CLERUS

Review. Clarify. Improve

Objectives of Investment

CIPFA Introduction to LGPS

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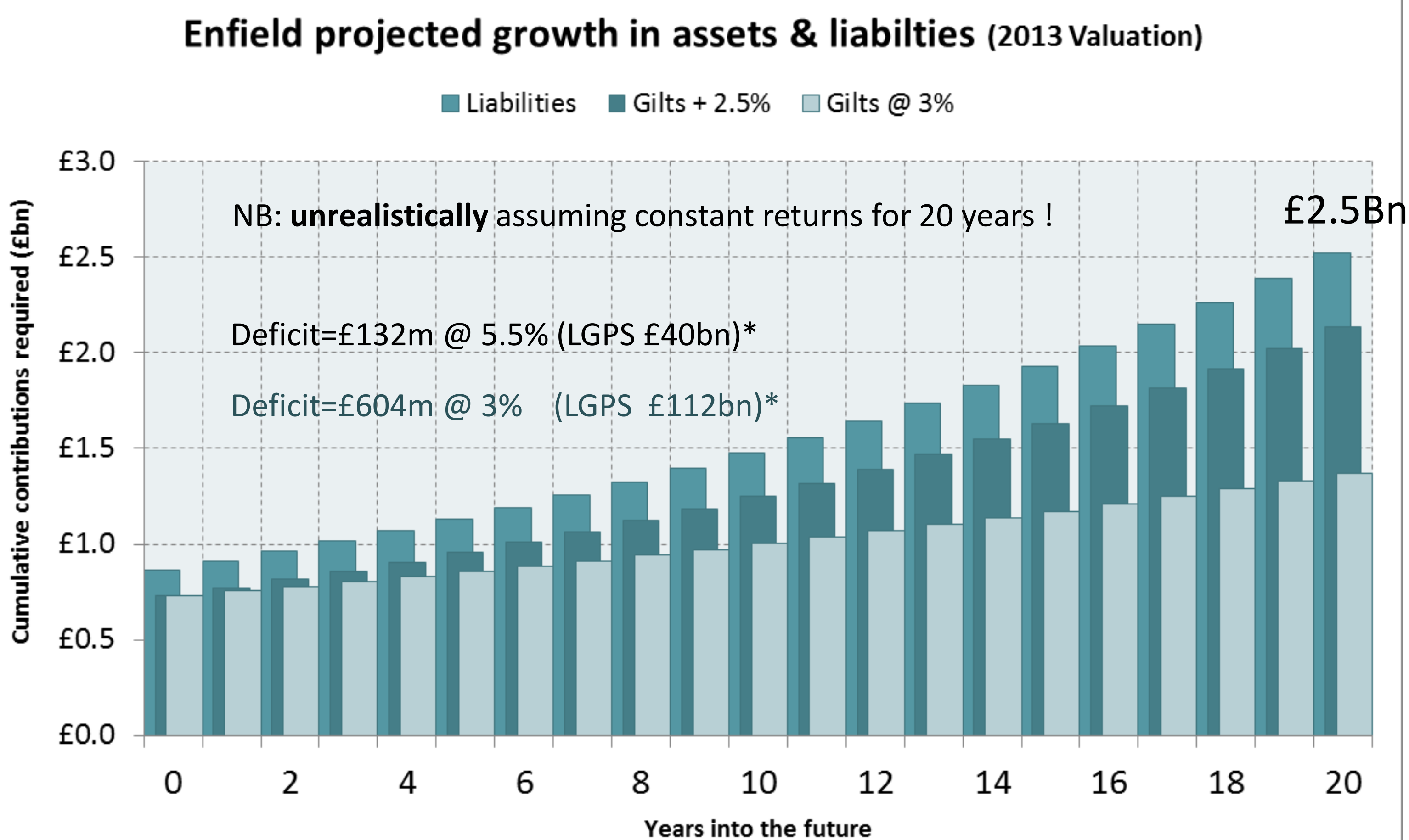
Objectives of investment

- Why Invest (take risk) ?
- What is the best way to invest?
- Role of officers and elected members (as stewards & investment decision-makers)
- Ways of managing and measuring activities to meet long term objectives
- How to manage (or not manage) risk
- Examples of what seems to work best across LGPS from our reports on £208 billion of LGPS assets released last year …

Why are we investing ?



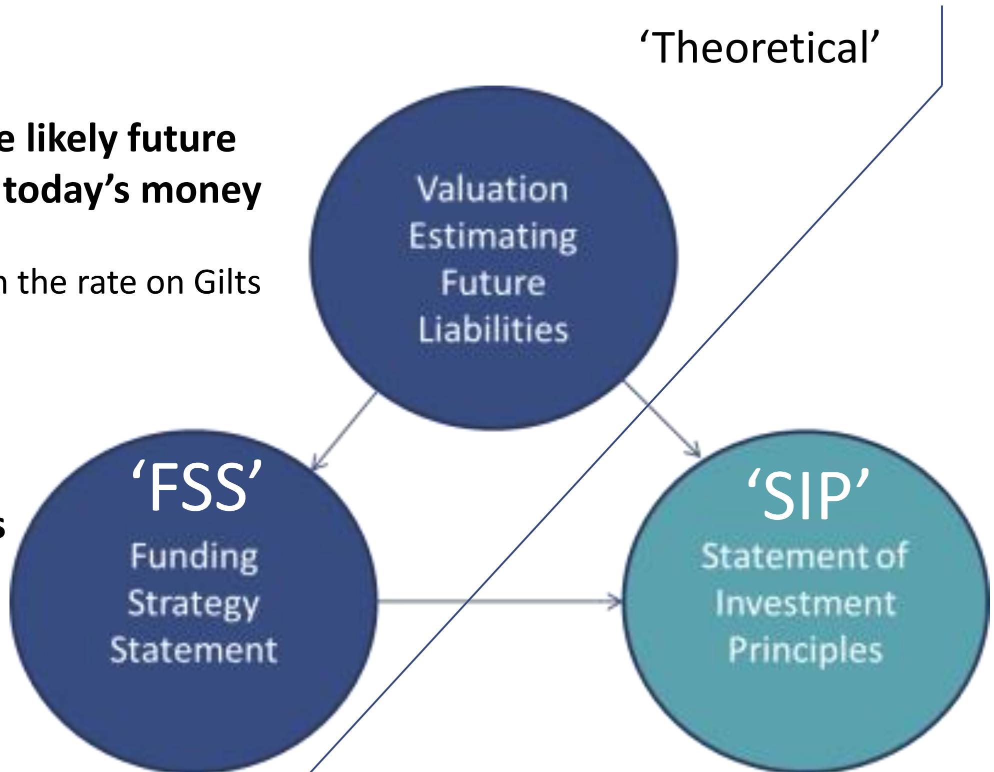
Deficit in Today's Money with low interest rates

Source: Enfield & CLERUS LLP

Regulatory framework for setting investment objectives

Establish the likely future liabilities in today's money
Actuarial +
Dependent on the rate on Gilts

Establish what asset growth + contributions required to meet expected liabilities
Function of affordability
The period considered
+ 'Random' performance assumption (ex. Gilt + 2%)



Setting Investment Policy and Objectives
What are we trying to achieve and how*

*The Local Government Pension Scheme (Management and Investment of Funds) Regulations 2009

Setting Investment Policy and Objectives

- You are now managing an investment business !!
- Simple trick is to look at this as any professional business plan
  - What are we trying to achieve and how?
  - What are our core capabilities?
  - What are the key success factors and how are we resourced against them?
  - Which of activities should we engage-in and how successful are we likely to be
  - Understand outcomes we can or can't control before setting targets & objectives
- Make sure that everything we do can be measured and understood
- Objectives clearly defined and measurable, plan in place if we are wrong?
- Adjust behaviour as you learn ….

Probability of success	Simple strategy	Complex strategy
Focus on controllable factors	High	50/50
Focus on non-controllable factors	50/50	Low

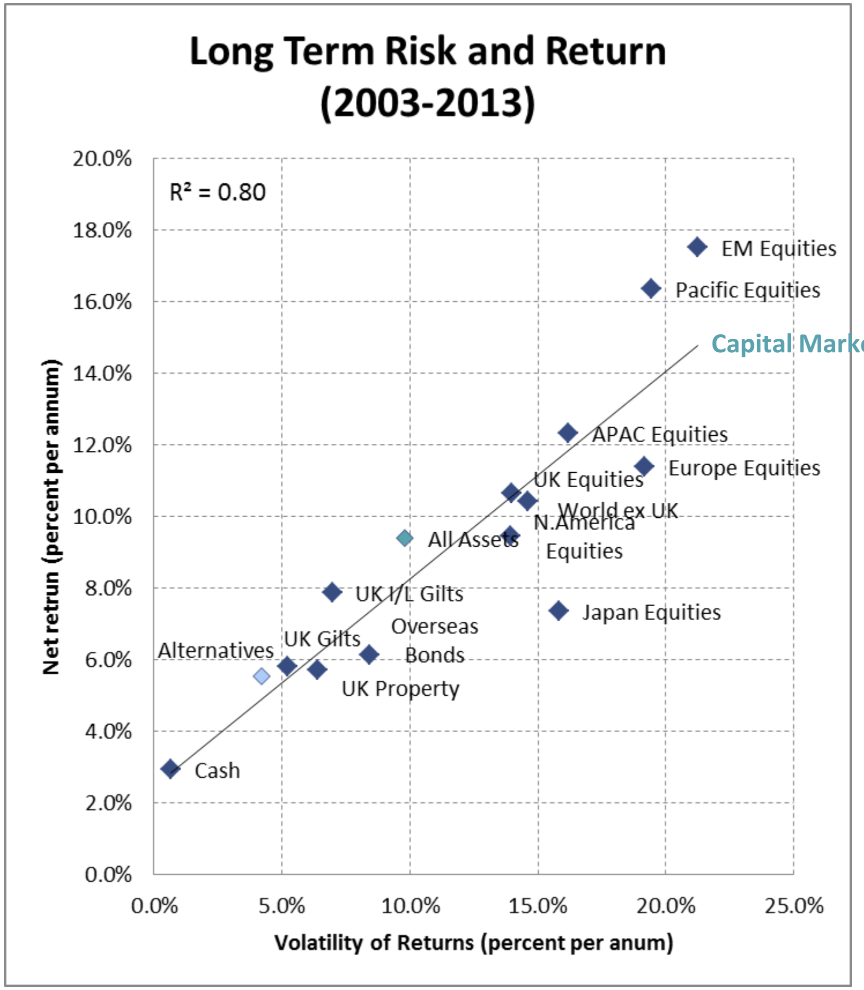
Examples of considerations you might have

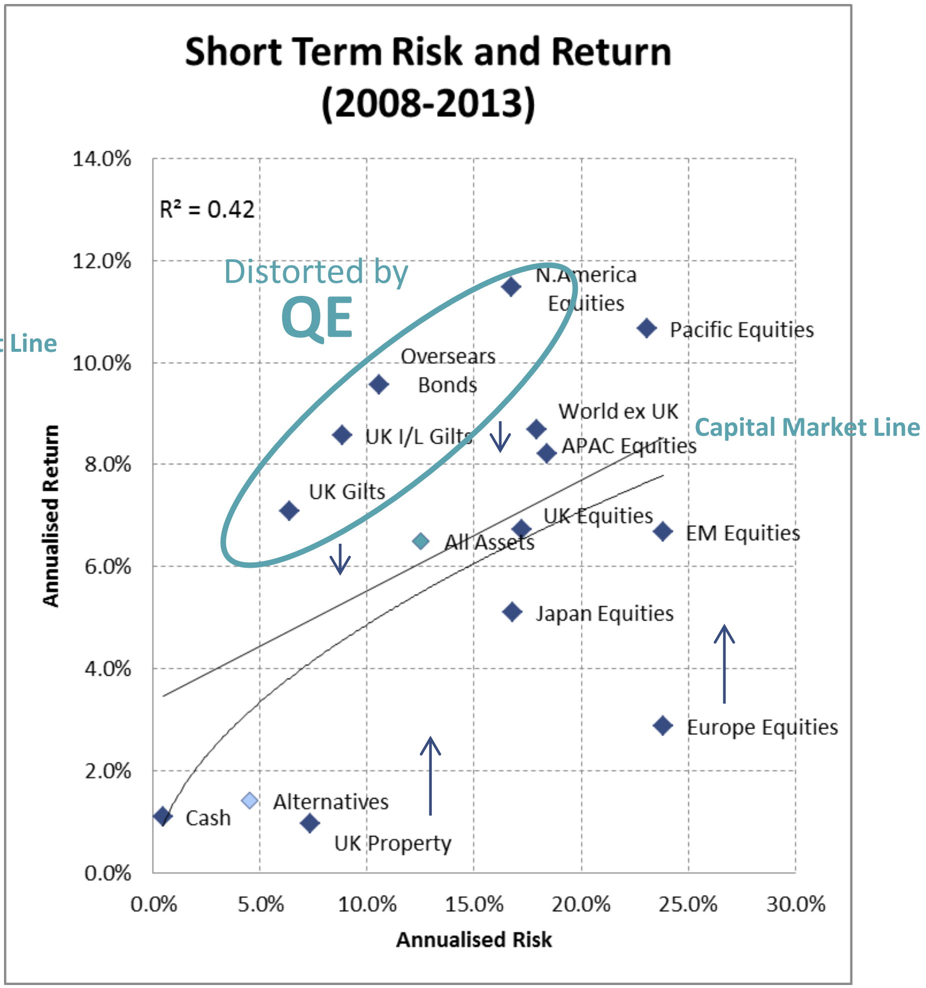
- The 'right kind' of investment policy and objectives depends on your beliefs, time and resources available, establishing a rationale plus common sense considerations

Beliefs – ways of making money	Focus	Resources	Evidence
Investment markets are largely effective over the long-term, the best you can probably hope for is the market risk-premium (Warren Buffet's bet)	Cost-effective investing, risk-sharing, avoid churn	Limited requirement, investment capacity high	On average active managers perform in line with 'the market'
It is possible to identify in advance which investment managers will do well	Picking Winners	Specialist advisors	Typically loss-making (-0.8%p.a)
It is possible to identify in advance which asset classes are likely to do better than others (market timing)	Fundamental & quantitative analysis etc.	Dedicated investment staff	Mixed results, success/failure often episodic
Market inefficiencies exist that can be exploited (net of fees and charges!)	Quantitative analysis	XL Specialist, capacity low	Like venture capital 80/20 rule

Active Management / Alpha / Skill / Luck?

Types of investments held, historic risk and return





Investment odds = Casino odds –> House Edge

Game	House Edge*	Element of Risk
• Blackjack	0.43%	0.38%
• Baccarat	1.06%	
• Caribbean stud poker	5.22%	2.56%
• Craps	1.41%	
• Roulette – single zero	2.70%	
• Roulette – double zero	5.26%	
• Slot Machines	2-15%	
• Bonus 6 no insurance	10.42%	5.41%
• Bonus 6 with insurance	23.83%	6.42%

* Assuming optimal strategy – otherwise house edge is higher

"If your goal is to nab the best risk-adjusted returns (as opposed to playing for hours on end), place fewer, smarter and larger bets. It's a difficult strategy to stomach, and your night could be over in a hurry. Still if you loose, at least you know you gave it your best mathematical shot." – Casino Manager, USA

Role of officers and elected members

Stewardship: Run as professional business
Set right objectives,
measure and manage,
value-for-money.

Risk

Brokers etc.

Investment Managers

Investment Consultants

£££

Finance/Pension Officers

Investment Committee (elected members)

You will receive biased advice

SIP

Council / Tax payers

When and how can ‘trustees’ make the biggest impact

- Understand that not everything is within the control of ‘trustees’ or advisers. Markets for example cannot be controlled by anyone.
- Focus on the factors within the control of ‘trustees’, such as the time invested in due diligence, fees, incentives, value for money, risk controls, risk sharing, and so on – but if constrained by tight budgets, the impact is reduced and policy reconsidered

- Impartial due diligence is always required on investment proposals.
  - Investment advisers are expected to undertake their own internal due diligence, but the quality of due diligence is often insufficient, has a ‘sell-bias’ and does not consider all costs.
- How does the proposed structure achieve the schemes’ objectives?
- Is the intended outcome likely in light of initial and ongoing fees, transition & transaction costs, ongoing valuation fees, redemption or exit fees
- Does a proposed change really add value? **Doing nothing is often the best investment decision (and saves you some money!!).**

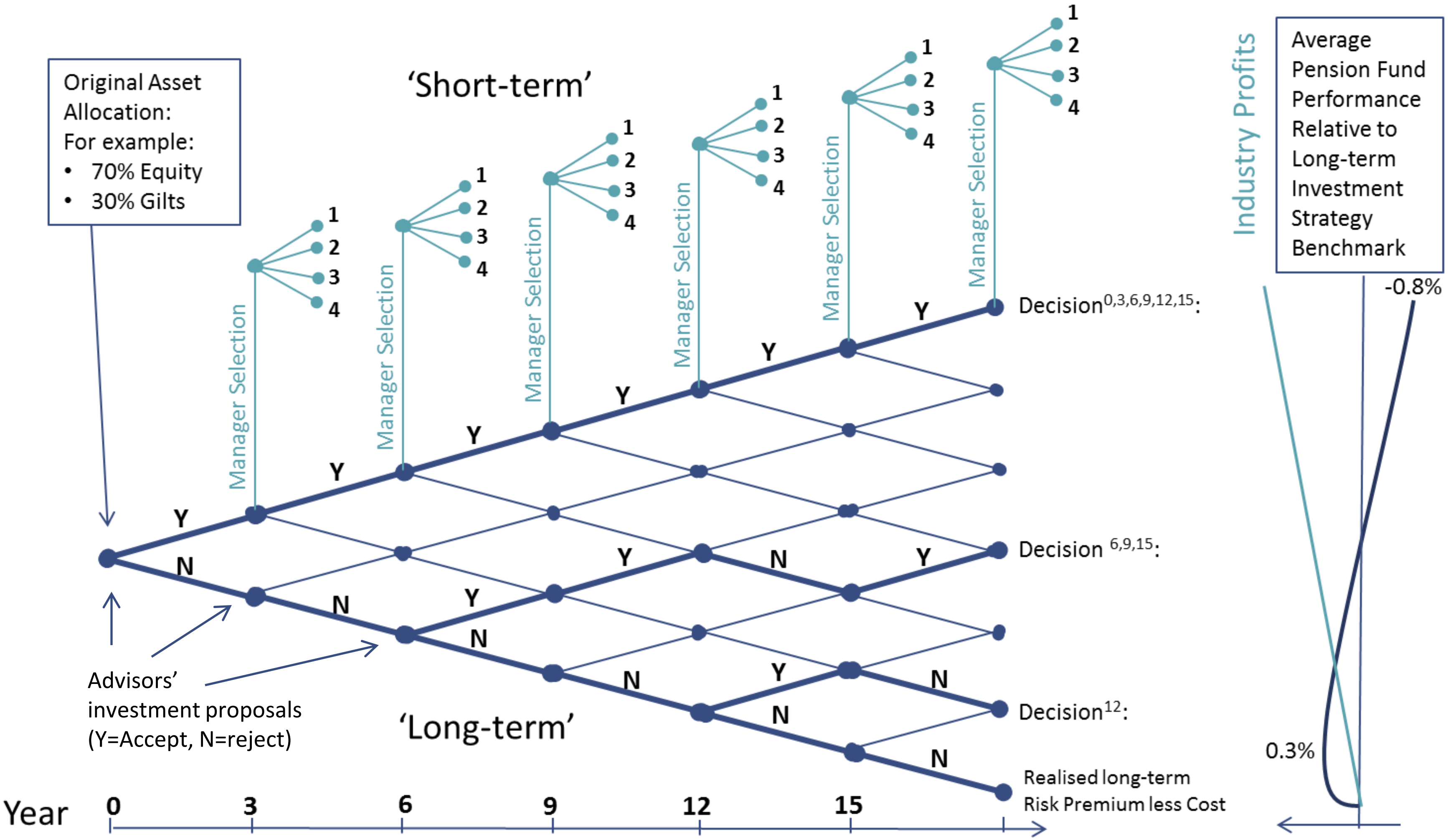
- Set the right long-term objectives
- Measuring and managing investment activities vs. long-term stable objectives

Measuring and managing investment activities

David discards his measuring tape for the faster 'eyeballing' method of measuring.

- Manage investments like a professional enterprise
- How do you manage a building project?
  - Bad builder experience?
    - Walked away with your money
    - Quality not as promised
    - Large bills for 'extras' not made clear from the outset
  - Due diligence?
  - Setting benchmarks, Quality control, Pay on delivery?

Measuring value-add of investment decisions



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Example – Simple Performance Measurement Report

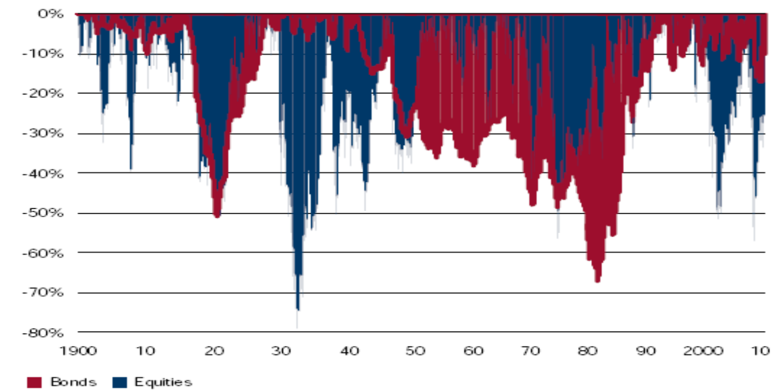
Performance Measurement Report for XYZ Pension Fund																
Description	**Year**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	Full Period	Per Annum
Original Benchmark		-11.8%	-11.9%	18.2%	10.0%	6.1%	9.6%	3.6%	-31.0%	15.0%	8.3%	-0.8%	10.4%	11.4%	37.1%	2.87%
Actual Benchmark		-11.8%	-11.9%	17.7%	9.6%	5.6%	9.8%	3.7%	-32.0%	15.4%	9.5%	-1.0%	10.5%	11.8%	37.1%	2.87%
Actual Performance		**-11.8%**	**-11.9%**	**17.7%**	**9.6%**	**5.6%**	**10.0%**	**3.7%**	**-32.0%**	**14.7%**	**9.0%**	**-1.1%**	**9.7%**	**11.3%**	**34.5%**	**2.67%**
Target Performance		-10.8%	-10.9%	18.7%	10.6%	6.6%	10.8%	4.7%	-31.0%	16.4%	10.5%	0.0%	11.5%	12.8%	50.1%	3.88%
Performance Attribution Summary:																
Description	**Year**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	Full Period	Per Annum
Asset Allocation Changes		0.0%	0.0%	-0.5%	-0.3%	-0.4%	0.2%	0.1%	-1.0%	0.4%	1.2%	-0.2%	0.2%	0.4%	0.0%	0.00%
Manager Selection vs. Benchmark		0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	-0.7%	-0.5%	-0.1%	-0.8%	-0.5%	-2.6%	-0.20%
Total Performance:		**0.0%**	**0.0%**	**-0.5%**	**-0.3%**	**-0.5%**	**0.3%**	**0.1%**	**-1.0%**	**-0.4%**	**0.6%**	**-0.3%**	**-0.6%**	**-0.1%**	**-2.6%**	**-0.20%**
Performance Attribution in Detail:																
Description	**Year**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	Full Period	Per Annum
Asset Allocation Changes:	Date	**0.0%**	**0.0%**	**-0.5%**	**-0.3%**	**-0.4%**	**0.2%**	**0.1%**	**-1.0%**	**0.4%**	**1.2%**	**-0.2%**	**0.2%**	**0.4%**	**0.0%**	**0.00%**
1) Increase allocation to US equities from UK equities	May-03	0.0%	0.0%	-0.5%	-0.3%	-0.4%	-0.4%	-0.3%	0.6%	-0.3%	0.3%	0.8%	0.0%	0.4%	-0.2%	-0.01%
2) Increase allocation to High Yield Credit from Government Bonds	Jul-06	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.4%	-1.6%	1.8%	1.4%	-0.6%	1.0%	1.4%	4.4%	0.34%
3) Allocate 10%to Hedge Fund / Abs.Return from equity allocation	Jun-09	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-1.2%	-0.5%	-0.4%	-0.9%	-1.4%	-4.3%	-0.33%
Manager Selection vs. Benchmark:	Date	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.2%**	**0.0%**	**0.0%**	**-0.7%**	**-0.5%**	**-0.1%**	**-0.8%**	**-0.5%**	**-2.6%**	**-0.20%**
1) Replace Fixed income manager A with Fixed income manager B	Oct-05	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.01%
2) Replace Equity manager X with Equity manager Y	Jan-09	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.7%	-0.5%	-0.1%	-0.8%	-0.5%	-2.7%	-0.21%

Managing market risk –> Risk of Loss

- Managing risk of loss (tactical) most investors rely on;
  - Diversification
  - Loss-limits, or price based risk controls applied to portfolios or strategies
- However these kind of risk controls are typically based on back-ward looking analysis which is main weakness … price patterns during previous shocks rarely repeat themselves (see charts)
- In order of effectiveness
  - Buy insurance – certainty – expensive
  - Portfolio insurance strategies and price based risk-controls – path-dependent
  - Diversification mostly works in benign markets, rarely during risk-aversion ρ => 1

Drawdown on US equities and bonds, real terms 1900–2010

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists; authors' updates



Rolling stock-bond correlations: real terms, 1900–2010

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Credit Suisse Global Investment Returns Source-book 2011, and authors' extensions.

Controlling all relevant risks

- More than just risk of short-term loss, risk from investment decision-making, risk to performance from asymmetric and unattractive fee-schedules

- **Risks that can easily be controlled (but frequently is not)**
- Paying higher fees & charges than necessary increase the risk of not meeting target
- Engaging in activities that detract value or have low probability of adding value net of all charges increase the risk of not meeting target

- **Risks that are more difficult to control (long-term / short-term)**
- Investment strategy does not deliver the average return it was hoped for
- Diversification fails to deliver (typical in sell-off after herding)
- Proactive (value-based/Paranoia) vs Reactive (guaranteed to be loss-making, accept)

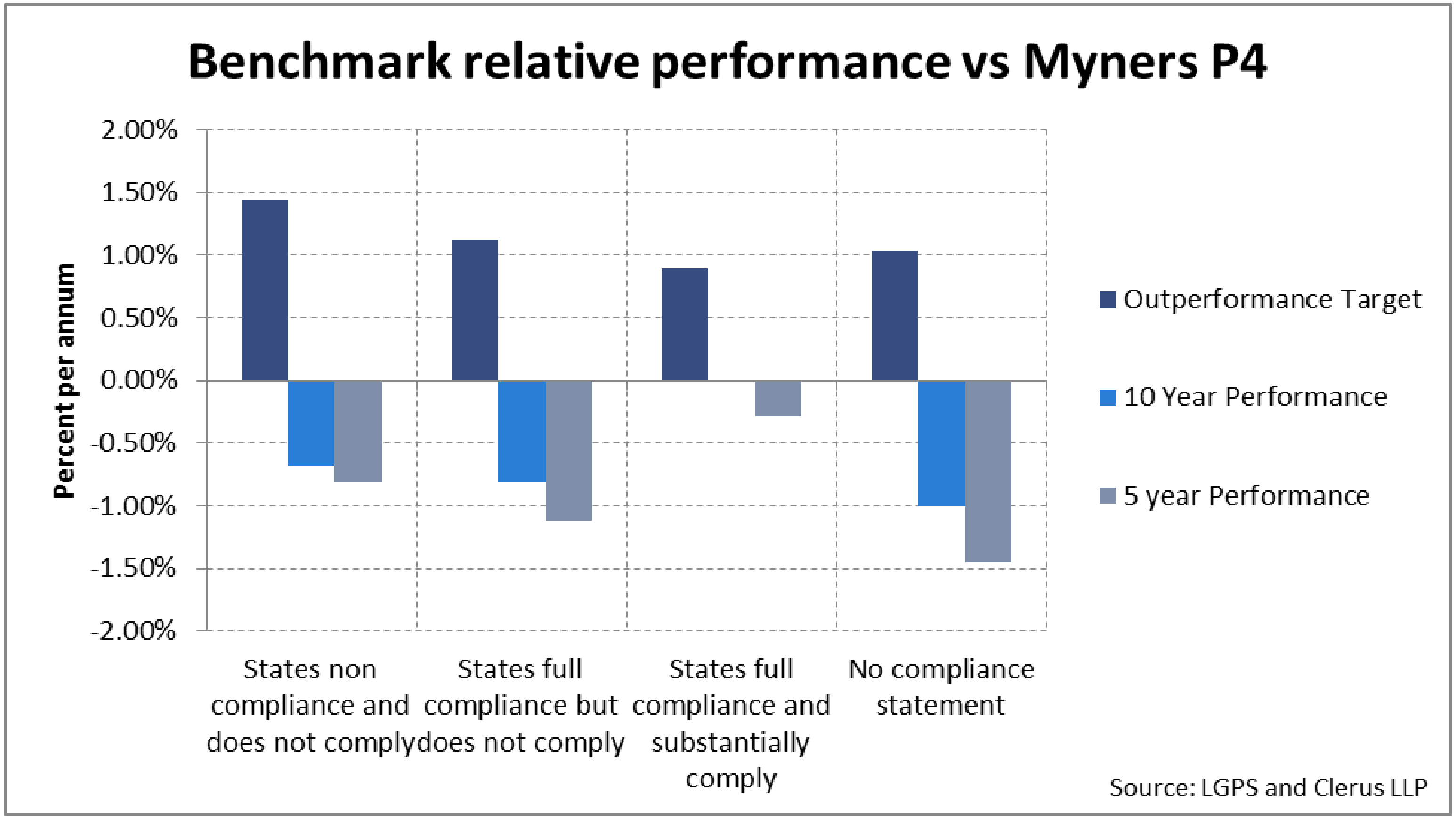
- Stop-loss on your active decisions – apply to contract terms, risk-sharing etc.

Examples of what seems to work best across LGPS

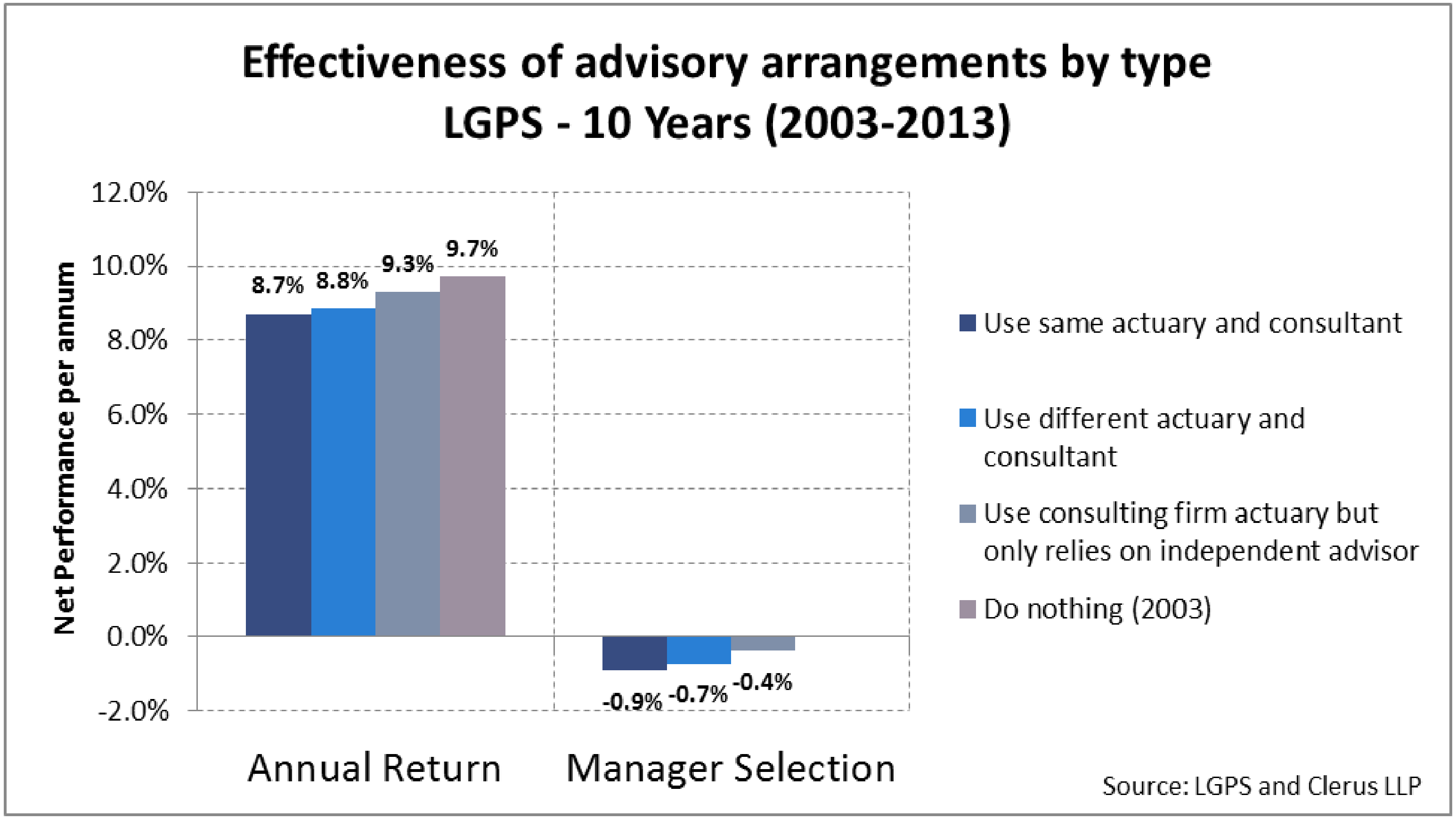
- Simple and cost effective investment strategies (balanced mandates)
- The less time and energy spend on manager selection and making changes to strategy the better
- Stay away from expensive alternative investments (>40% fees < 10% Assets)
- Manager diversification doesn't work – better to have a few managers than many
- Good investment governance principles is key
  - Diversify your advisors - Do not use actuary as investment advisor
  - Prioritise advice from fully independent advisors not earning fees from the implementation of their own advice (i.e. promotion of manager selection etc.)
  - Keep simple long-term objectives and measure/report how you do against them

- And finally,
- Passive or in-house not necessarily better
- Larger schemes do not have better performance
- No evidence that larger schemes are better at picking managers

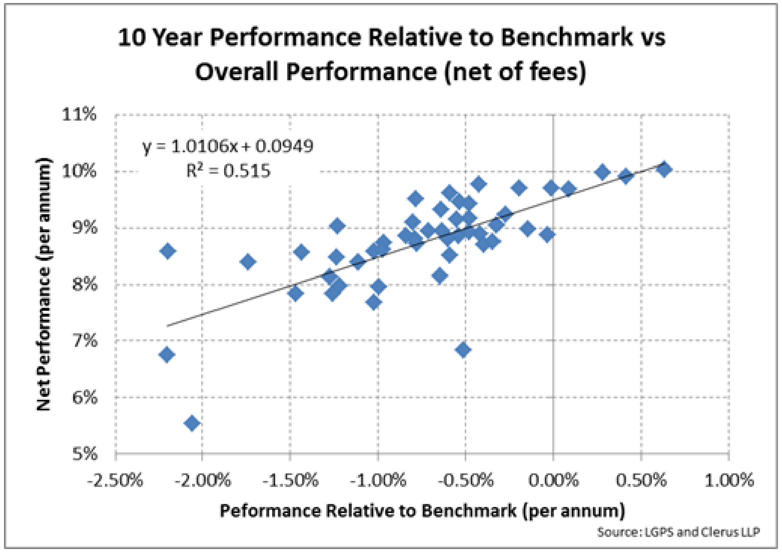
Good Governance is good for performance

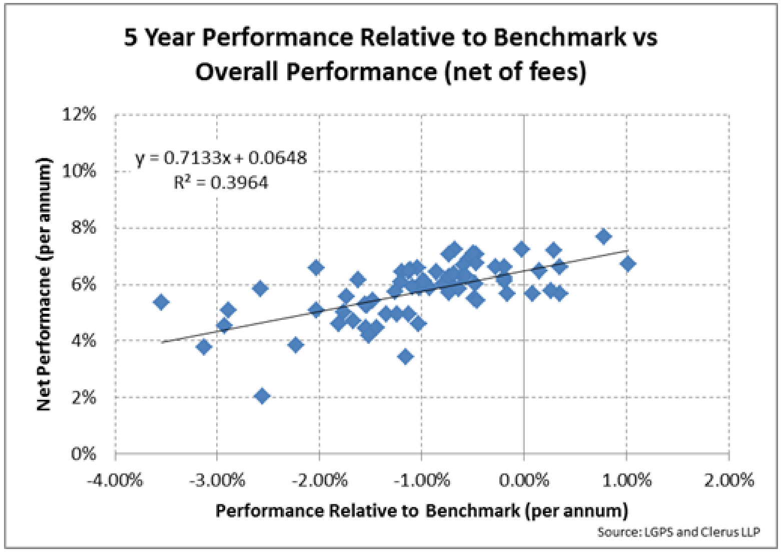


Investment advisors selling investment products …

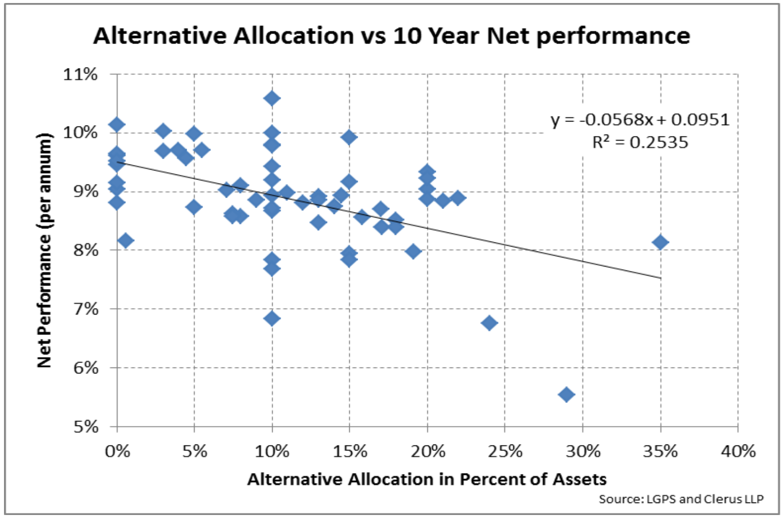


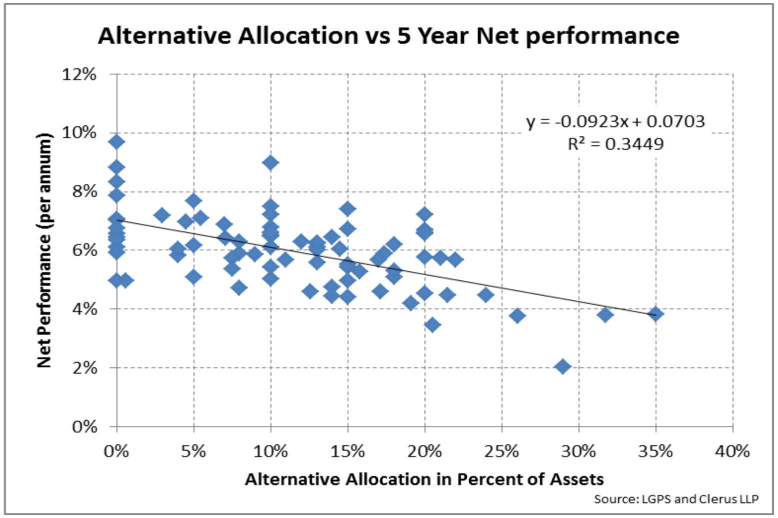
Key factors driving performance across LGPS





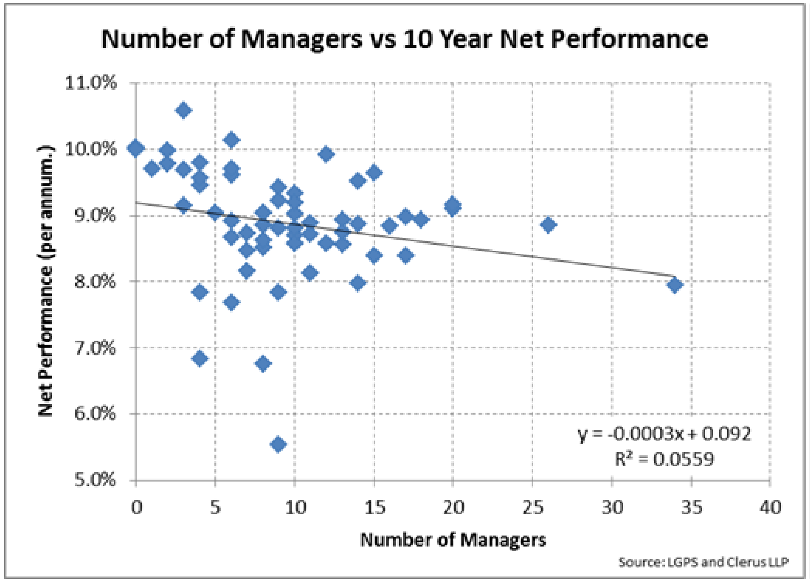
Losses from Manager Selection

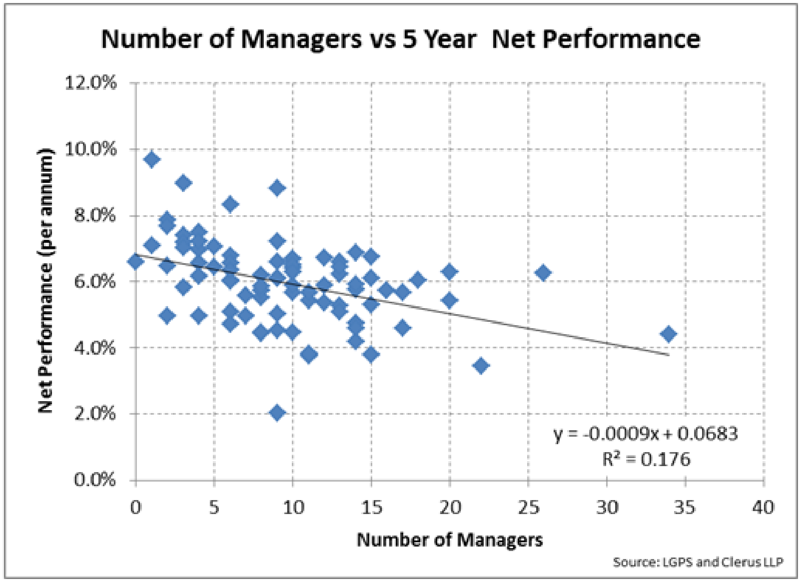




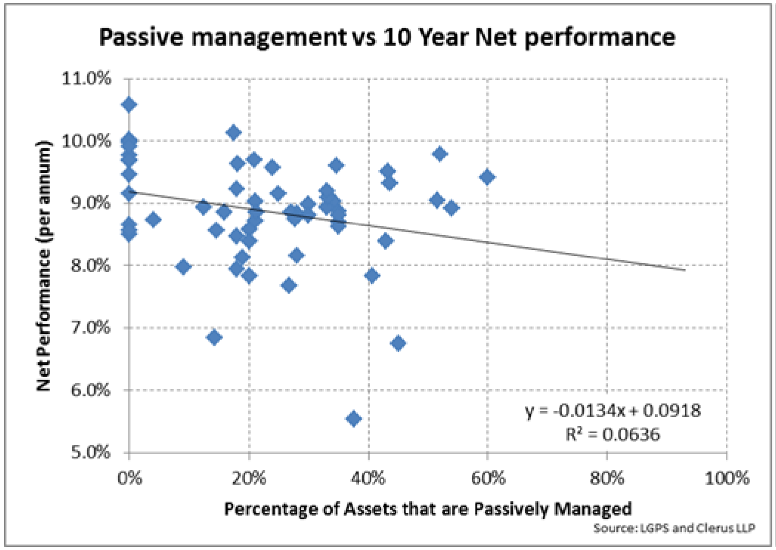
Alternative Allocation

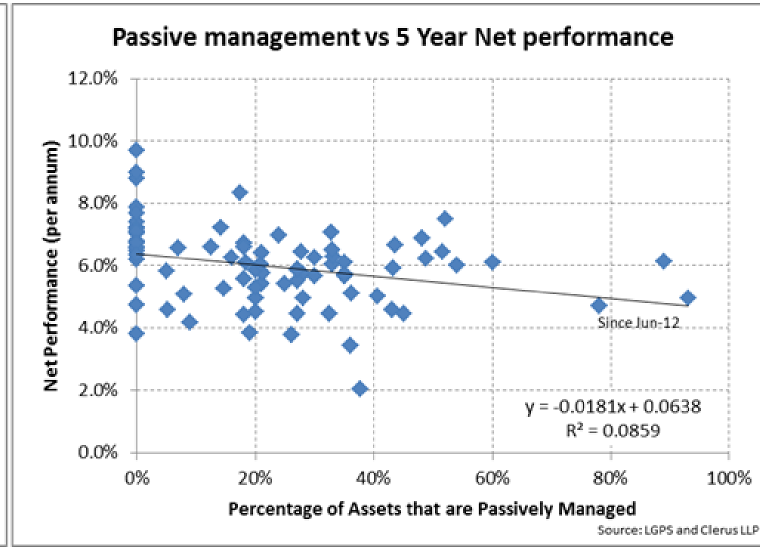
Manager ‘diversification’ detracted value

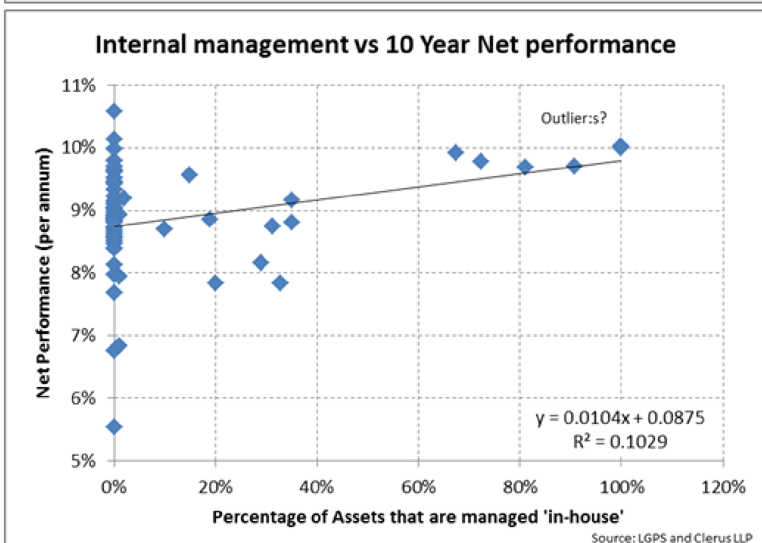


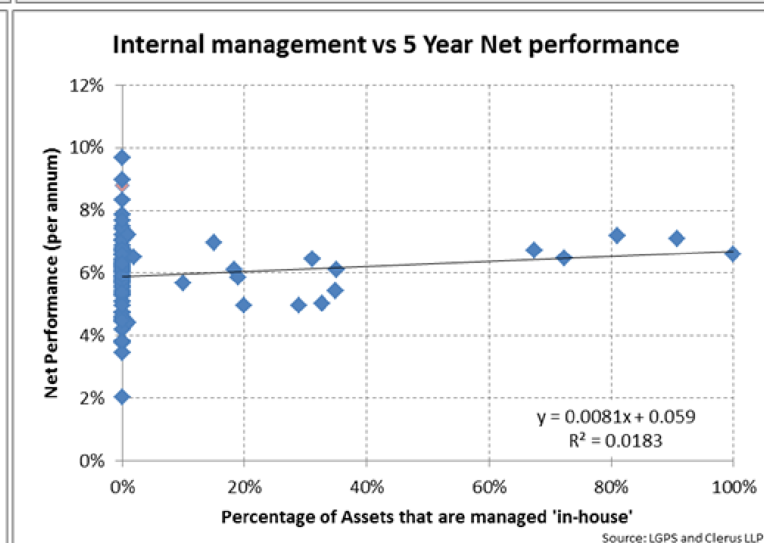


Passive and ‘in-house’ not necessarily better

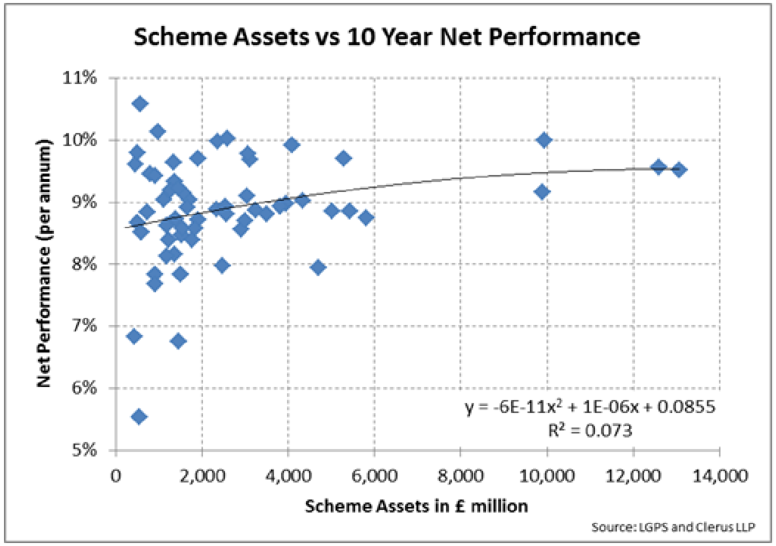


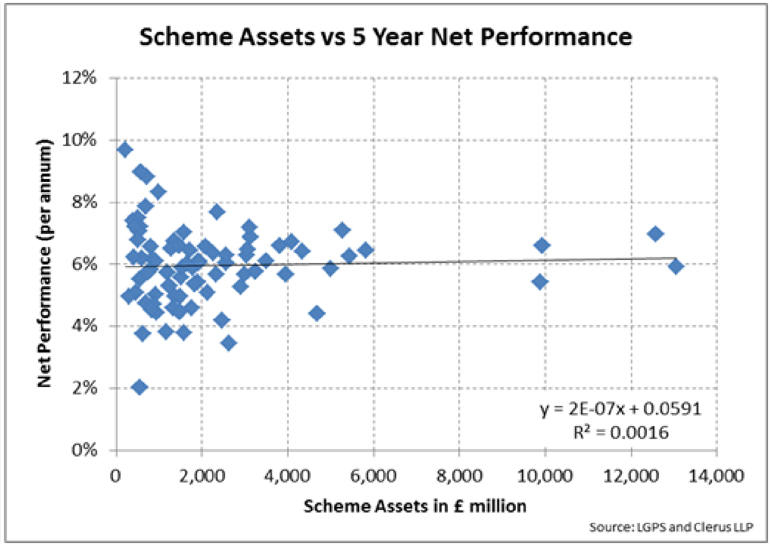


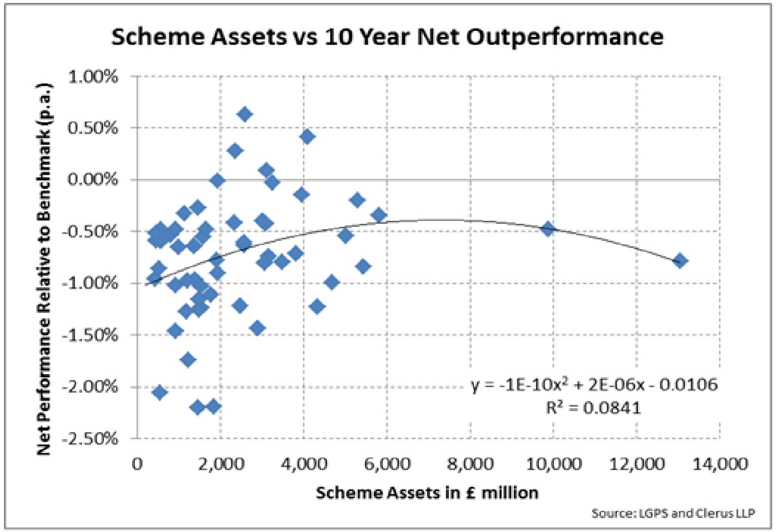


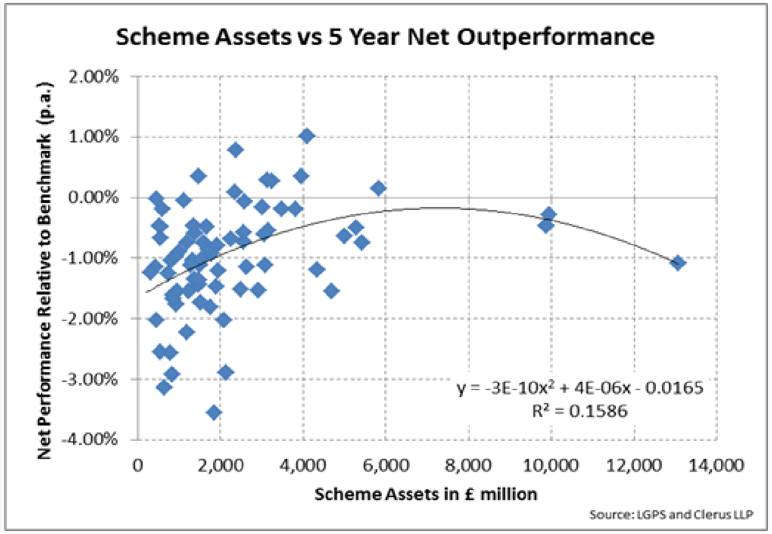


Size doesn't matter









Summary - Investment Objectives

- Decision-making under uncertainty – ask what you can control / probability of success for you as 'investor'
- You can have as much investment skill as anyone else – trick is to keep it simple and focus on core issues such as reducing churn and getting value for money
- Align your investment objectives with your capabilities – think hardest about this
- Many poor investment propositions can be identified in advance – take your time
- Activity based management is the simplest way to align long term objectives and good governance (3 simple steps) providing the necessary discipline
- If you 'outsource' make sure you get independent benchmarking in place to ensure that you get more for less and make sure knowledge transfer is taking place
- As a 'trustee' you will be bombarded with investment proposals – learn to say 'no'

Biographies: Co-founders

Henrik Pedersen, MBA

Henrik has 28 years of investment management and advisory experience. From 2008-2013 he was Chief Investment Officer of Pareto Partners (a BNY Mellon asset management boutique) where he built a successful multi-asset, multi-strategy investment track-record for delivering absolute return to institutional investors. Prior to this he served as head of product development and quantitative investment models at Overlay Asset Management (a BNP Paribas Investment Partner) where he led a successful re-launch of the firm's alternative investment capabilities which led to buy-rating from investment consultants and significant growth in AUM. From 2000 to 2005 Henrik was Director of Citigroup's Risk Advisory Group where he developed quantitative investment models and advised institutional investors on managing risks derived from international investment portfolios. Henrik's detailed market and investor knowledge is drawn from his tenure in FX Sales and Marketing with Citibank and JPMorgan Chase, where he focused on providing value-added investment services to clients and which culminated in his role as Head of Emerging Markets Sales. Henrik started his career in financial markets with A.P.Moller Group in 1985, managing the group's substantial financial market exposures. He holds an Executive MBA with distinction from CASS Business School, London and a B.Com degree in Financial and Management Accounting from Copenhagen Business School.

Richard Rothwell, ASIP, FSIP

Richard has 28 years of investment management and advisory experience – he has established, overseen and invested in a wide range of funds. He was elected a Fellow of CFA Society of the UK (FSIP) for services to the industry, and served as Chairman of the CFA UK Board from 2011-2012. In 2006 Richard established Stoneware Capital LLP, an FCA-regulated investment manager, to run his own hedge fund. Prior to that he was responsible for managing the US$ 1.6Bn international equities product at Northern Trust and was also a member of the firm's investment policy committee, creating policy for more than US$600Bn in AUM. Before joining Northern Trust, Richard was a portfolio manager and investment policy committee member with Deutsche Asset Management and prior to that he was at Hermes Investment Management. He began his career in 1985 with Arthur Andersen, becoming an audit manager in London and Singapore. Richard has various philanthropic interests, including co-founder of SHINE, one of the first UK charities to invest in hedge funds. Richard holds a Masters in Natural Sciences (Hons) from St. John's College, Cambridge University, and is qualified with the Institute of Chartered Accountants in England & Wales. He was awarded the Wincott Foundation Prize by the Institute of Investment Management and Research, a predecessor organisation of CFA UK.

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Appendices

Example of professional governance framework

Review of Decision-Making and Investment Objectives

- Evaluation of decision-making in the context of investment performance targets (e.g. Benchmark+1%)
  - Evaluation of Investment performance objective s
  - Impact on decision making
  - Performance Evaluation and attribution

Review of Investment Advisors and their advice

- Review of Investment Advisor Performance and value-add
  - Asset allocation proposals
  - Investment Manager Proposals
  - Value-for-money

Review of Current Investment Management Arrangements

- Review of Investment Manager Performance and value-add
  - Performance analysis vs. marketing materials
  - Current Fee arrangements
  - Benchmarks
  - Value-for-money

Performance Attribution and Assessment (The Key to unlocking Performance Improvements)

- Evaluate decision-making activity and attribute performance
  - Identify activities that add value to investment performance
  - Identify activities that detract value from investment performance
- Understand behavioural motives for value detracting activities
- Implement and enable solution where value detracting activities are fully understood and where the main focus going forward is on value-added activities

- Top-down evaluation of performance
  - Track-records vs. Marketing
  - Attribute performance into "market & factor returns" vs. skill
  - Assess Key performance risks
  - Value-for-Money proposition

Performance Improvement vs. objectives & cost-saving on management fees

- Implementation of informed investment process focused on value-added activities
  - Increased In-house Investment expertise and improved decision-making framework
  - Ensure value for money proposition with external managers and avoid pitfalls

The Local Government Pension Scheme (Management and Investment of Funds) Regulations 2009

Investment policy and investment of pension fund money

11.—(1) An administering authority must formulate a policy for the investment of its fund money.

(2) The authority's investment policy must be formulated with a view—

(a)to the advisability of investing fund money in a wide variety of investments; and

(b)to the suitability of particular investments and types of investments.

(3) The authority must invest, in accordance with its investment policy, any fund money that is not needed immediately to make payments from the fund.

(4) The authority may vary its investments

(5) The authority must obtain proper advice at reasonable intervals about its investments.

(6) The authority must consider such advice in taking any steps in relation to its investments.

Statement of investment principles

12.—(1) An administering authority must, after consultation with such persons as it considers appropriate, prepare, maintain (in accordance with paragraph (5)) and publish a written statement of the principles governing its decisions about the investment of fund money.

(2) The statement must cover its policy on—

(a)the types of investment to be held;

(b)the balance between different types of investments;

(c)risk, including the ways in which risks are to be measured and managed;

(d)the expected return on investments;

(e)the realisation of investments;

(f)the extent (if at all) to which social, environmental or ethical considerations are taken into account in the selection, retention and realisation of investments;

(g)the exercise of the rights (including voting rights) attaching to investments, if the authority has any such policy; and

(h)stock lending.

(3) The statement must also state the extent to which the administering authority complies with guidance given by the Secretary of State, and, to the extent the authority does not so comply, the reasons for not complying.

(4) The first such statement must be published no later than 1st July 2010.

(5) The statement must be reviewed, and if necessary, revised, by the administering authority from time to time and, in the case of any material change in the authority's policy on the matters referred to in paragraphs (2) and (3), before the end of a period of six months beginning with the date of that change.

(6) A statement revised under paragraph (5) must be published.

Measuring value-add of investment decisions

The Challenge:

- Behavioural biases favour ‘activity’ over ‘passivity’ in investment management
- Initial objective to optimise performance but activities can become ‘habitual’ and no longer add value
- Average expected return on investment activity across the whole market is negative (transaction cost and slippage) so consistent skill/luck/bias must be present overall
- Nobody wants to report if their investment activity detracts value (hidden cost)
- Performance reporting typically focuses on attributing the achieved return across different asset types or factors - benchmark not always a true reflection of process
- It’s difficult for anyone to be objective about their own performance (separation)

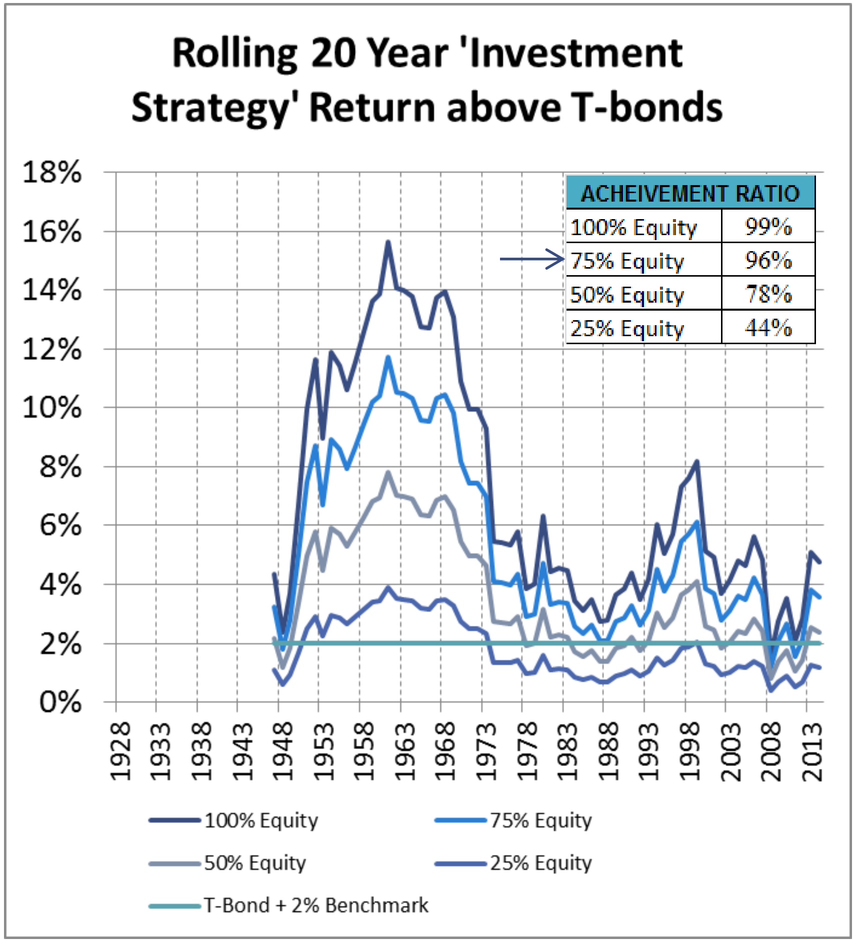
The Opportunity:

- This is low-hanging fruit for performance improvement because:

Investment performance = market returns of original investment portfolio +/- impact of investment decisions and activity

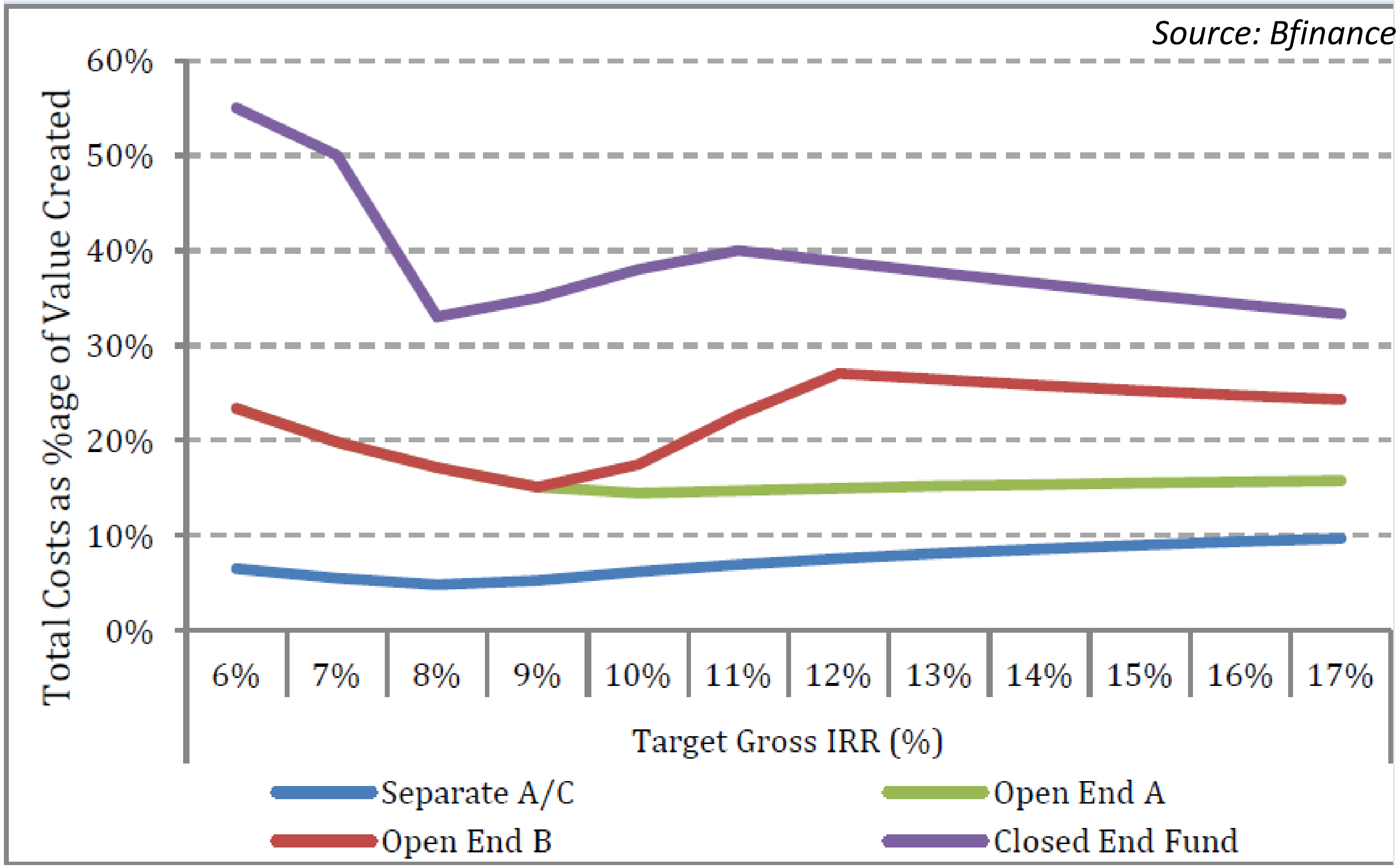
Setting appropriate investment targets & benchmarks

- Gilt + 2% is an aspiration, **not a benchmark or assessment criteria** except over very long periods;
- It's a fixed number and market returns are not constant
- Future investment strategy returns are impossible to predict, control and will be volatile
- Investment performance should always be measured against the relevant market opportunity and the original investment rationale
- Historically Gilt+2% has been very easy target to reach over 20 years



Beware of hidden costs and charges

Value leakage from Infrastructure Investments (cost and hidden fees)



"Price and terms are critical ingredients to the success of an investment"