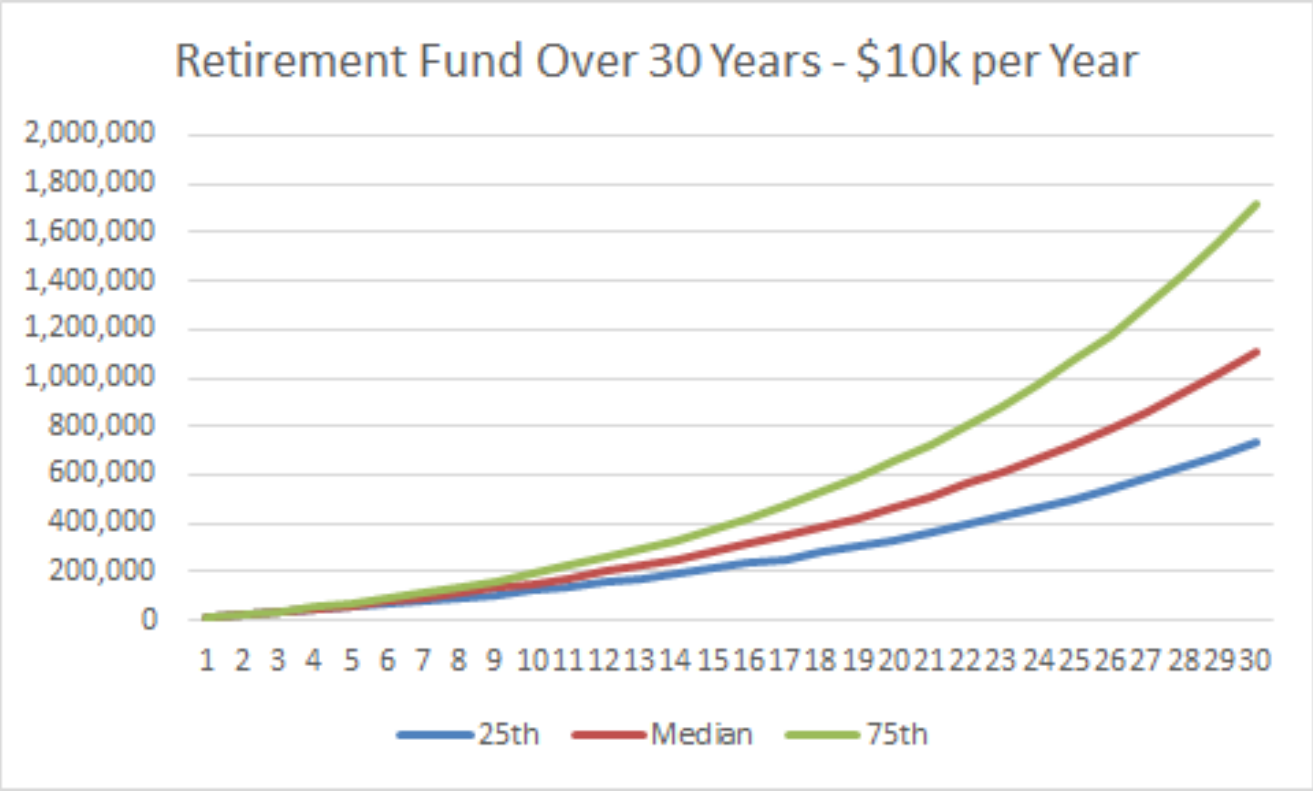
“Diversification”

“Diversification”

- Step 1: Begins with a demonstration of long-term DCA-based equity returns
- Step 2: Can demonstrate that a mix of not-perfectly-correlated equity classes is superior over the long-term horizaon
- Step 3: Target-age funds can help foster a long-term relationship with a tangible risk-management goal in mind

“Diversification – Step 1”

- An investor with 30 years to retirement might be shown this, regarding an Equity fund: *



*Note: from here on, all examples assume 7% mu & 16% sigma for Equity. 4% each for Fixed.

“Diversification – Step 1”

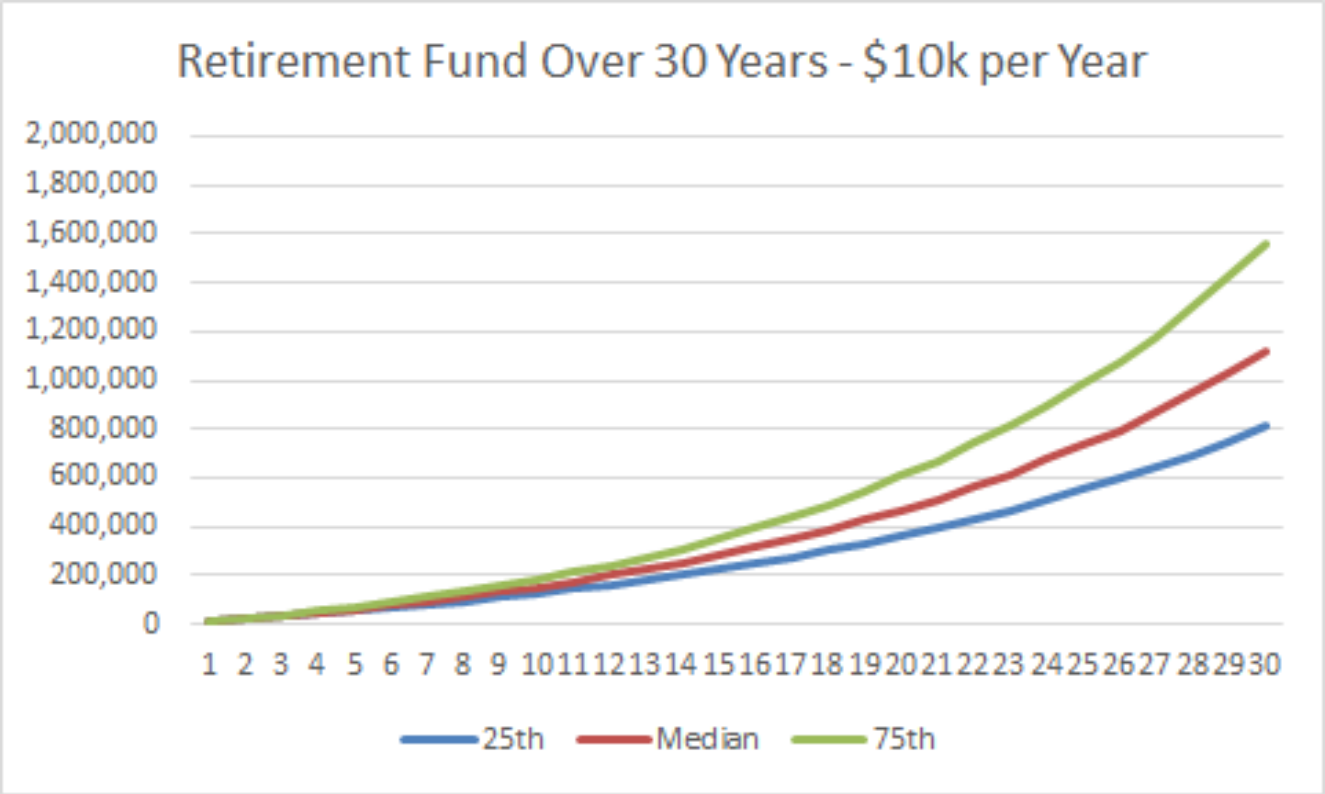
- Demonstrates the power of periodic Equity investing in the long term
- The median return looks great (not to even mention the 75th %-ile)
- Even the 25th %-ile demonstrates more than a doubling of the total investment
- With a 30-year horizon, plenty of time to re-think, if early returns disappoint

“Diversification – Step 2”

- Mix together Large Cap Growth and Small Cap Value (say), with around 75% correlation (which is high)
- The overall range of returns is arguably superior, to a risk-averse client
- Expected return doesn’t really change, but range of results narrows

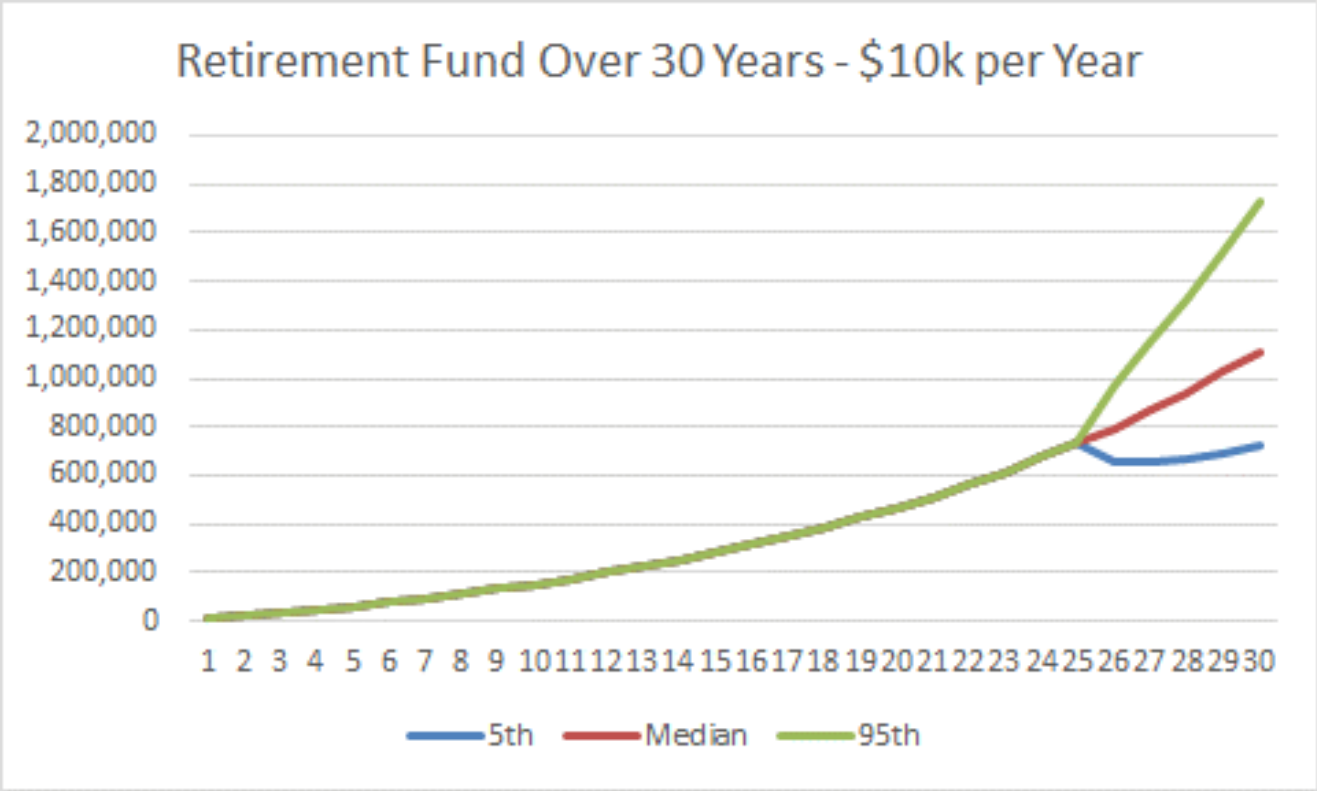
“Diversification – Step 2”

- Mix of Equity Classes with 75% Correlation between funds



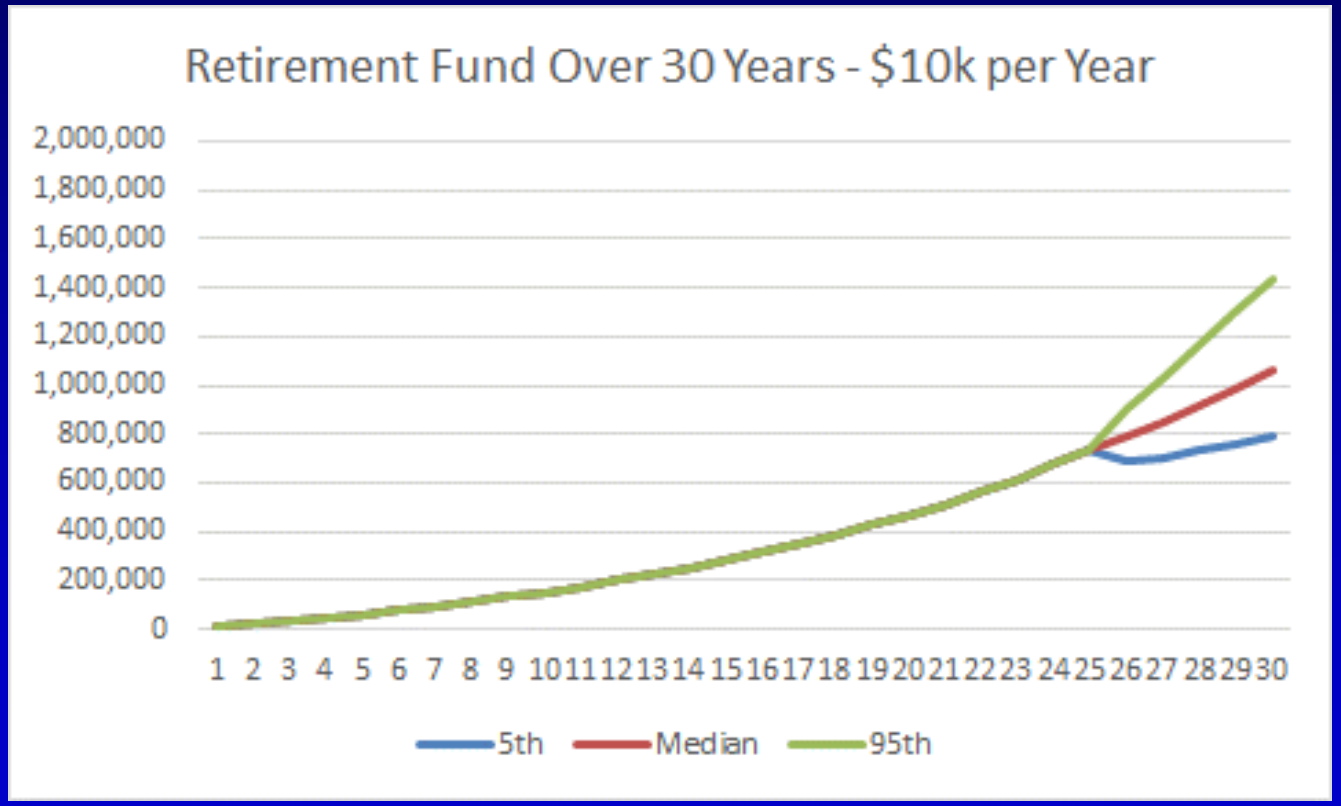
“Diversification – Step 3”

- The situation is quite different in year 25, assuming median growth thus far



“Diversification – Step 3”

- Mixing in 50% Fixed in Year 25 can narrow the ultimate outcome range



Lessons Learned . . . .

- Planning for equal transactions over time = “Good”

Lessons Learned . . . .

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- Diversification into Fixed = “Safety”

Lessons Learned . . . .

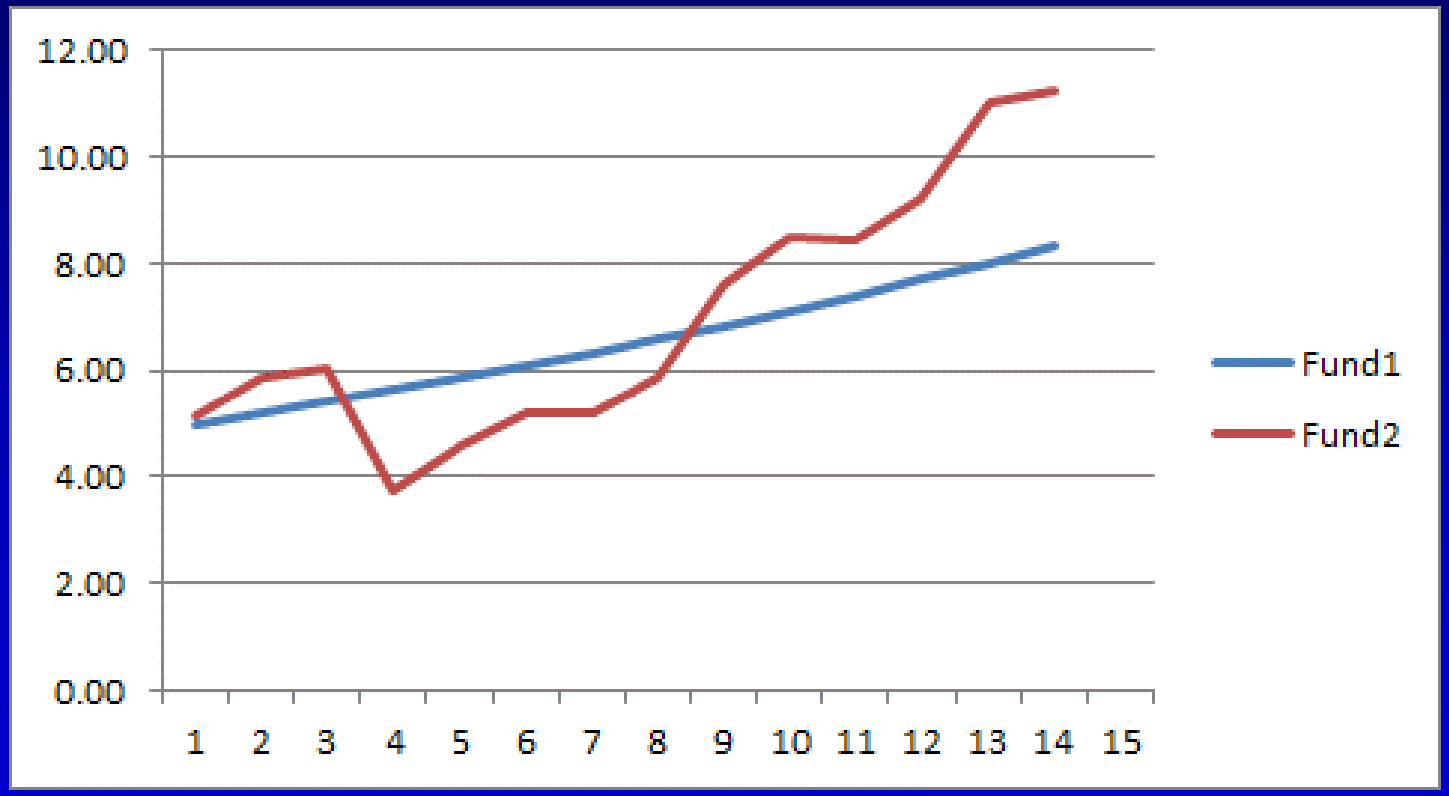
- Planning for equal transactions over time = “Good”
- Diversification into Fixed = “Safety”
- What could possibly go wrong?

Topics

- Should I Just “Dance with the One that Brung Me”?

Two patterns of Fund Unit Values

- Version 2



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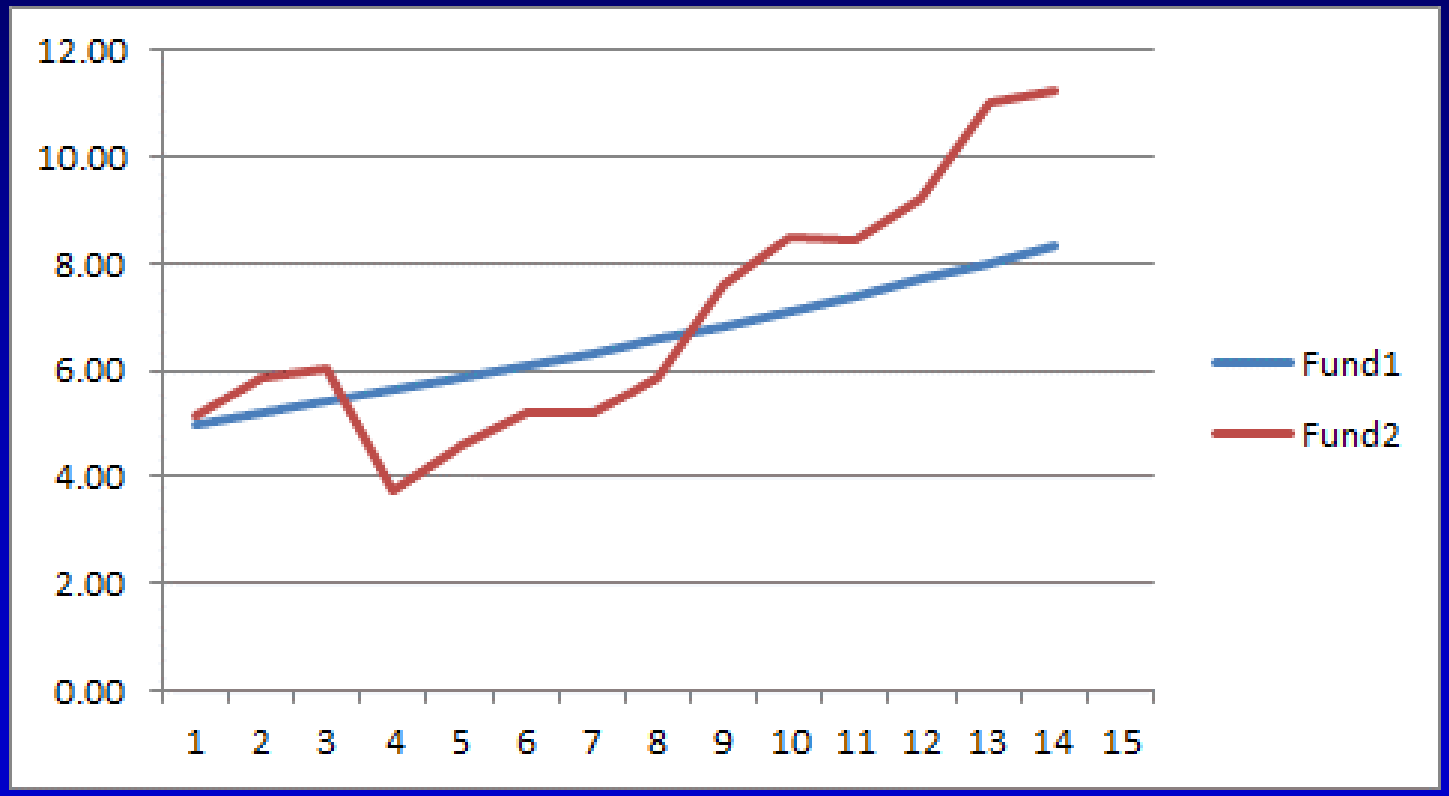
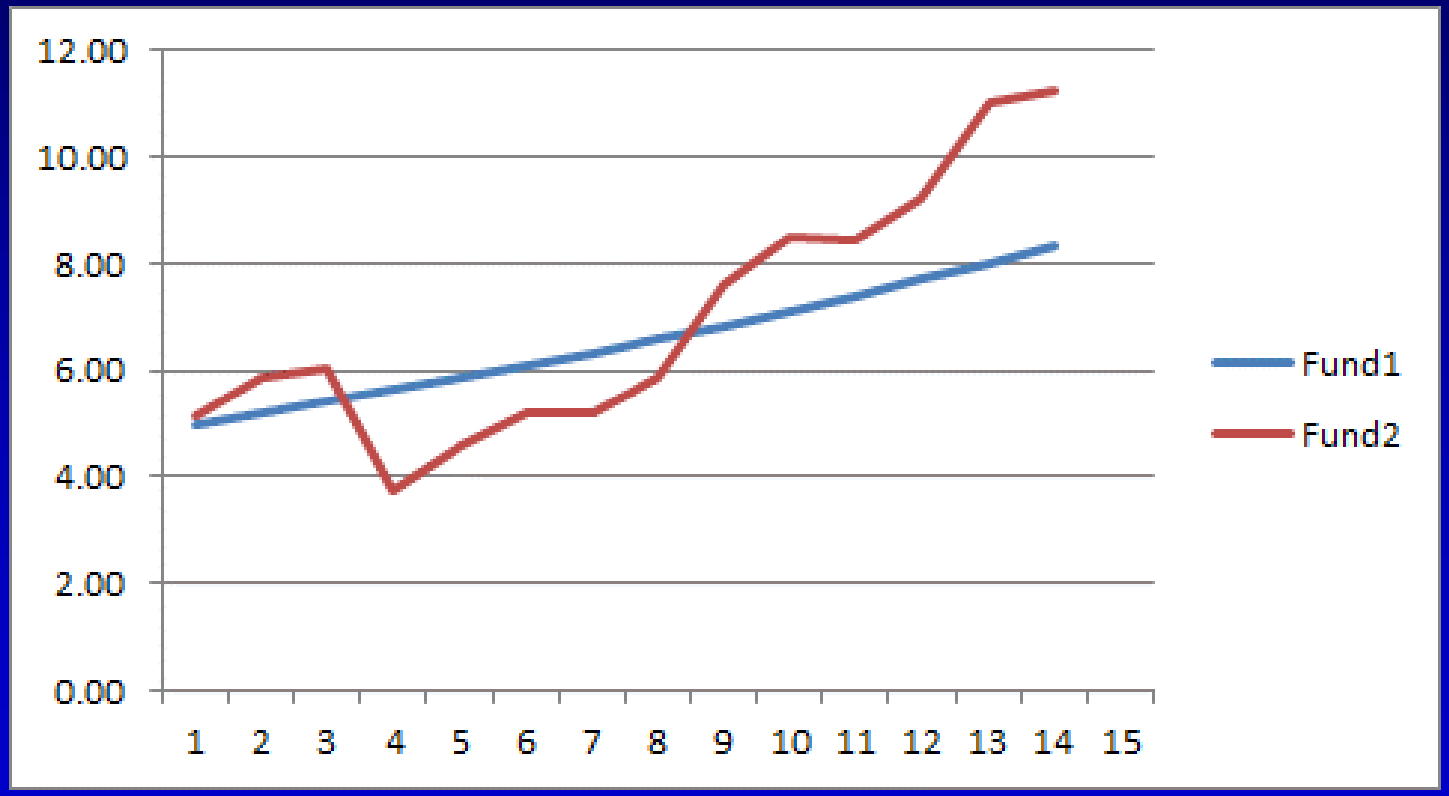


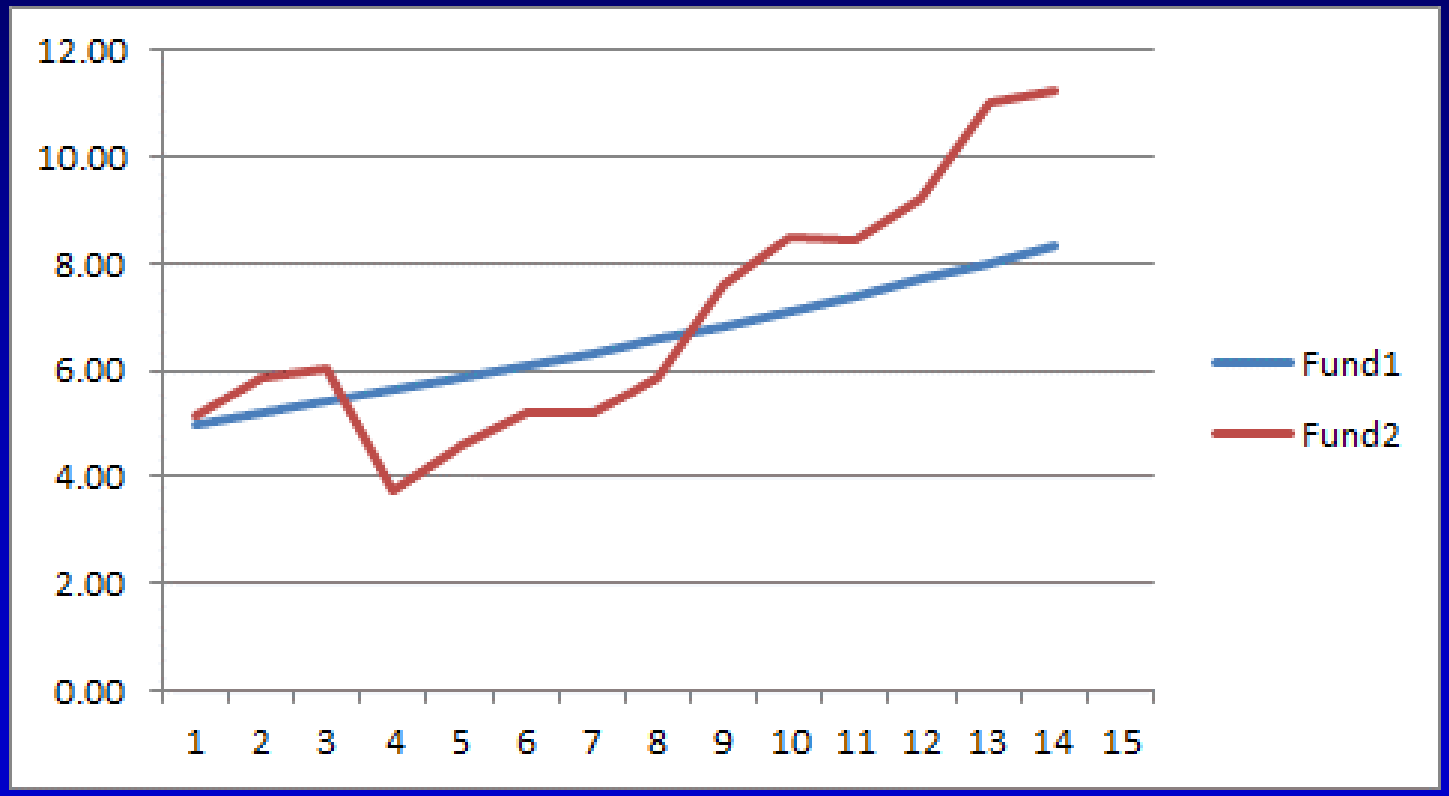
Two patterns of Fund Unit Values

- What if I have $200k, and plan to w/d $18.2k/yr (total $255k) for 14 yrs?



Two patterns of Fund Unit Values

- The blue fund (4%/yr) works perfectly; the red one (~6%/yr) runs out after yr 12



Retirement Disaster

- My ***accumulation***-phase red line was quirky – possibly misleadingly so
- The ***payout***-phase one was just an S&P500 starting point of Dec 31, 2004 (which is by NO MEANS worst case!)
  - Not too quirky at all, really
  - In fact, it could be reasonably viewed as an average to good-ish real-world scenario
  - Yet it led to retirement disaster

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  - In fact, it could be reasonably viewed as an average to good-ish real-world scenario
  - Yet it led to retirement disaster . . . b/c of timing
  - **To improve our odds, we need a new partner!!!**

Topics

- Changing the Odds

What is going on?

- "Reverse Dollar Cost Averaging"
- In a spiky market, if you are in the payout phase, taking annual income:
  - You likely intend to withdraw equal amounts periodically – a standard retirement goal
  - You may find it tough to adjust your income down by 40% if the market drops that much
  - This will tend to cause you to sell the most units in market downturns, depleting your account rapidly in the worst possible scenarios

What is done about this now?

- Agents who don't want their clients to run out of money in retirement may set up a Systematic Withdrawal Program ("SWiP")
- Quite often, each year, 4% of current account value is taken each year to fund retirement
  - The beauty is, you in fact practically never can run out of money this way
  - The drawback is that you can't count on the amount you'll receive (also true of a VIA)
  - Why 4%? I'll try to demonstrate in a moment

What can we do differently?

- Option 1: Meet our entire income need using a DIA/SPIA or a GLWB
  - Positive: Fully guaranteed at amount planned
  - Negatives: May result in very little left in accumulation accounts (I'll call this "Extra Money")
    - Other risks may bite in this scenario, inflation being one key example
    - Nothing left for emergency needs
    - "Loss of control of funds," aka liquidity risk

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    - Nothing left for emergency needs
    - "Loss of control of funds," aka liquidity risk
- The latter is very important to agents!!

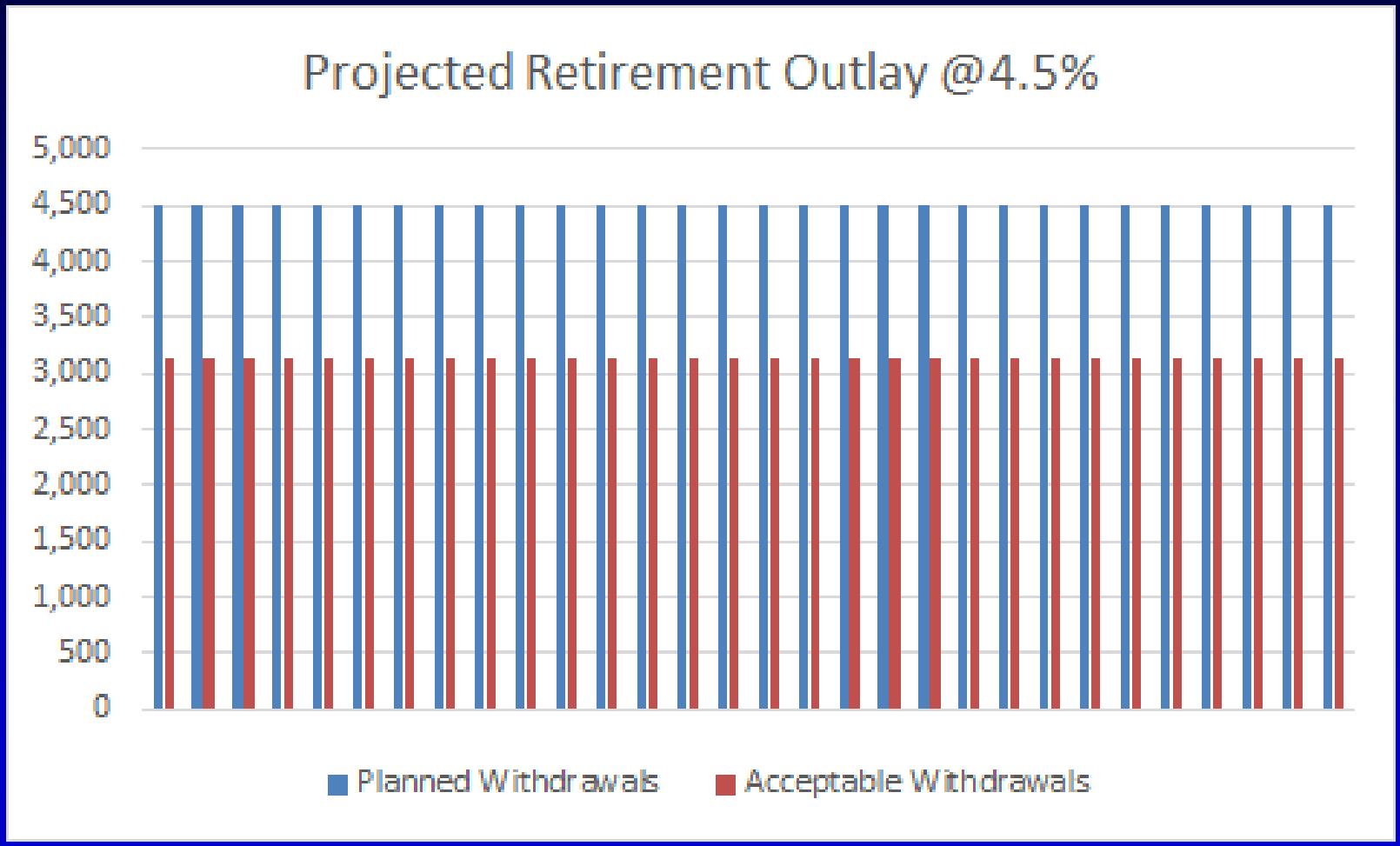
Can We Do Something Where Everyone Wins?

- I believe we can, via Option 2: a more limited allocation to SPIA/DIA, or better yet, a "Fixed WB" annuity
- I will set up a case study to demonstrate:
  - A simple 30-year certain-period SWiP analysis
  - Simulation based on independent lognormal annual returns, w/ parameters "mu" and "sigma"
    - Mu's from 5-7%, net of expenses & fees
    - Sigma's from 10-16%
  - Varying planned withdrawal amounts

Can We Do Something where Everyone Wins?

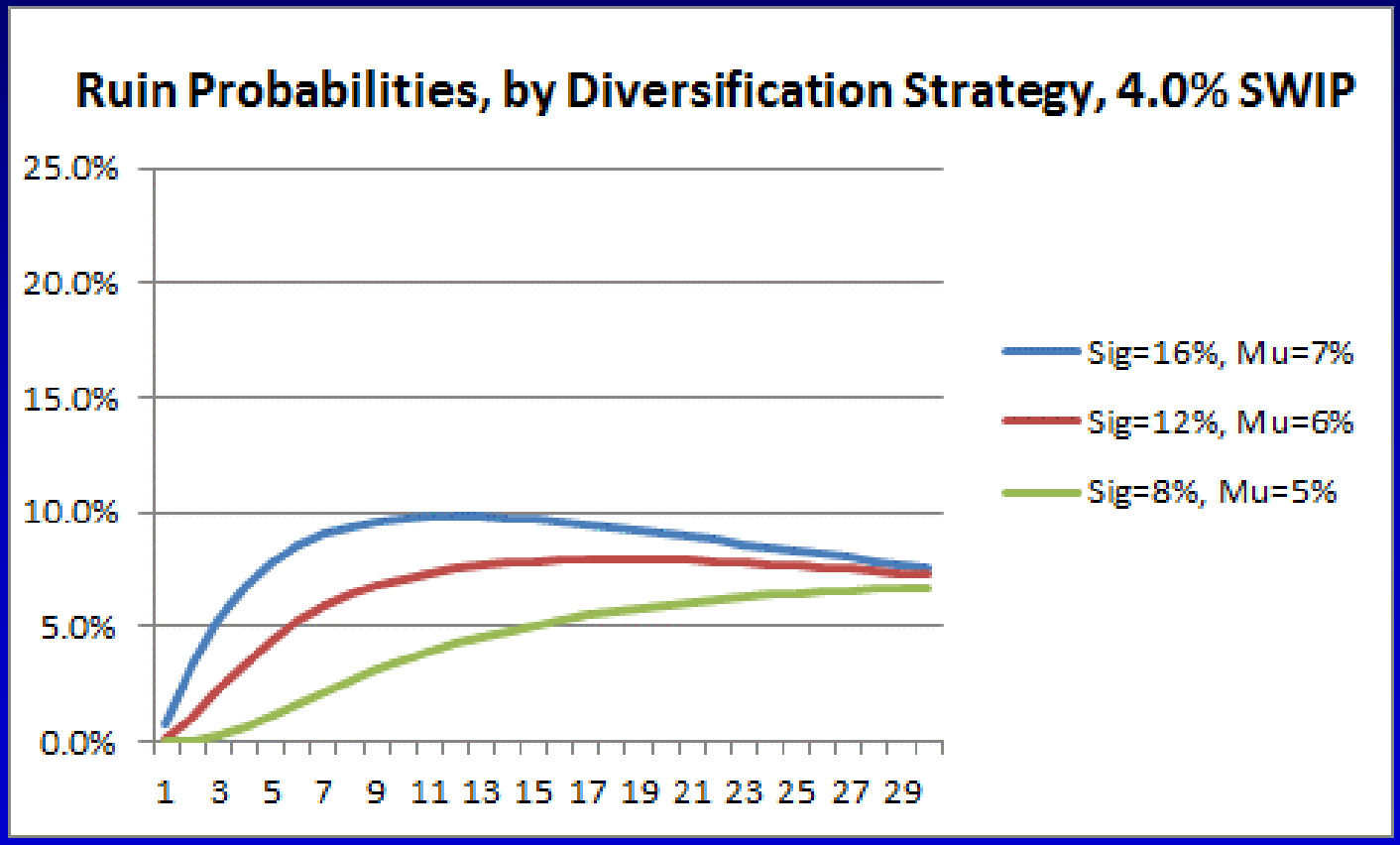
- Assume that the policyholder has a planned withdrawal % of account value
  - They will alter the $ amount as A/V varies
  - (A “SWiP,” or Systematic Withdrawal Program)
- Also assume that there is a minimum livable annual income of 70% of starting planned
  - This gives us an array of “ruin” probabilities
  - These can be used to compare strategies

Illustrating Such a Retirement Outlay



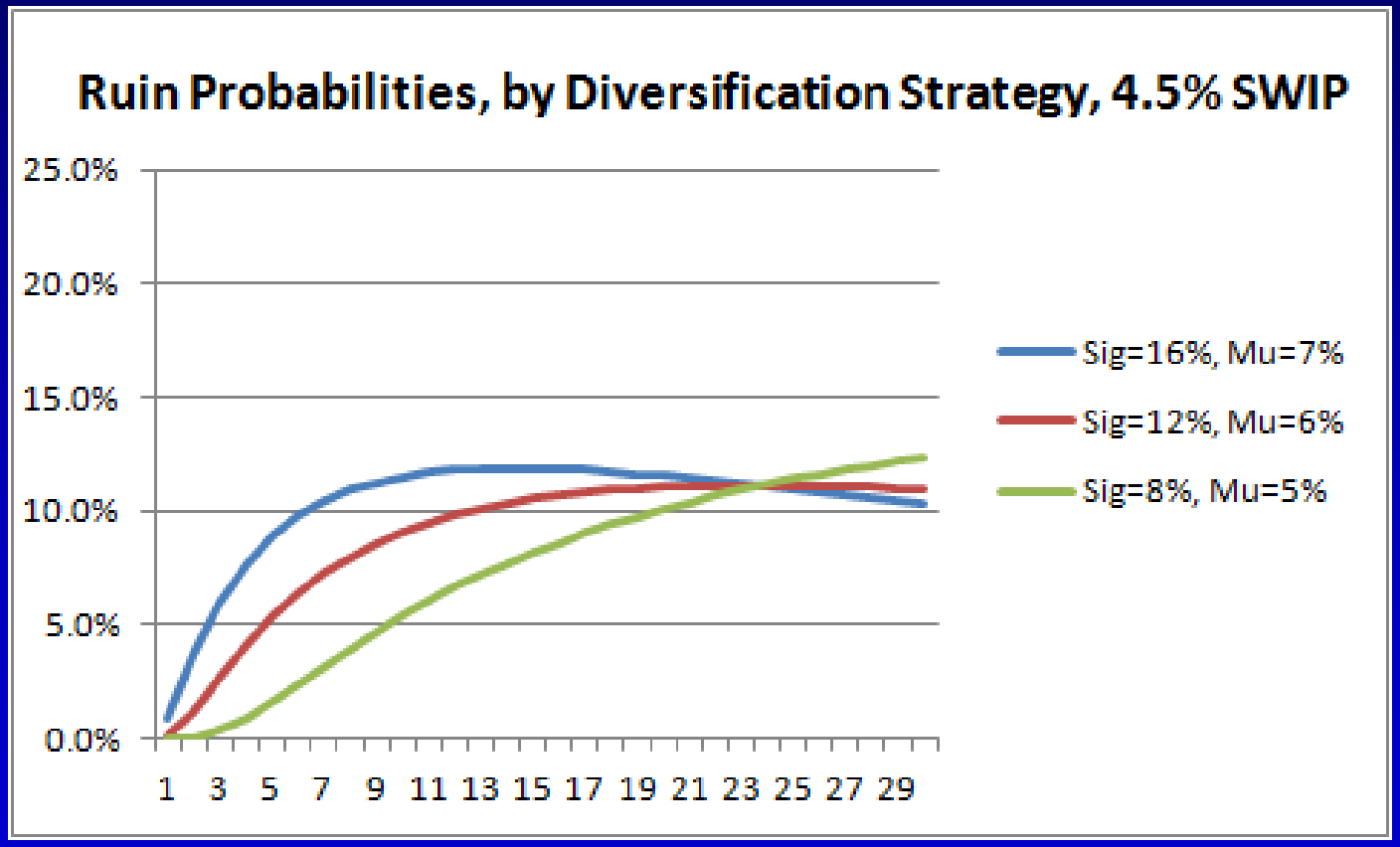
Defending the 4% SWiP!

- For a 4.0% income strategy for 30 years, you get the following ruin probabilities:



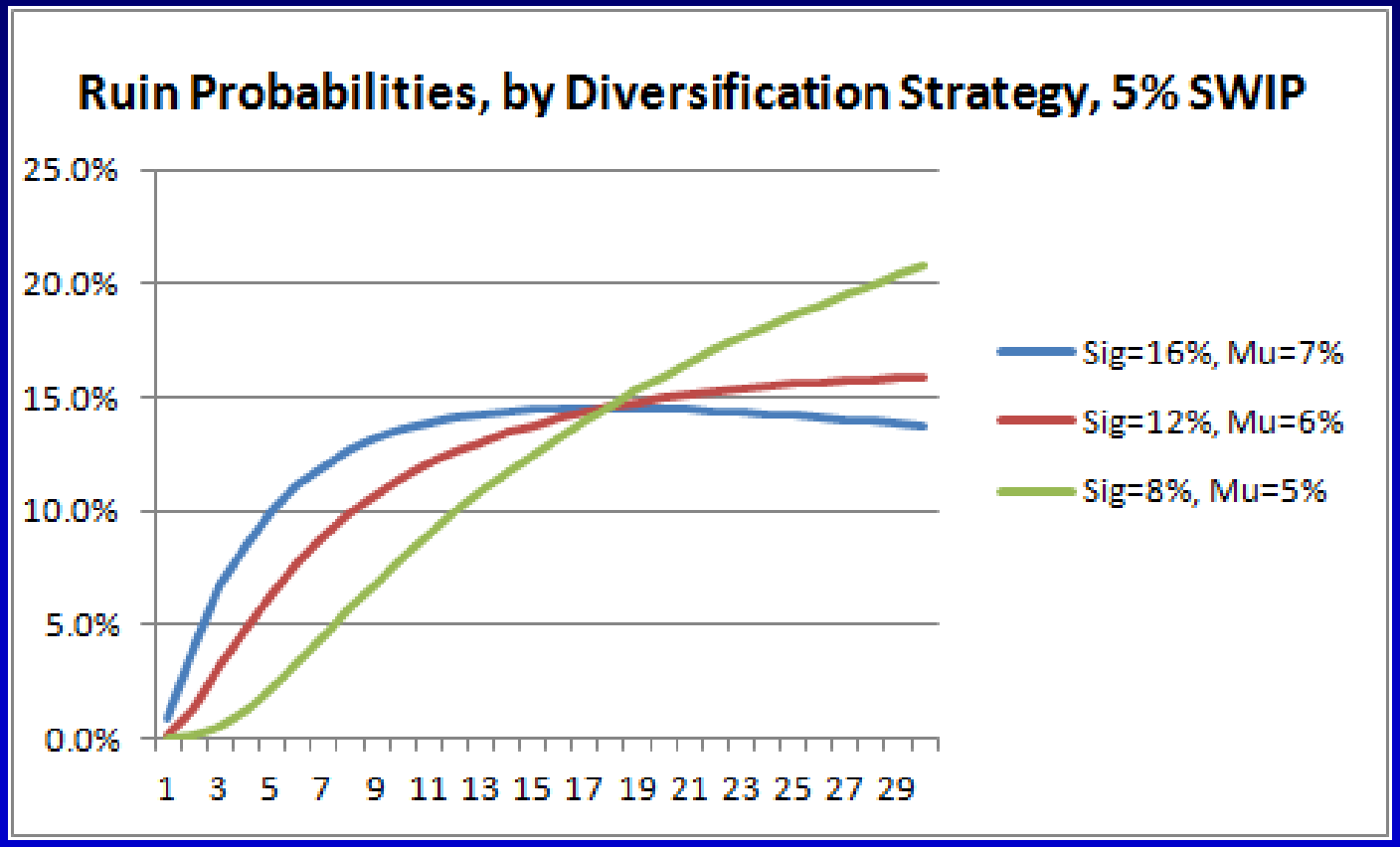
Defending the 4% SWiP!

- For a 4.5% income strategy, you get the following ruin probabilities:



Continued . . . .

- A 5% income strategy produces results a bit more ominous:



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- Looking at those illustrations suggests something rather stunning, at least to me
- We've discussed the benefits of shifting fund mixes during the accumulation phase
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- Moral: We need to rethink "Safety"!

Does this Result Make Sense?

- It really does: in the long run, expected net growth is as or more important in avoiding failure than volatility (which diversifies away somewhat over time)
- If you need a lot of income for a long time, a fixed-heavy fund can be a horrible out-year strategy – it can practically "guarantee ruin"
- (For clarity, consider a "bank CD fund")
- So what do I do now, coach?

What DO I do now, coach?

- This leads to an easy-to-grasp conception of the impact of adding a SPIA to an equity-based portfolio
- Say you have $100,000 invested in exactly the sort of fund projected in my scenarios, with the 30-year retirement horizon used
  - You expect a net mu = 7%, Sigma = 16%
  - Your desired income is $4.5k (w/ ruin at $3.15k)
  - A retail SPIA is paying 5% per annum

And this matters because?

- Clearly, using $90k to buy a SPIA would meet the entire desired income, with 0% risk
- But it would leave almost no liquidity

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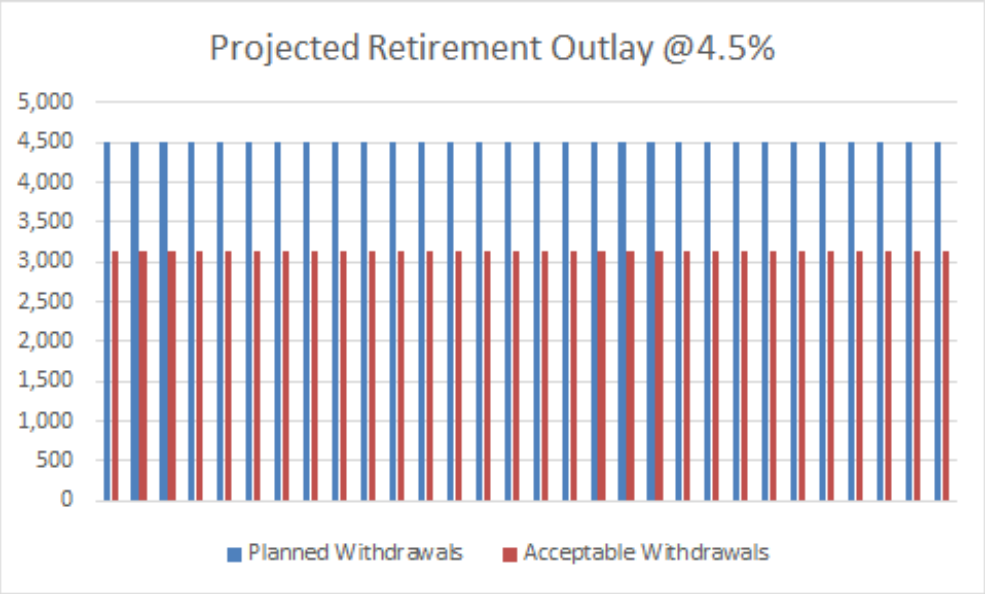

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  - This deal makes it much more likely than "SWiP only" that the $ amount of the SWiP and the "Extra Money" will both grow over time, ***BUT WAIT THERE'S MORE: virtual investment freedom!!***

Further Thoughts

- This whole area lends itself to various sorts of tools that enterprising actuaries might develop for the field
  - Clients have different goals and risk tolerance
  - An effective tool balances those aspects
- Social Security and DB pensions help allay the risks we've discussed, but depending on desired income, may be only a partial solution (or for some, no help at all)

Topics

- Educating “The People”

First Question: Who is That?

- Populace 1: Retirees
  - Want to maximize value of accumulated assets
  - Want to not outlive assets in decumulation
- Populace 2: Sales Force
  - Want to maximize value of assets
  - Want to maintain control of assets

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  - Want to maximize value of assets
  - Want to maintain control of assets
  - Want to maximize value of assets controlled

Second Question: What is the Best Tool?

- Since I began to really study this topic, the market seems to have moved against my thinking
  - I'd have said a year ago that a SPIA or DIA, with no liquidity and therefore a maximized benefit, was ideal
  - Fixed (more so than VA) GLWBs since then have quite often had superior payouts, as opposed to SPIA/DIA
- There is a weakness that ought to be considered
  - A product with liquidity allows the client to torpedo their long-term retirement security with a rash WD
  - However, an agent who believes their client will resist this temptation may see a Fixed GLWB as the right call

Retirees s/b easy to convince

- A mix of account value (“AV”) driven assets of some type with a G’teed Fixed Payout (of any type) is typically less risky than going full AV
- The client’s desire to not be starving at age 90 could make this an easy sell
- It should simply be a matter of assessing the client’s preferred risk (of AV depletion) level, and showing them how to achieve it

Sales Force may be less so

- Payout (non-AV-driven) Annuities have long been equated with loss of asset control
  - Ever hear of the term “annuicide”?
  - Prospect of one last upfront commission at annuity date, has not been sufficiently motivational
- Any educational effort for the Sales Force has to focus at least as much on asset preservation as it does on retirement security
- Could be a misconception based on a “myth”

Busting the "Myth"?

- What "myth" do we need to educate away to be successful getting a G'teed Fixed Payout utilized?
- I hypothesize that it's related to risk tolerance
  - "If I put 15% of my assets into a Fixed GLWB now, I'll have only 85% left under my control in accumulation accounts."
  - "Something I had is being taken away from me."
  - "I'm willing to incur risk* to avoid that."
  - Is this analysis of the situation correct?
    - In the very short term, yes, of course it's correct!!
    - But it ignores the cash-flow picture of a 100% A/V strategy

***For my client, but also for myself, in terms of asset/trail depletion**

What is the "Myth," Exactly?

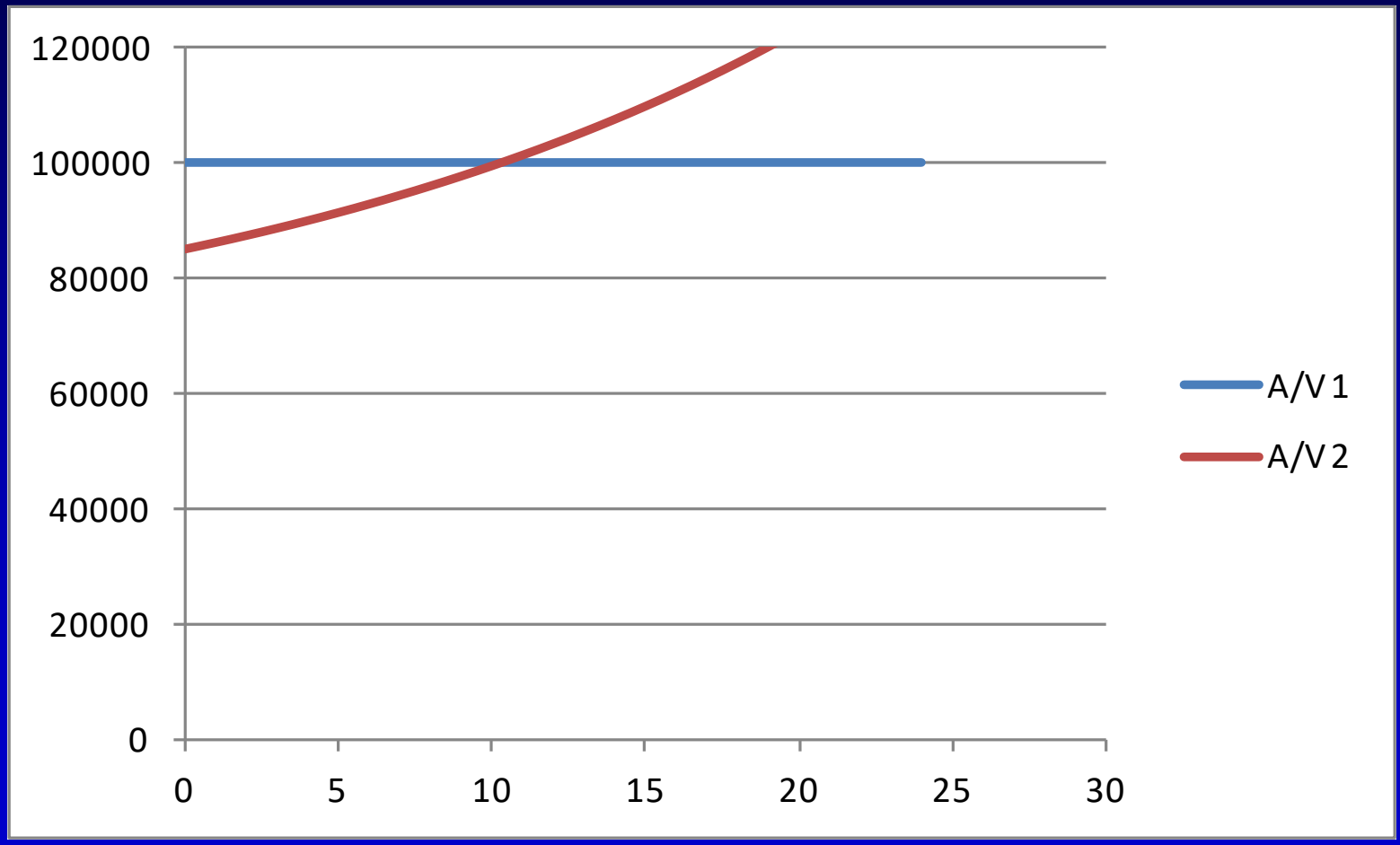
- The following illustration assumes that the starting position is in a heavily balanced fund assuming 4% net AV growth, and the client wants a 4% withdrawal rate
- Let's assume that the agent is in "full control" of these funds – no CDSC or MVA, etc
- And let's say his concern is this:
  - He'll get an upfront commission, roughly the same, on either a move into a final deferred annuity or a Fixed WB paying 6% now
  - But on the deferred annuity, he'd get a 1% trail after year 7 – any WB money "loses out" on this, as those are priced to "draw down"

Myth Busting

- As we've seen, not only does the Fixed WB paying 6% of Premium take care of 0.90% of the required 4% w/d; it makes the overall position less risky
- The agent, realizing that the composition of the 85% in an AV product matters less, can be more aggressive with that 85%
- So the SPIA, as she suspected, is "dead money" to her now, but the remaining money in the AV product can potentially be assumed to grow at 5% instead of 4%

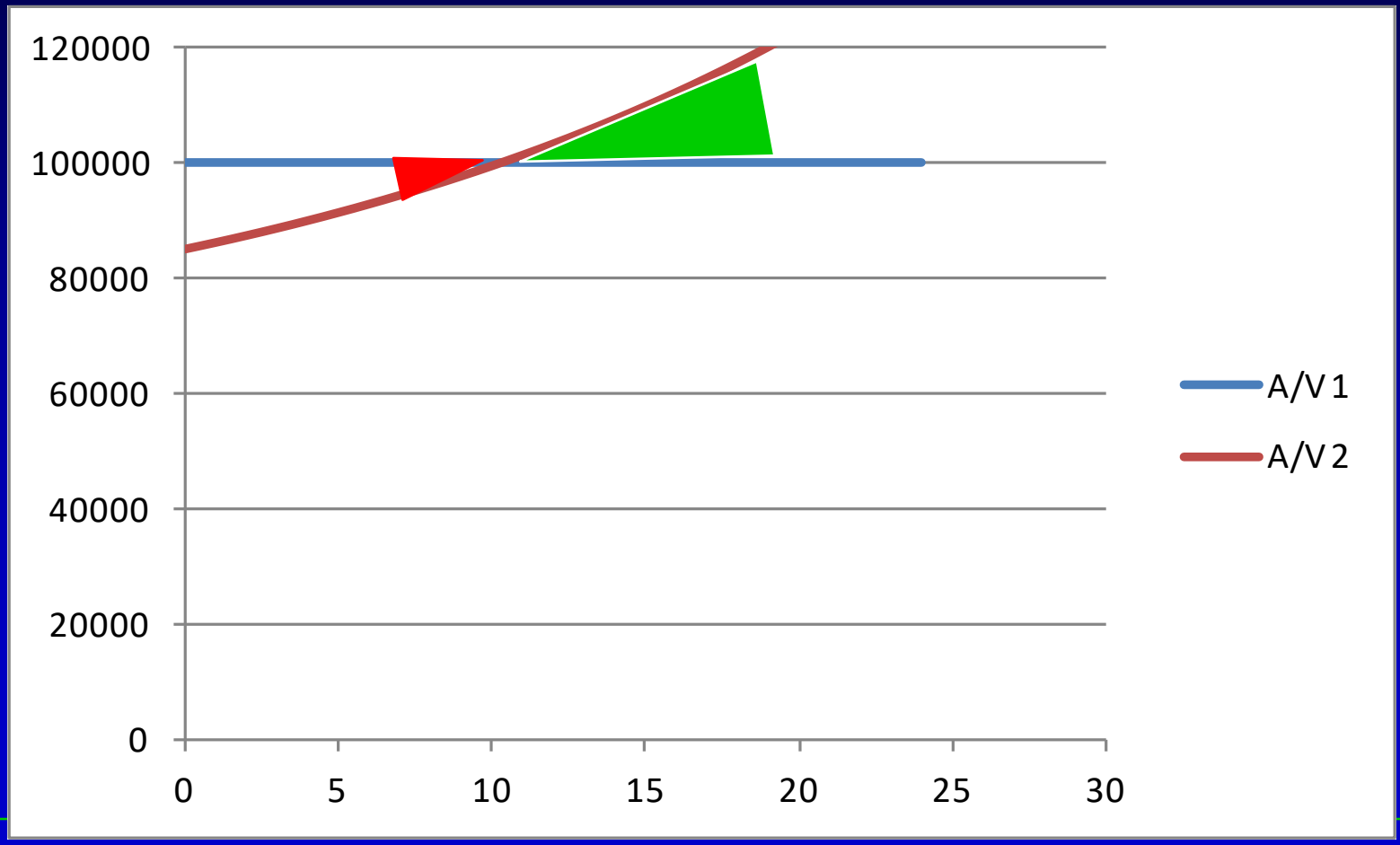
Myth Busting

- A comparison of the 2 positions now becomes



Myth Busting

- Better yet, the trail-commissionable portion is:



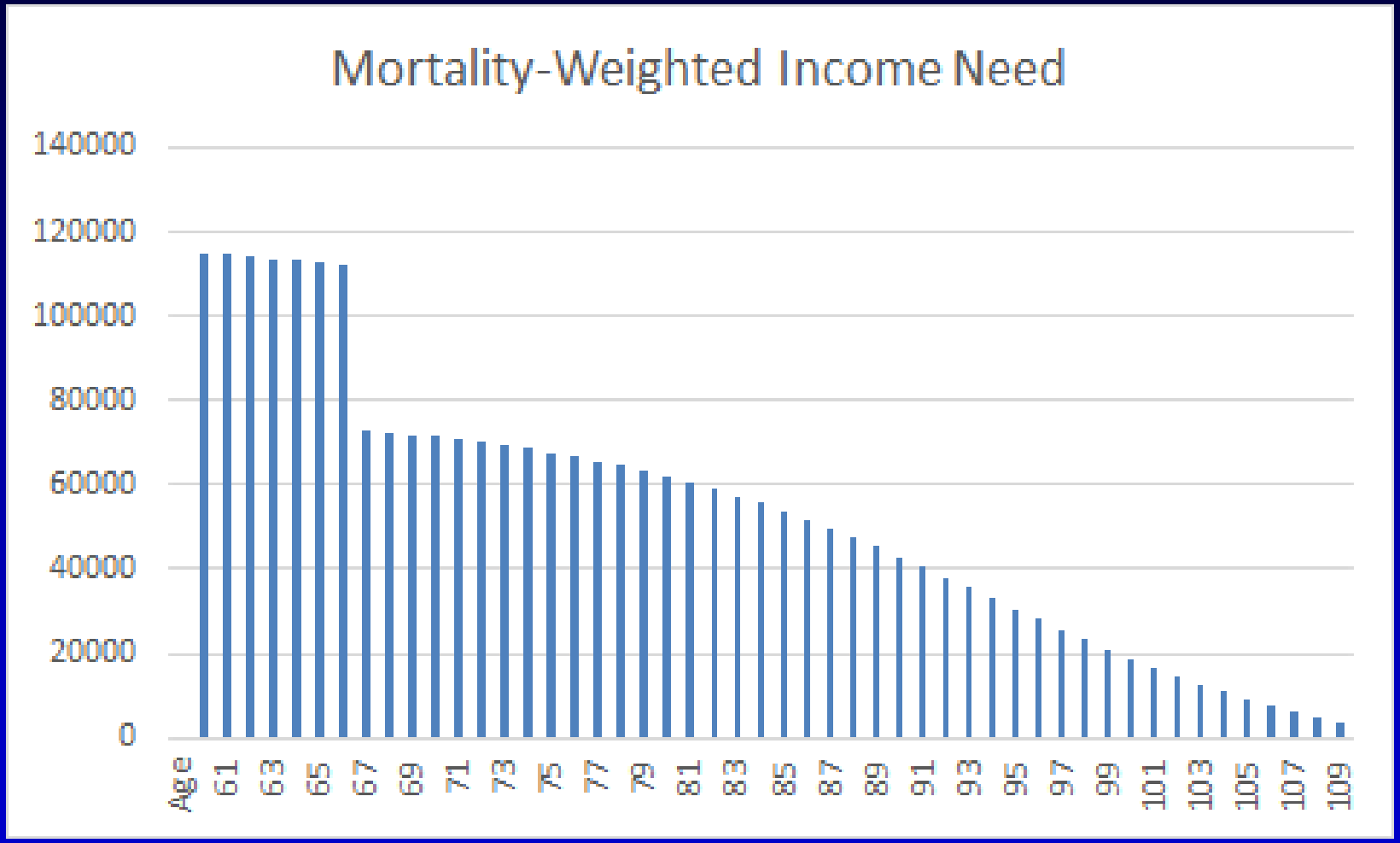
Case Study: More Realistic look at "Ruin"

- No more "30-year certain" look
- We will instead use 70% of a2000 mortality, for simplicity (rather than messing with improvement factors)
- If the fund completely runs out, ruin now occurs with probability ${}_tP_x$
- Same fund characteristics, in terms of balancing Equity and Fixed

Assume an Agent has a Potential Client

- We've been educated by the DOL threat
  - Presume that one goal is to give advice that is unlikely to be said to have failed in retrospect
  - Agent and client basically agree on <2.5% P(Ruin)
- Client has $2m to invest
- Client wants to retire now, at age 60, and plans to begin taking Social Security at 67
- Non-SS Income need is stated as $115k per year until 67, and $75k thereafter

Chart of Income-Need Problem



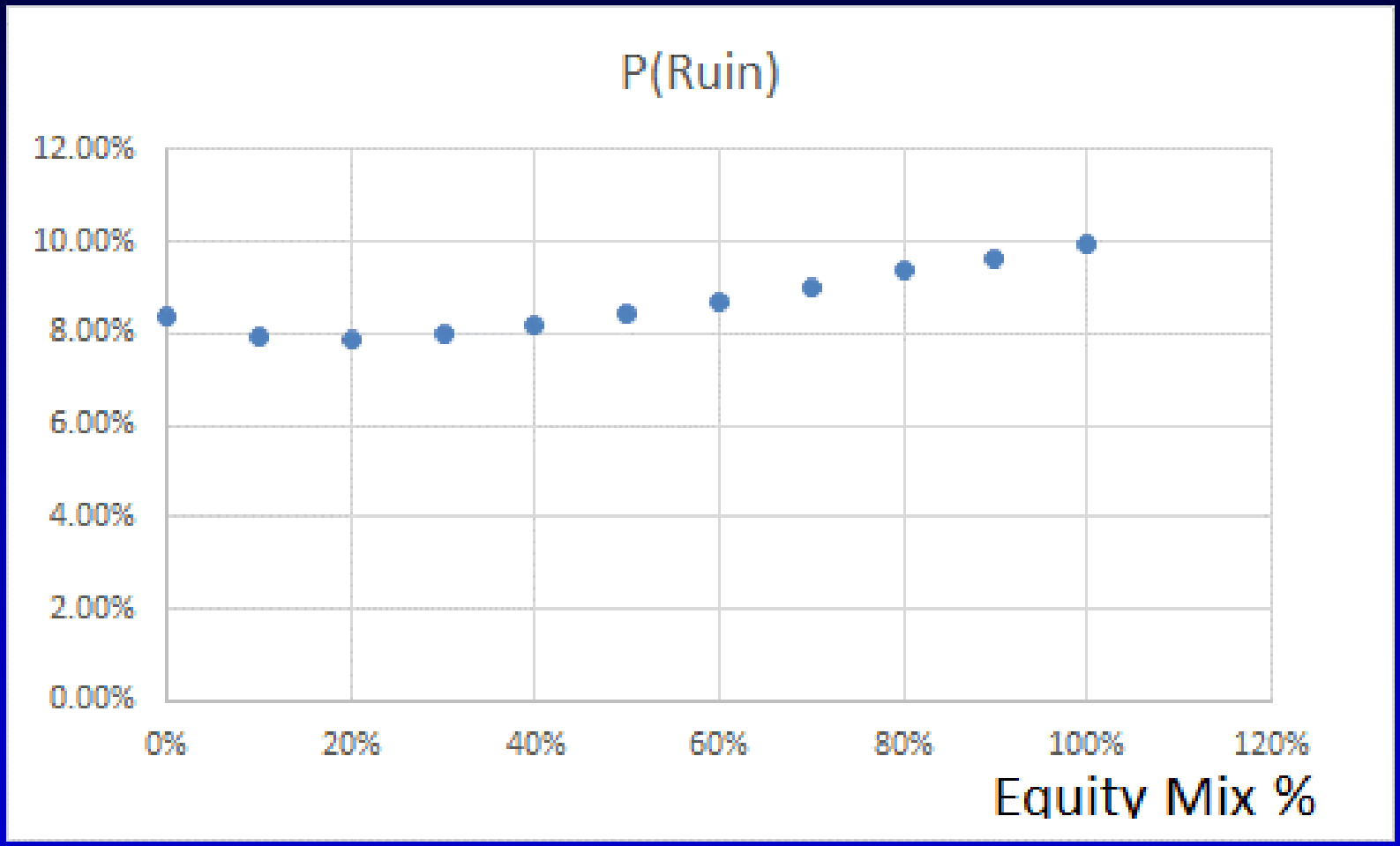
The Agent has 4 Relevant Key Tools

- 1. A Variable Annuity with a 7-yr CDSC, Comp of 5% now and 1% trail yrs 8+
- 2. Same, w/ 4.25% W/B rider for 125bp
- 3. A Fixed WB that pays 5% per year immediately, and has 5% comp upfront
- 4. Same Fixed WB, with a 7% credit and Age-Banding, that gets you to 8.5% of Prem per year in years 8+, with 5% comp upfront

The Agent thinks "Diversify VA for Safety"

- Would normally used 20% Equity, 80% Fixed for a high-risk cash flow layout like this
- By using a Monte Carlo tool you've designed, they find that the probability estimate of ruin for that is about 7.9%
- The tool allows them to monkey with the fund mix, to little avail
  - Best case is pretty much where they're at; any major change to the equity mix, up or down, makes it worse
  - Median Base PV of Trail comp @3% = $254.3k

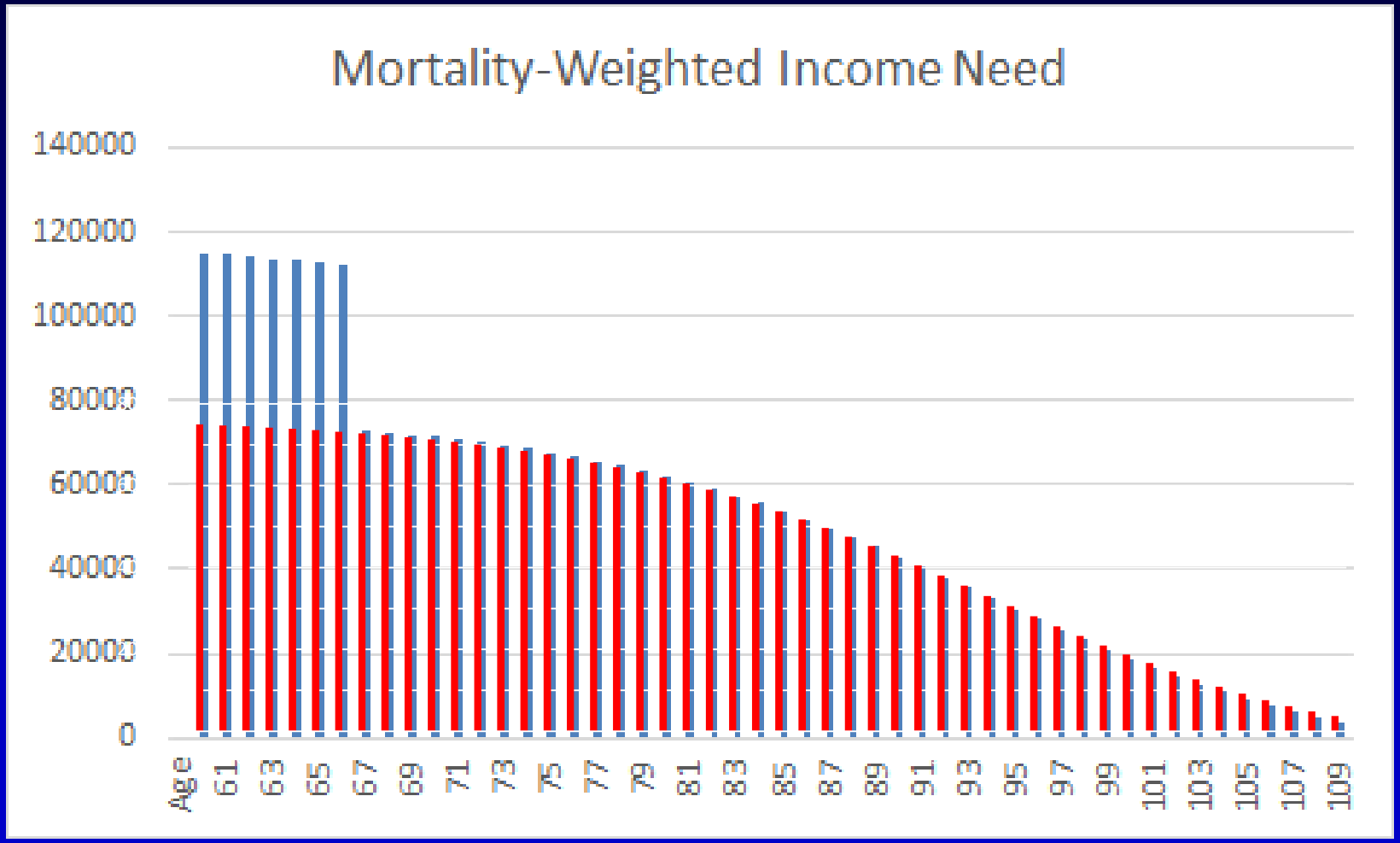
Ruin Probabilities with no Fixed Payout



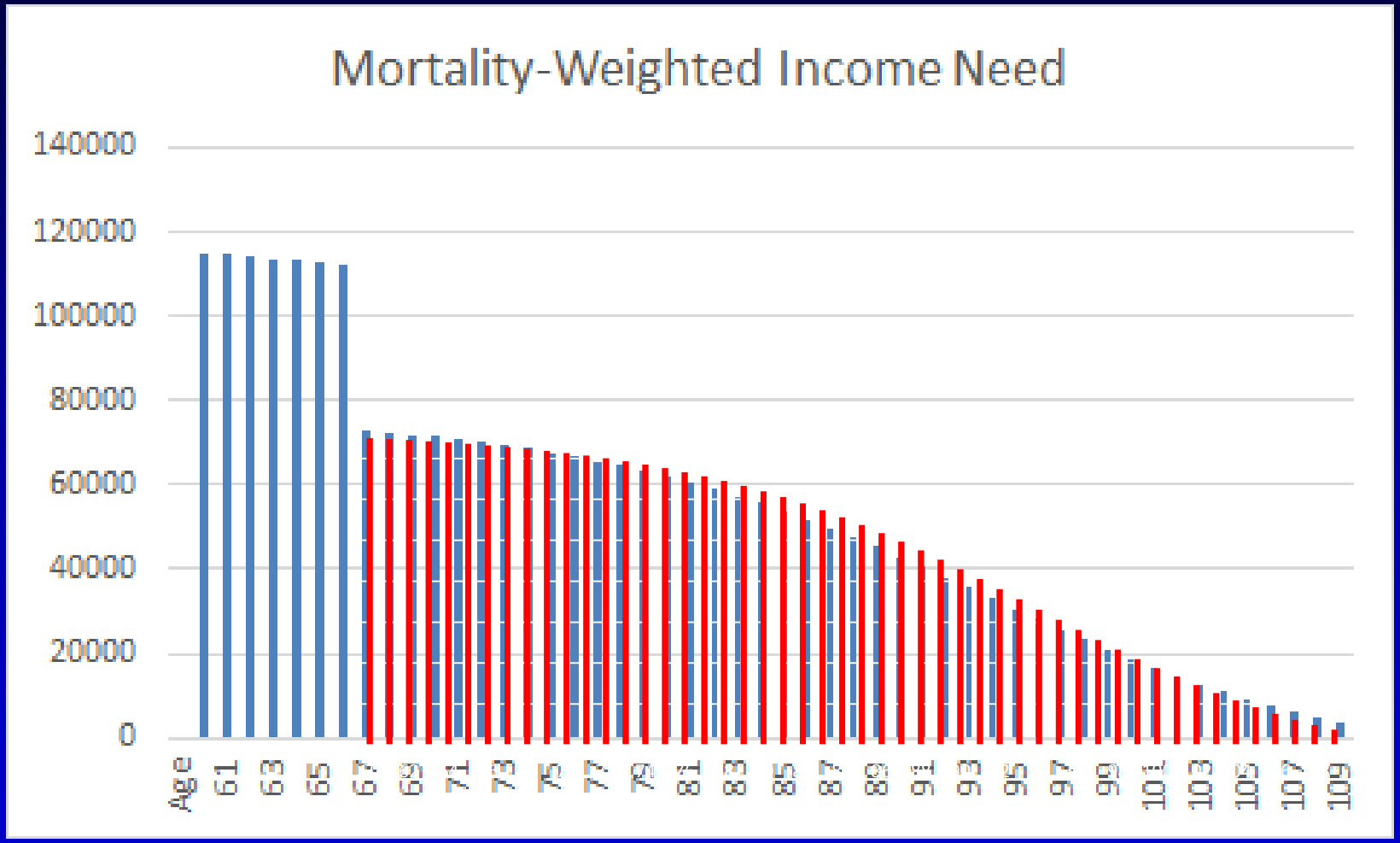
What are some other options?

- Use some % of “Income Now WB” to underlie the entire series of cash flows
- Use some % of “Income Later WB” to underlie the post-Age67 cash flows
- Use the VA, and include the VAGLB Rider:
  - Presume efficient policyholder behavior
  - This rules out use for the pre-SSA excess amount, since any efficient VAGLB payout must be level

VAGLB or “Income Now” Plan of Action



“Income Later” Plan of Action



An Effective Tool would Have a “Solve”

- I won’t go into all the detail today of what that might look like
- Essentially, though, this study will look by hand at some options that attempt to meet the client’s agreed upon Ruin need
- Of those options, we will attempt to maximize the PV of trail comp

Here is a Chart w/ Inclusion of "Income Now"

- You can quickly see a couple general trends
  - More Fixed WB at the same Equity Mix reduces both Ruin% and PV (Comp)
  - More Equity at the same WB% does the opposite

Attempt #	% Equity	% IncNow	% Ruin	Post-Ruin Income	PV(Comp-k)
1	20.0%	0.0%	7.9%	Destitute	$254.3
2	30.0%	25.0%	5.2%	$25,000/annum	$222.2
3	50.0%	25.0%	6.1%	$25,000/annum	$272.2
4	65.0%	45.0%	3.9%	$45,000/annum	$243.3
5	95.0%	60.0%	2.2%	$60,000/annum	$248.7
6	100.0%	75.0%	0.0%*	$75,000/annum*	$181.8

- Ruin, once you're at least partly into a Fixed Payout, ***doesn't mean the same thing*** as it does in a "Level WD from a Fund"
- In Case 6*, Ruin ~= running out of "Extra Money" in years 1-7

Here is a Similar Chart for "Income Later"

- This option seems to be even more helpful
  - The risk of Ruin in years 1-7 isn't great if you don't overspend on the G'tee
  - The payout structure, in this case, provides cheaper out-year protection

Attempt #	% Equity	% IncLater	% Ruin	Post-Ruin Income	PV(Comp-k)
1	20.0%	0.0%	7.9%	Destitute	$254.3
2	50.0%	25.0%	2.6%	$42,500/annum*	$261.0
3	50.0%	35.0%	0.5%	$59,500/annum*	$226.0
4	80.0%	35.0%	1.7%	$59,500/annum*	$297.2
5	80.0%	40.0%	0.7%	$68,000/annum*	$272.2
6	100.0%	44.1%	0.98%**	$75,000/annum**	$299.9

- In this case the Post-Ruin Outcome* is only true at ages 67+ – this should be carefully conveyed
- Case 6** Ruin is similarly described as with SPIA; all ruins, though are IN year 7; likely could plan around them

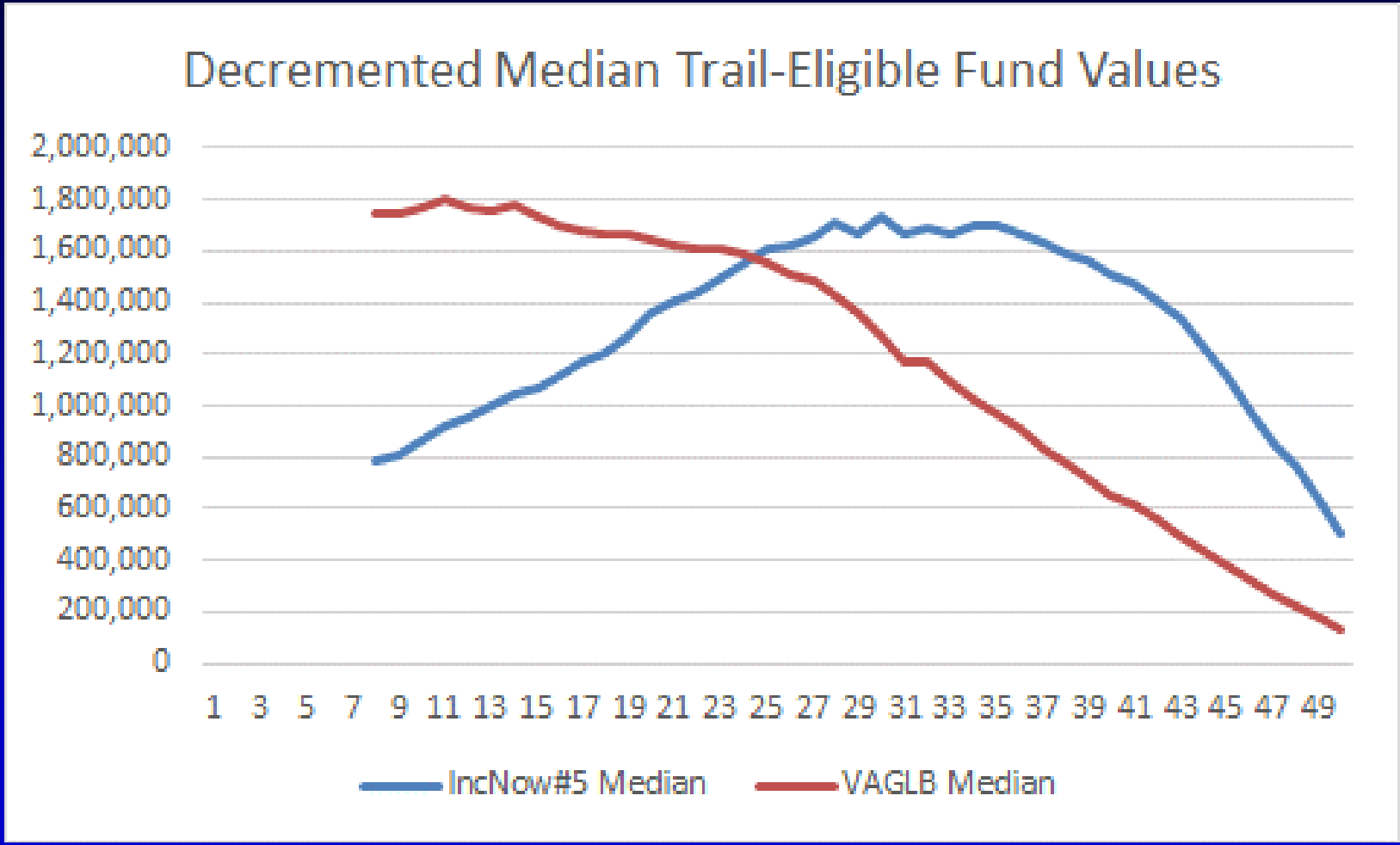
Important Areas of Emphasis

- I've expressed the fund-value component in terms of the selling agent's perspective, but it also measures likely "Extra Money" that a given policyholder will have around – could be crucial
- Something like this would be pretty easy to automate, and solve for a best possible outcome, assuming chosen conditions
- All outcomes are, of course, dependent on input market assumptions and Fixed Payout rates; in my example, "Income Later" was the "best deal"

What About the VAGLB Option?

- The non-level income desired, and desire to use any VAGLB efficiently, rule out keeping 100% of funds in a VA
  - Assume the extra $280k of withdrawals needed pre-age 67 can be financed via a Bond for ~$236k at issue
  - The remaining premium can fund the $75k per year as an efficient VAGLB withdrawal stream
- The PV(Comp), with 0% chance of "ruin" in that case is $264.1k, better than the winning "Income Now" options, but well below best-case "Income Later" – some caveats, though:
  - Again, "ruin-free" assumes perfect utilization!
  - And the probability of "extra money" going to $0 is 23%!! For many clients this is truly suboptimal – underutilization early on could result in a stunted quality of life (elderly clients' underutilization of WBs has already been documented!)

Full Story on “Income Now” vs VAGLB



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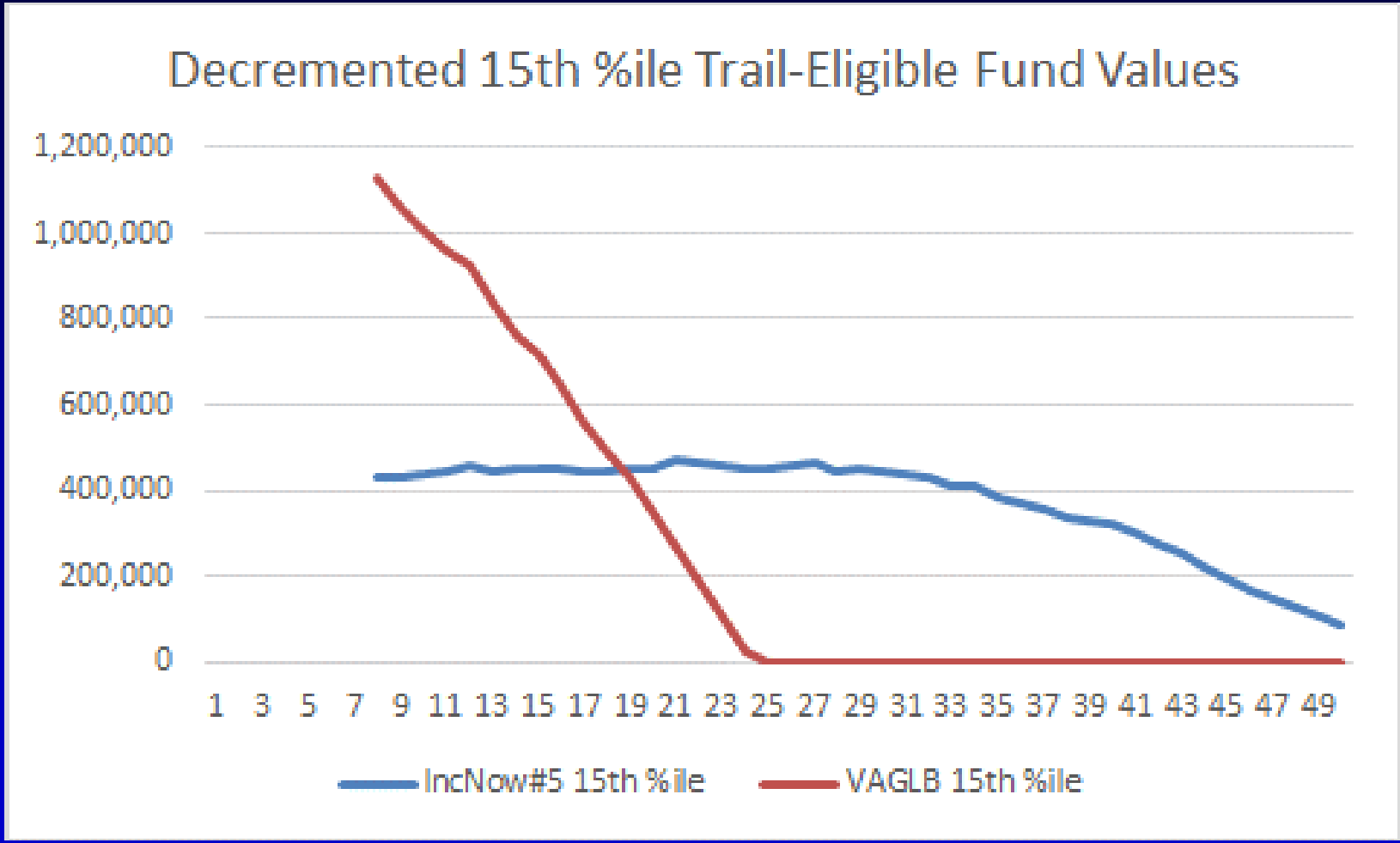

Conclusion

- Although it may seem like it, the goal of this study wasn't to extol one form of guaranteed income over another
- It's to argue that we can better educate, and design better tools for, the field, in this general area of practice
- I believe this is how we will ultimately best serve our true end-clients