

Proposal to Government for a Smoothed Approach to Auto-Enrolled Pensions

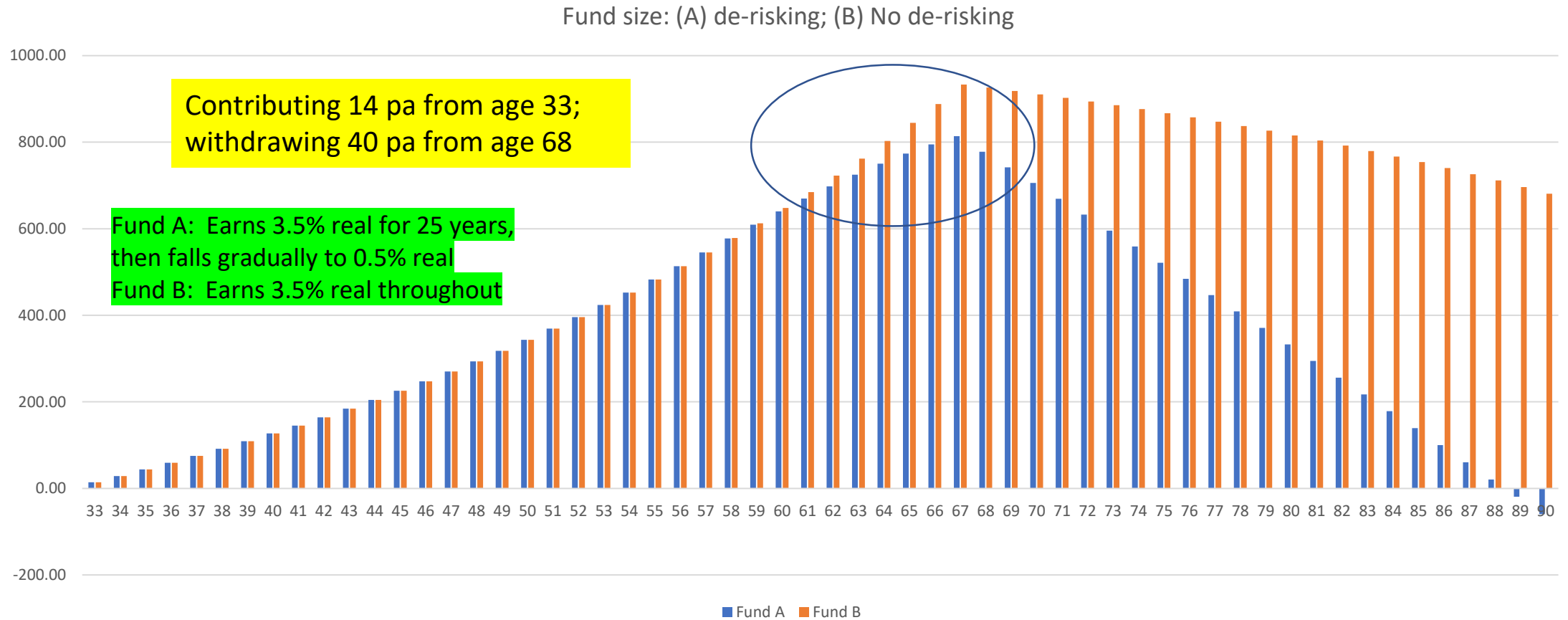
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Why make a submission to government?

- Lessons from managing my own DC pension for more than 20 years
 - First in the accumulation phase, then in decumulation/drawdown for last 8 years
- It was difficult to devise suitable investment strategies for both phases
- Even more difficult to manage transition from accumulation to drawdown
 - I was able to keep the same investments, and not have to cash the savings product at retirement and buy a new drawdown product. This made the transition from pre-retirement to post-retirement low-cost and relatively painless.
- Typical saver's experience at this stage is high costs and low returns
 - De-risking in the period leading up to, then through, retirement reduces returns
 - High costs are incurred in changing from a pre- to a post-retirement contract, changing the investment mix, then getting ongoing advice through retirement
- Aim is to apply lessons from my experience, so that others can earn high returns at low cost and with less risk than would otherwise be the case.

De-risking: “Foot off the gas when fund at its maximum”



Equity Risk Premium – general thoughts

- Investors must be rewarded for taking risks
 - Otherwise, everyone would put their money on deposit and take no risks
- Theoreticians argue that observed ERP is higher than justified on rational grounds
 - Risk aversion explains part but not all of ERP puzzle. Fear of looking foolish also a factor!
- Simplistic estimate of prospective ERP:
 - $\text{ERP (over inflation)} = \text{dividend yield} + \text{real growth rate}$
 - $\Rightarrow \approx 3\% + 2\% = 5\%$ (real, over inflation)
 - If bonds deliver 1% over inflation, then ERP over bonds is 4% a year
(Result is complicated by share buybacks, options, rights issues, etc.)
- ERP higher for illiquid investments (private equity (PE), real estate, etc)
 - Some experts believe that returns on PE are more than 3% pa higher than on quoted equities
 - Proposed approach allows significant investment in private equity, infrastructure, real estate.

Equity Risk Premium (ERP) – the past

- Federal Reserve Bank of New York, 2015: between 5% and 6% pa
 - Derived from a combination of models, retrospective and prospective
 - Wide variations in estimates, depending on model and time periods
 - Between 1960 and 2013, mean ERP of 9.3% per annum
- Credit Suisse Global Investment Yearbook 2017
 - Between 1900 and 2016, mean ERP (over Bills) of 4.3% per annum
 - Estimate is for global equities (in USD)
- But “Past returns no guide to the future”

ERP – the future

- KPMG Netherlands makes regular estimates of prospective ERP
 - 5.5% per annum prospective estimate at Q3 2017 (also 5.5% at Q3 2018)
 - Measured against 30-year AAA-rated bonds; higher if measured against cash or short-term bonds
- “market-risk-premia.com”: prospective ERP estimates at 30 November 2017 (estimates at 30 October 2018 in brackets):
 - China: 3.8% pa (6.9%); US: 3.4% pa (3.8%); UK: 5.9% pa (6.7%);
Japan: 6.6% pa (7.4%); Germany: 6.4% pa (7.7%)
- Prospective ERP is lower when markets are elevated, and conversely
 - Investment horizon for a 35-year old is 50 years +, so average market levels can be assumed

But high risk is a heavy price to pay

- Since its formation in 1986, the FTSE All-Share Index has grown by 9.8% pa on average, but:
 - It fell 26.5% in one month (October 1987) – down 21% in two days
 - It fell 13.2% in Sep 08 and 11.9% in Oct 08 => down 23.6% in two months
 - An even greater fall of 33.8% in the two months October and November 1987
- Market downturns can be prolonged
 - Index remained below its August 2000 level for five years
 - ... and below its October 2007 level until February 2011, 40 months later
 - On seven occasions since 1987, the Index has remained below its previous high for more than 12 months.

ERP –high volatility is a steep price to pay (2)

- Allowing for charges (say 1% per annum), the longest losing streak increases from 61 to 73 months (Dec 1999 – January 2006)
- A different question: why risk the stock market if you can earn more in the Post Office?
 - €1,000 in the Post Office between Dec 1999 and Oct 2013 would have earned more than if it had been in equities (assumes 1% pa charge, 3% pa in PO)

In summary:

The Equity Risk Premium carries a heavy price in terms of extra risk.

Is it worth the effort?

Behavioural psychology adds to the challenge

- Part of being human is to worry more about negative outcomes than to celebrate positive results
 - Hard-wired by evolution? (“He who fights and runs away”)
 - We tend to give twice as much weight to losses as to gains
 - The pain of a 10% loss wipes out the joy of a 20% gain
- Affects financial advisers too, possibly even more acutely
 - “ .. decision makers who expect to have their decisions scrutinised with hindsight are driven .. to extreme reluctance to take risks.” (Kahneman)
 - Why take the risk of advising a client to invest in equities if the odds are close to 50:50 that they will lose money in the first month?
 - Personal recollection of Tony Taylor’s full-page ad on the Sunday before Black Monday in 1987, exhorting clients to invest in equities.
 - Market fell 20% over the next two days
 - Lesson taken by other advisers was to be cautious when advising on asset allocation

**The
solution to
ERP
conundrum
?**



SMOOTHING !!!

Key smoothing principles

- Smoothing formula should be transparent, objective, easy to apply
 - Not “with-profits”; no black box; no actuarial discretion
- When applied to historic data, it should mitigate – ideally eliminate – negative price changes
- At the same time, it should faithfully reflect long-term trends
- The formula should remain broadly unchanged over time, indicating that, if it worked for past price movements, it should work equally well for future movements.
- Risks of adverse selection, of investors exploiting the fact that smoothed values can differ from market values, must be minimised.

Proposed smoothing formula

Smoothed fund value at start of month equals:

- a) 98.5% of previous month's smoothed value, increased by one month's interest at assumed long-term rate; plus
- b) 1.5% of current month's market value, net of management charge, excluding cash flow in the month; plus
- c) Cash flow in the month (contribution income less withdrawals)

Assumed long-term return in (a) is derived as follows:

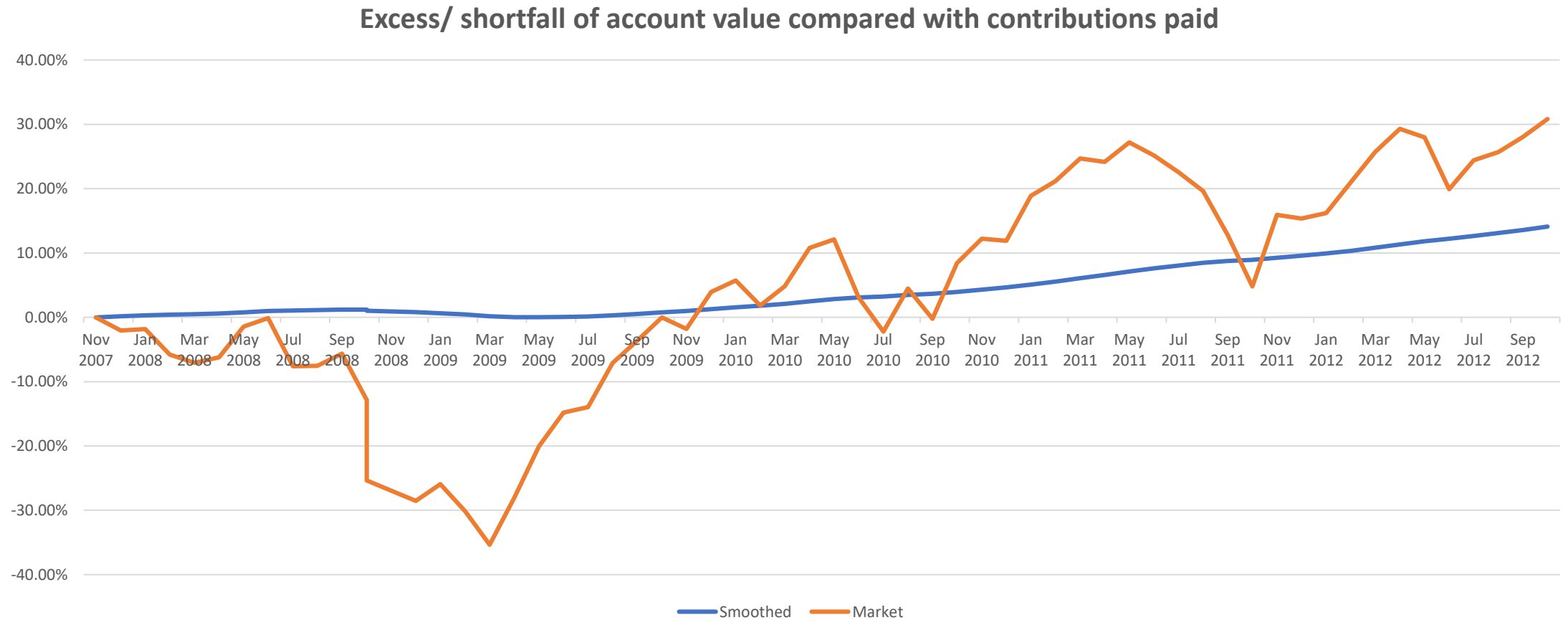
- Assumed l-t return at start is current long bond yield plus 3% pa (3.5% less 0.5% fee)
- From month 2 onwards, it moves between an upper and lower bound where:
 - Upper bound is prevailing long bond yield plus 5.5% per annum (6% less 0.5% fee)
 - Lower bound is prevailing long bond yield plus 0.5% per annum (1% less 0.5% fee)
- If market value above smoothed value, assumed l-t rate moves toward upper bound; if below smoothed value, it moves toward lower bound, both at 2% a month

For Auto-Enrolment, parameters will be decided after careful consideration of various options

Smoothing formula ensures positive smoothed returns at the start, even if markets perform poorly, e.g.

Month	Cash Flow	Market Value Change	Market Value	Smoothed Value Change	Smoothed Value	Market/Smoothed
1	100	-2%	98	0.38%	100.38	98%
2	200	-2%	292	0.36%	301.48	97%
3	300	-2%	580	0.35%	603.58	96%
4	400	-2%	960	0.33%	1,007	95%
5	500	-2%	1,431	0.32%	1,512	95%
6	600	4%	2,113	0.39%	2,112	100%

Excess/shortfall of smoothed and market values from contributions paid, assuming start date of Nov 2007



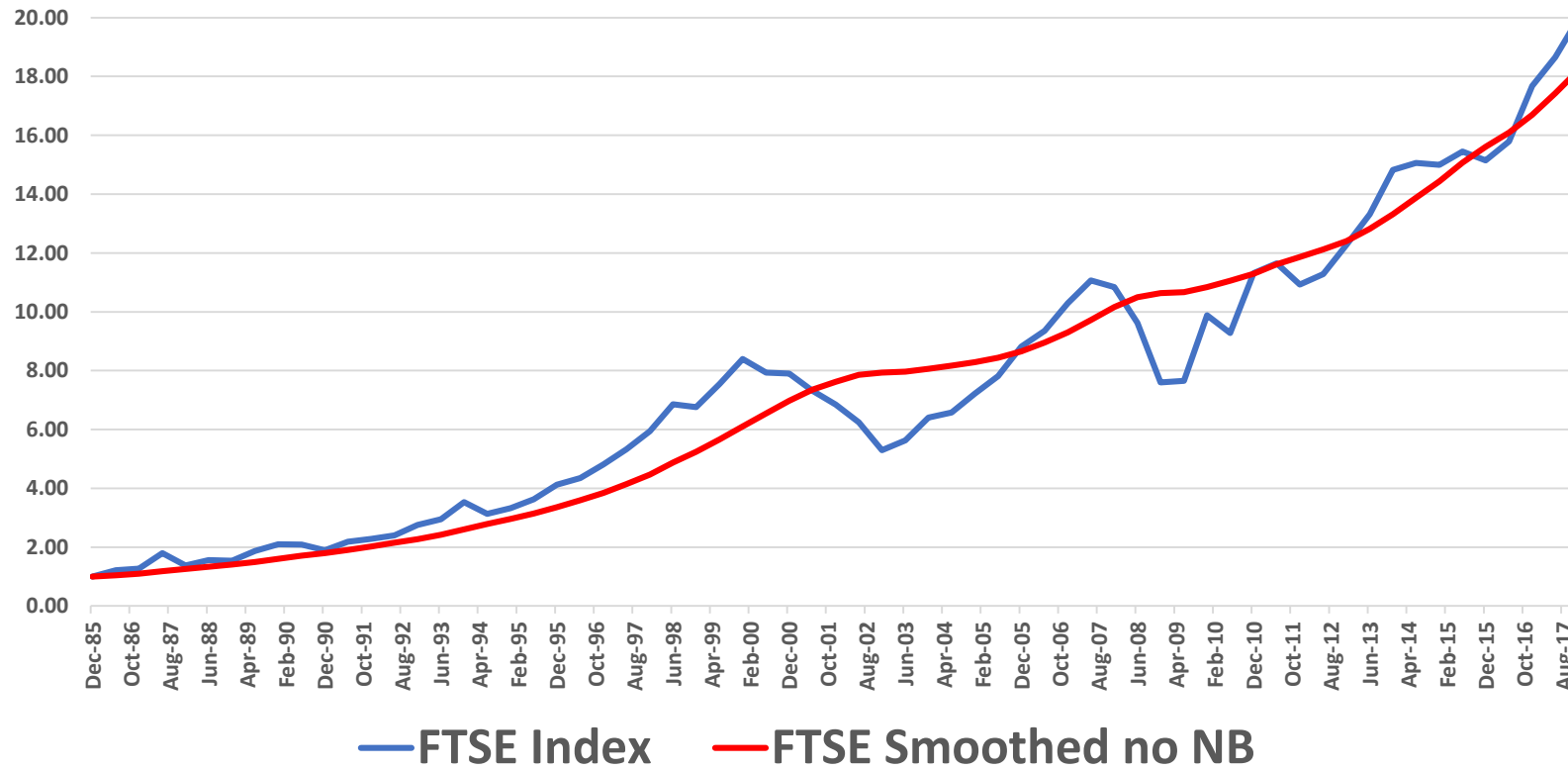
Changes in market values versus changes in smoothed values from 1 Nov 2007

3-month change in market value (starting Nov 2007)	3-month change in smoothed value (starting Nov 2007)
-12.8%	+0.5%
+4.9%	+0.4%
-10.6%	+0.4%
-19.7%	-0.1%
-4.0%	-0.4%
+6.1%	-0.4%
+9.4%	+0.2%
+10.7%	+0.9%

This assumes constant monthly inflows. If 5% per annum exits are assumed, the cost to continuing members of paying them smoothed value equates to less than 0.4% of the fund's market value by December 2009, and credited smoothed returns would be unchanged. (See para. 11)

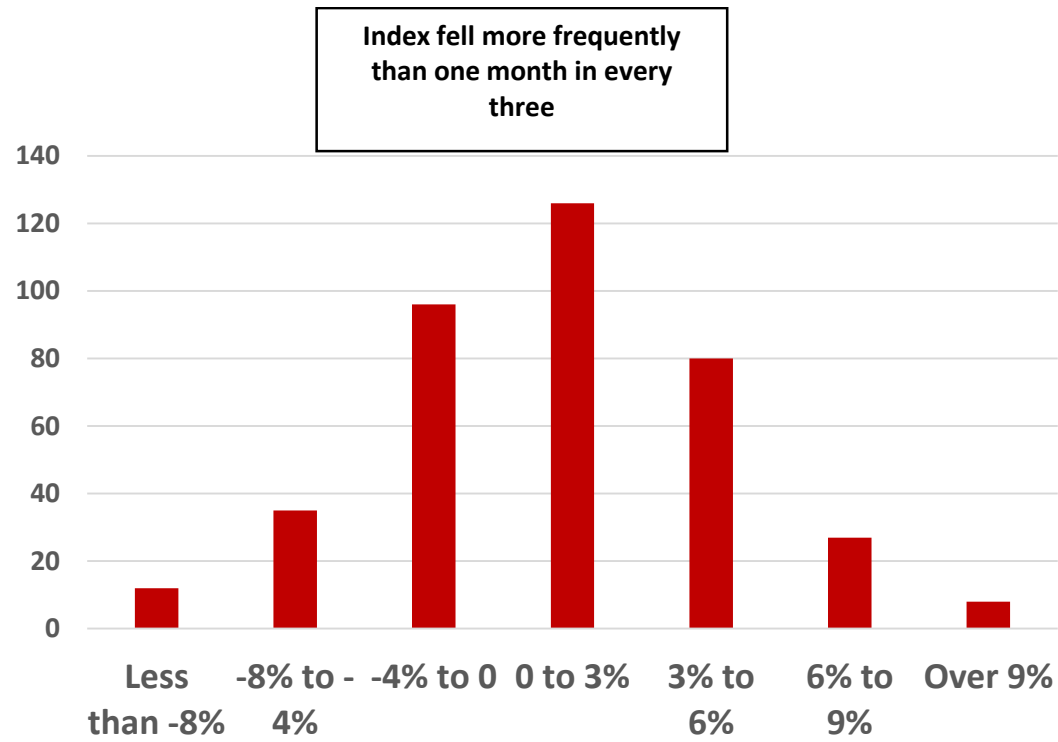
Formula applied to FTSE All Share 1986-2017

Gross dividends reinvested

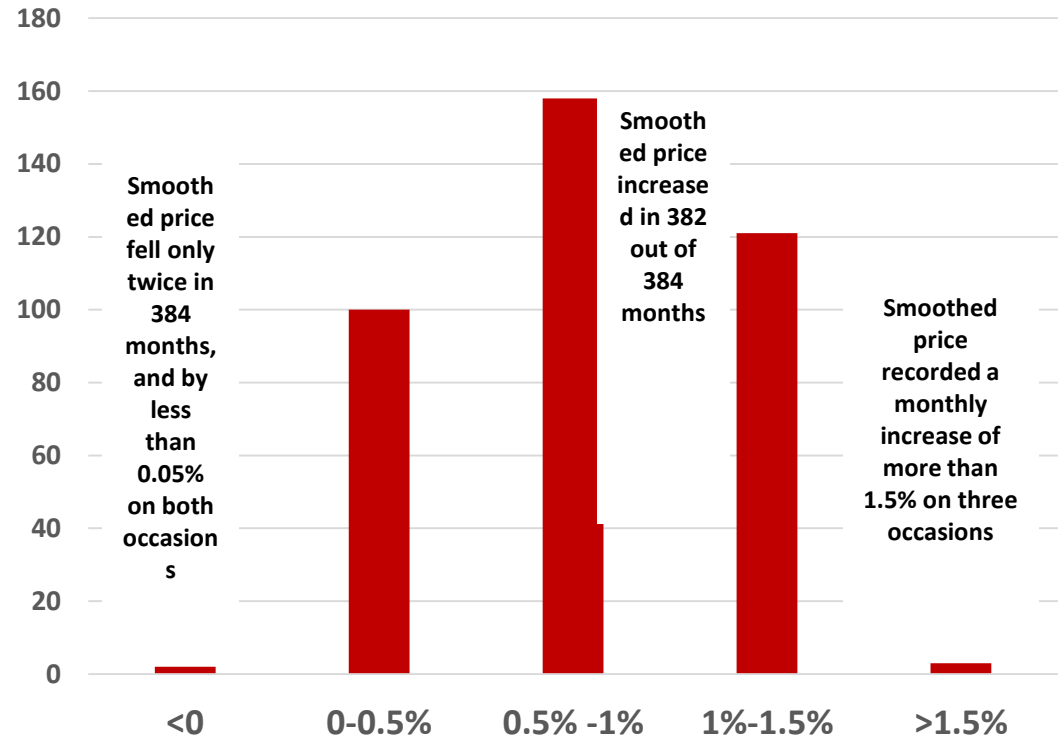


Price changes 1986 to 2017—before and after smoothing

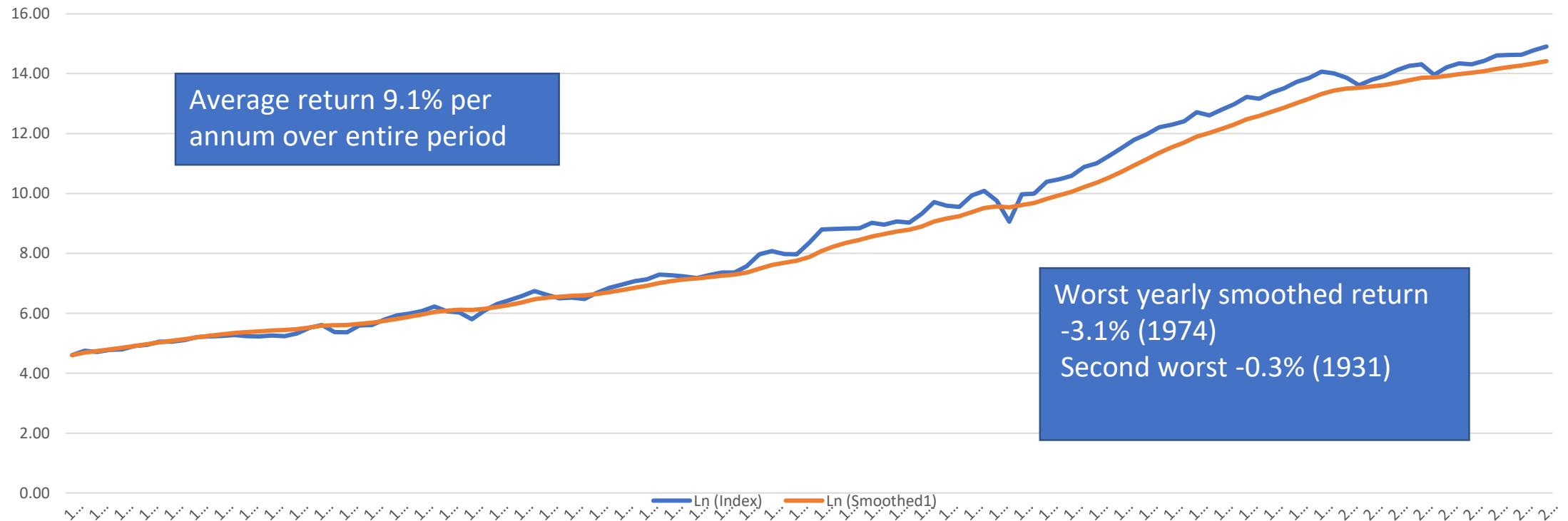
Monthly changes – unsmoothed



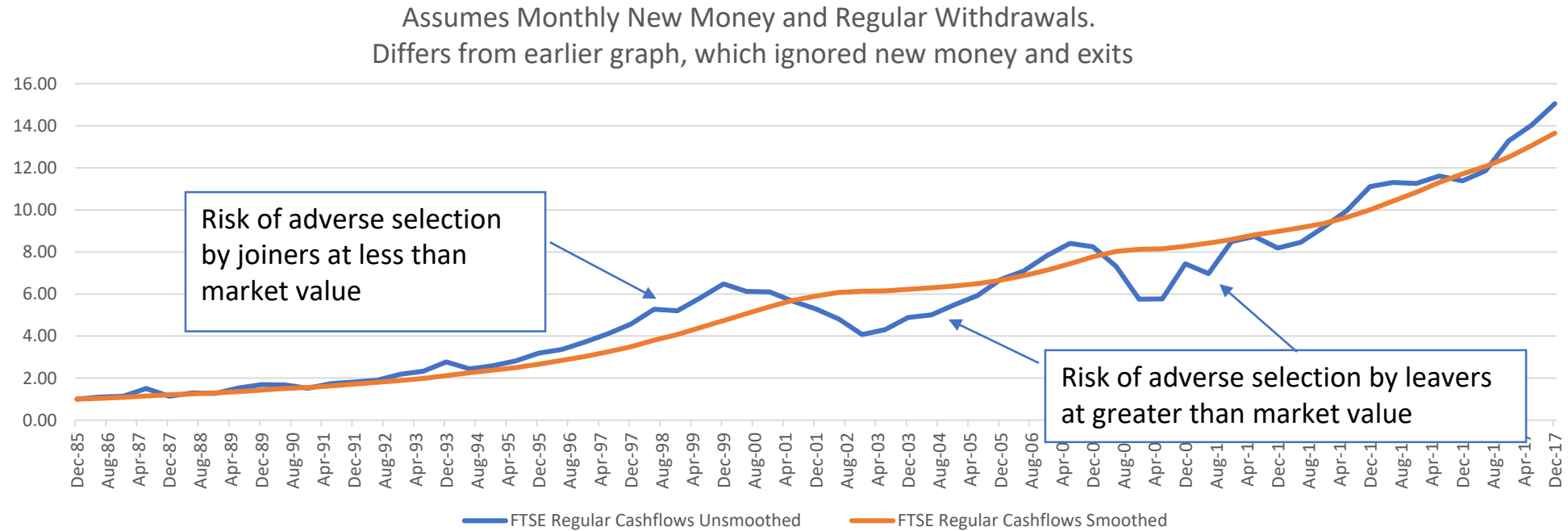
Monthly changes - smoothed



Actual, smoothed returns on UK equities from 1900 to 2017 (level cash flows) - Logarithms



Risk of Adverse Selection Whenever Smoothed Value (SV) differs Significantly from MV



Guiding principle to avoid anti-selection: “It’s a pension, not a piggybank”

- Regular contributions
 - No lump sums or, if allowed, must be invested evenly over (say) two years
 - deposit interest credited in the meantime on amounts to be invested
- Can only withdraw on death or during retirement
 - May also be allowed in specific circumstances, e.g. house purchase
 - No transfer values at any time
 - Gratuity 25% of fund on retirement (must be taken in all cases)
- Rules for withdrawals post-retirement to prevent anti-selection, e.g.
 - Must withdraw between 3% and 10% of fund each year (under age 80)
 - Amount of any withdrawal cannot vary from previous one by more than 5%

Investment Strategy

- Predictability of outflows extending many years into the future removes a major constraint on investment policy
- Low weighting for current market value removes another constraint
- Allows high levels of investment in unquoted and illiquid assets
 - Covers a wide range: infrastructure, real estate, forestry, private equity, etc.
 - Proportion in such assets could exceed 20%
- Every investment should be expected to deliver target return
 - => no government bonds and no cash, other than for liquidity or tactical reasons
- Avoid excessive exposure to any geography, industry, economic outcome, ...
 - Try to reduce risk of everything going bad at same time.
 - But not the end of the world if everything goes wrong simultaneously.
- In the early years, suggest 100% in passively managed world equities
 - Less politically fraught than active management

A free lunch?

- Does the assertion that the equity risk premium can be captured with minimal pain fall into the category of “something for nothing”?
- Where’s the catch?

A free lunch?

- Does the assertion that the equity risk premium can be captured with minimal pain fall into the category of “something for nothing”?
- Where’s the catch?
- Key to success is spreading the pain (volatility and short-term losses) and the joy (long-term gains) across future as well as past generations
 - Traditionally, only gains could be spread across future generations, not losses
 - e.g. “estate” of with-profit funds must always be positive
 - No additional capital required in earlier example of scheme that started in November 07, where market values were 35% below smoothed value in March 09
- Proposed approach could solve ERP puzzle and lead to lower ERP in future
 - Ireland, as the first to launch this product, will gain most from re-rating of risk assets

“Lifetime Income Fund” for longevity risk

- Up to age 75, pensioner/ beneficiary decides how much to withdraw each year, subject to the constraints outlined earlier
 - e.g. must take between 3% and 10% of fund each year; amount withdrawn cannot vary from previous withdrawal amount by more than 5%
 - In practice, people draw down less than can be afforded
 - Probably due to fear of running out of funds prematurely
- Proposed “Lifetime Income Fund” addresses this problem
 - From age 75, can **opt** to take 1/15th of fund each year (plus interest)
 - Thus, after 15 years (by age 90), the fund will be completely exhausted
 - At that stage, Lifetime Income Fund steps in and pays 1/15th for rest of life
 - Additional benefit is paid for by a management charge of 2.6% pa (estimate)

Example of Lifetime Income Fund

Contributor with €150,000 in account at 75

Age	Amount withdrawn	Account balance at end	Payment from LIF
75	€10,120	€143,360	0
76	€10,360	€136,310	0
....
87	€13,450	€27,220	0
88	€13,770	€13,940	0
89	€14,100	0	0
90	0	0	€14,440
91	0	0	€14,790
92	0	0	€15,140

Summary

- Proposed approach delivers a pension 60% to 100% higher than would be possible for a scheme run on conventional lines (e.g. NEST)
 - Uplift is highest at older ages, since a higher proportion of total return is earned post-retirement
- Scheme is easy for contributors to understand
 - Like a deposit account; same “interest rate” for everyone (expected to average over 5% pa)
- Seamless transition from pre-retirement to post-retirement
 - Pre-retirement, contributor puts money into account; post-retirement, withdraws it
- Easy and therefore cheap to administer
 - One fund for everyone. No need for plethora of risk-rated funds with different asset mixes at different stages of a contributor’s career, and a completely different product in retirement
- No need for regular adviser reviews pre- and post-retirement
 - Post-retirement reviews have a serious adverse impact on returns (not reflected in estimates)
- “Lifetime Income Fund” concept eliminates fear of outliving one’s assets
- Ireland will be the world leader in this new era for retirement planning