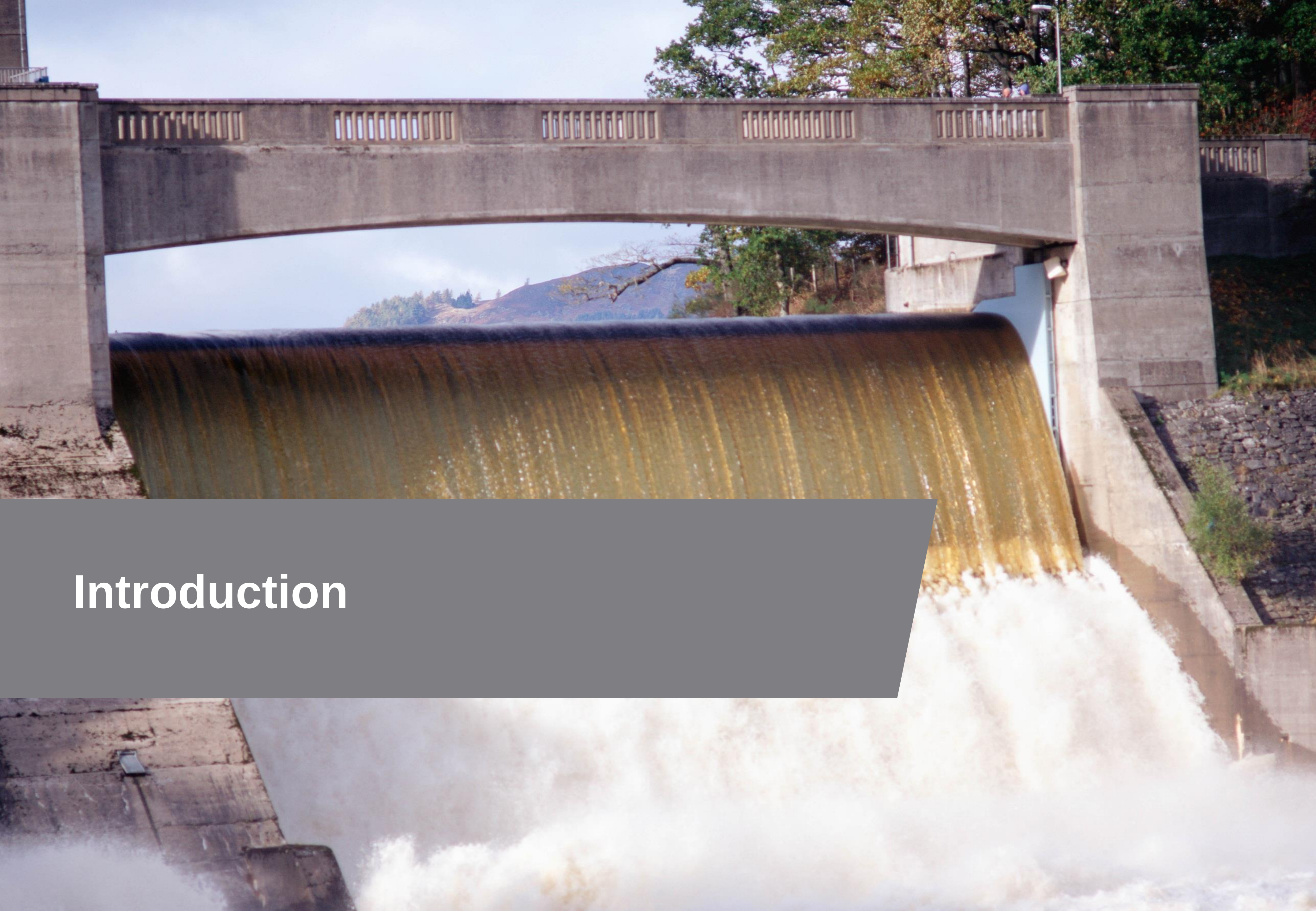
Institute and Faculty of Actuaries

Opportunities and challenges for pension schemes in non-traditional assets

Gareth Mee (on behalf of the non-traditional assets working party)

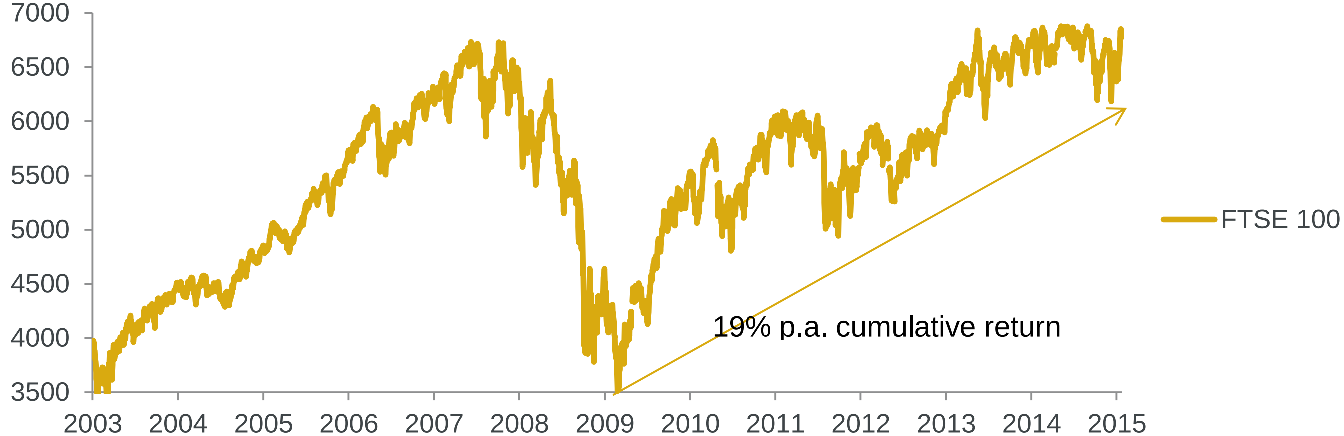
A presentation to the Pensions Conference – June 2015

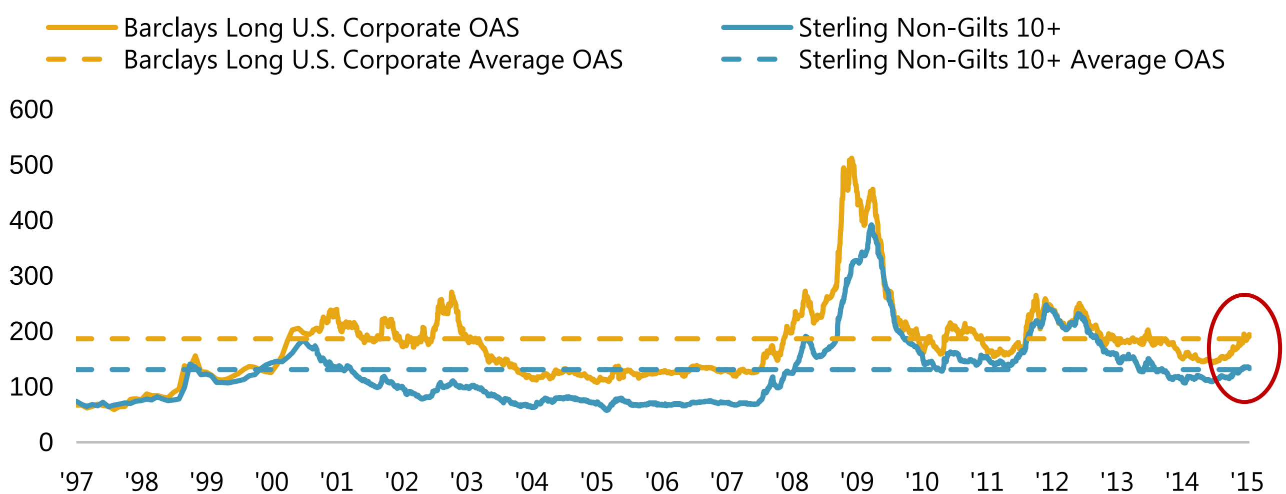


Introduction

Economic Backdrop - are Markets Overheating?

- The stock market has delivered strong returns …

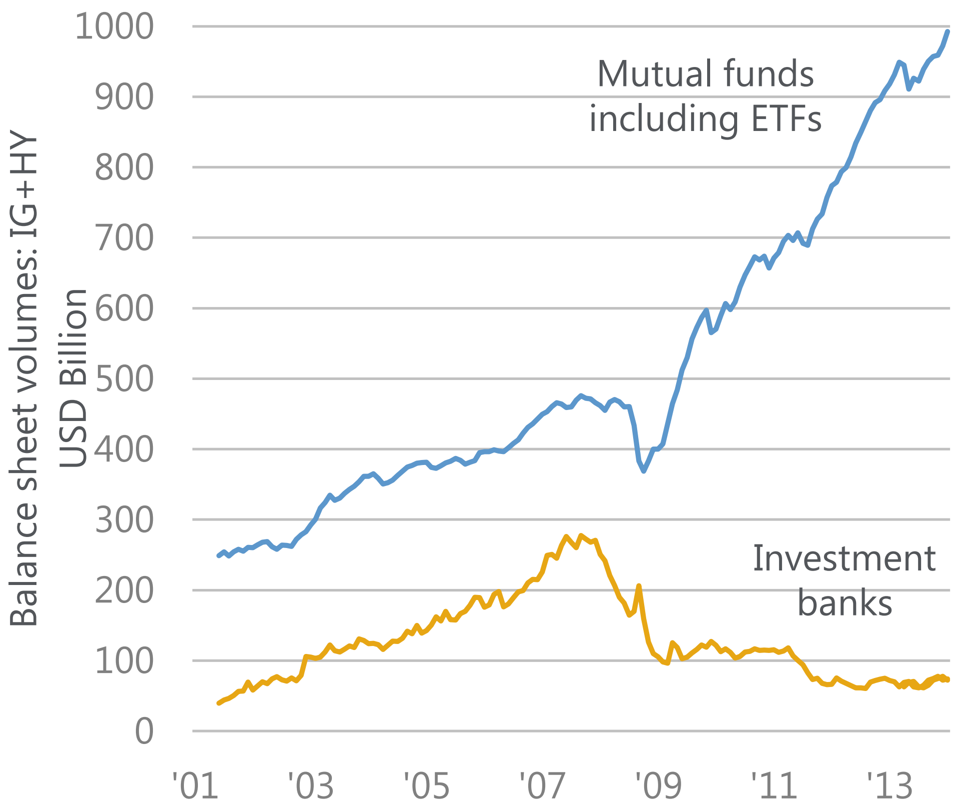




- Meanwhile, spreads in fixed income markets grind in tighter and tighter

As of May 2014 SOURCE: Bloomberg, BofA Merrill Lynch (BofA Merrill Lynch Sterling Corporate Index and BofA Merrill Lynch UK Gilt Index)

The Changing Complexion of Fixed Income Investing



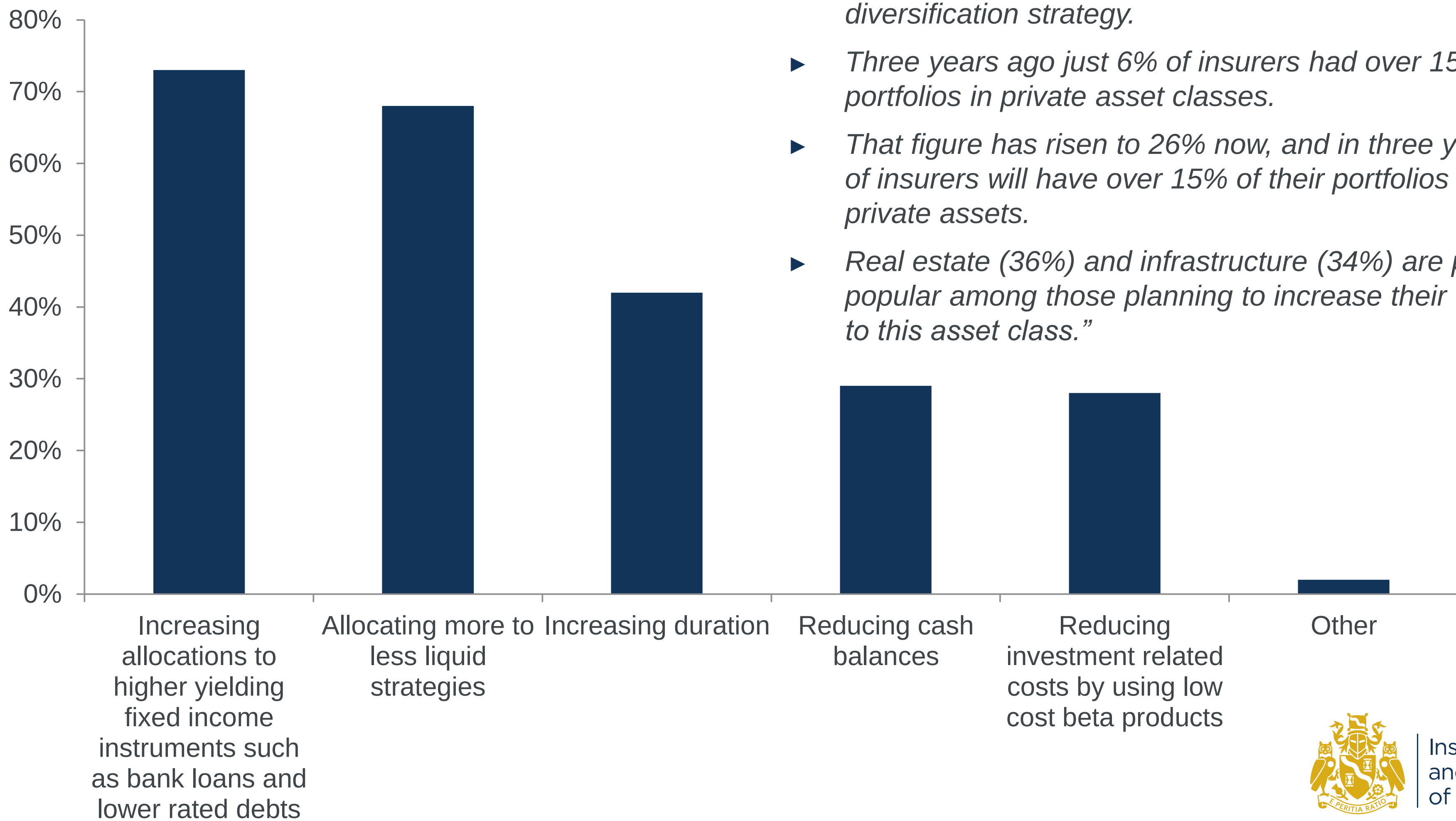
- **Challenges for pension schemes as Investors:**
  - Need to invest as a function of liabilities
  - Some other constraints (e.g. regulatory)
  - Perceived inability to act quickly
- **Advantages of pension schemes as investors**
  - Ability to divorce funding from risk taking activities
  - Low liquidity requirements/ability to be patient

Does this create investment opportunities for pension schemes?

Institute and Faculty of Actuaries

As of 28 February 2014. SOURCE: Haver, PIMCO.

Insurance investment trends – starting to move towards pensions allocations?



- *"Private asset classes are becoming crucial to insurers' diversification strategy.*
- *Three years ago just 6% of insurers had over 15% of their portfolios in private asset classes.*
- *That figure has risen to 26% now, and in three years 46% of insurers will have over 15% of their portfolios invested in private assets.*
- *Real estate (36%) and infrastructure (34%) are particularly popular among those planning to increase their exposure to this asset class."*

Institute and Faculty of Actuaries

Source: Economist intelligence unit; 206 participants

Non-traditional investments working party

- Working party formed in late 2013 to:
  - educate actuaries and other professionals on the types of alternative assets and their characteristics and risks
  - work with regulators / other professional bodies on behalf of the profession
- Research so far focused on
  - Development of research material on five subgroups of alternative assets, with a focus on fixed income
  - Development of research material on potential constraints and issues for insurers and pension schemes investing in alternative assets
  - Staple Inn presentation on 19th January and related paper (http://www.actuaries.org.uk/events/one-day/sessional-research-event-benefits-and-challenges-insurers-considering-non-traditional)

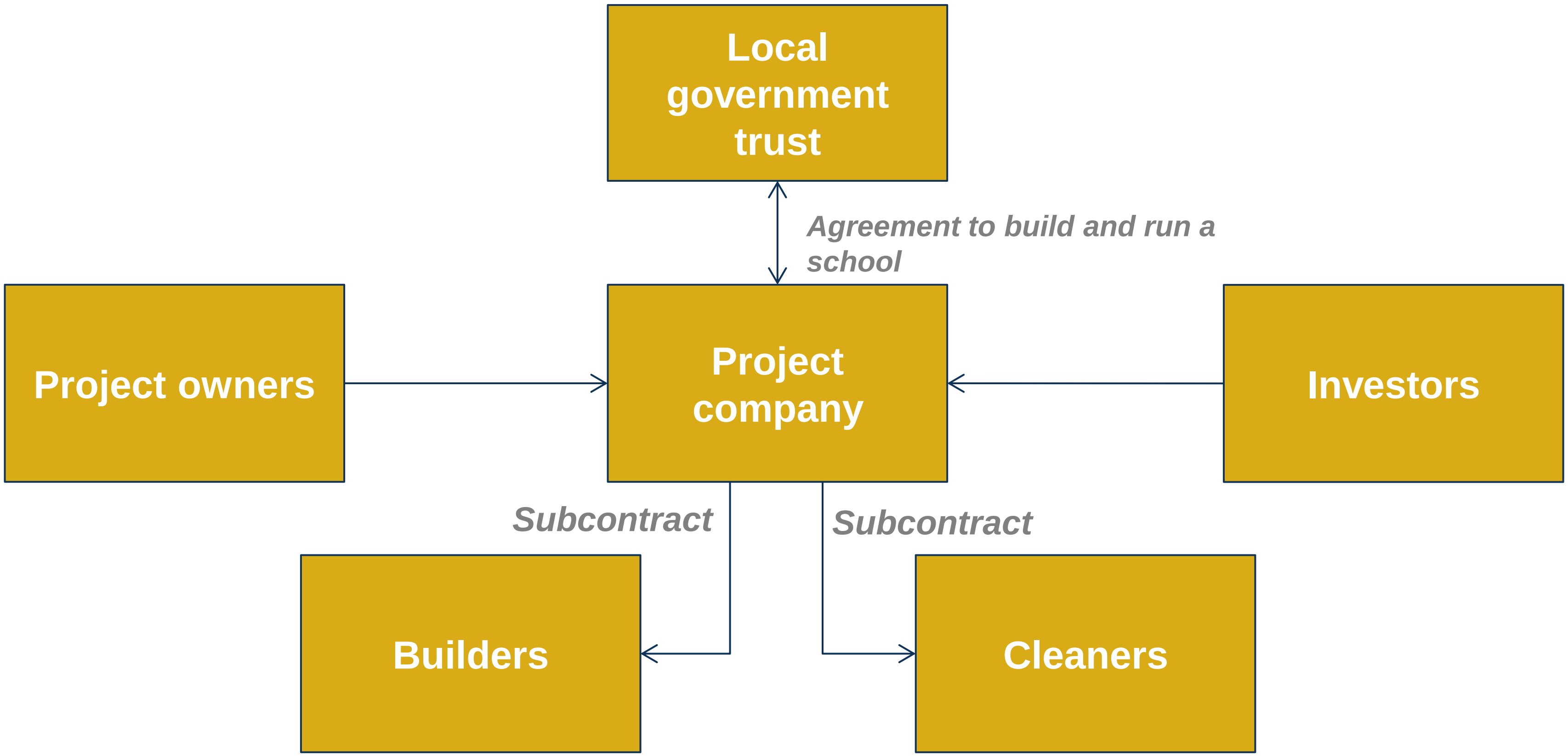
Institute and Faculty of Actuaries

Working party members

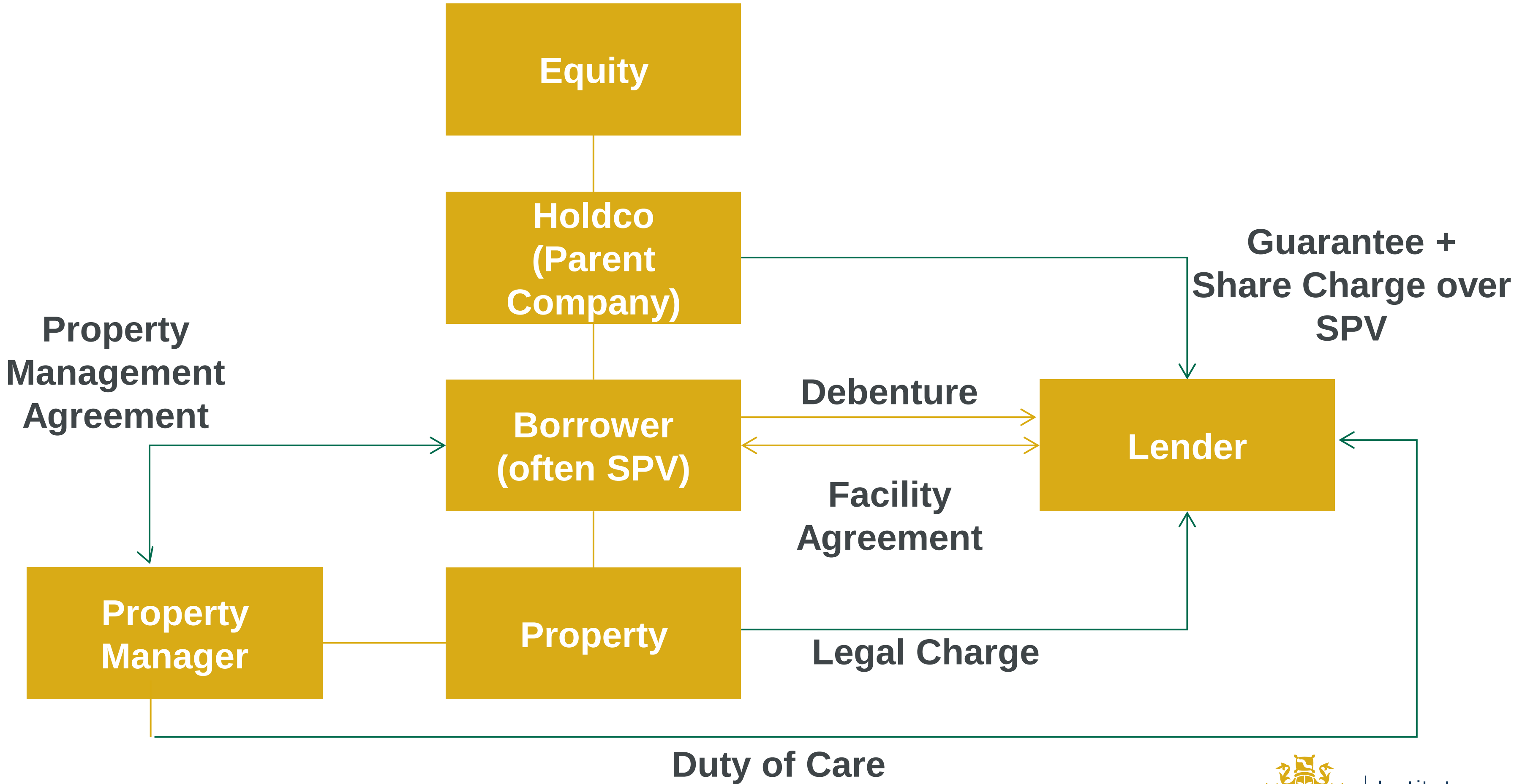
Niall Clifford	Mercer	Irina Kendix	Aviva Plc
Eamon Comerford	Milliman	Brian McCormack	Aviva UK Life
Edward Conway	Bank of America Merrill Lynch	Gareth Mee (chair)*	EY
Eugene Dimitriou	PIMCO	Stephen Metcalfe	Prudential Plc
Ross Evans	Hymans Robertson	Lucian Rautu	Independent consultant
Thomas Gormley	Assured Guaranty	Nick Sinclair	Standard Life Plc
Justin Grainger	Alpha Real Capital	Grisha Spivak (vice chair)	Legal & General Plc
Eliza Gu	Rogge Global Partners	Jelena Strelets	Nomura International Plc
Andrew Hammacott	Independent consultant	Russell Ward	Milliman
Belinda Hue	Independent consultant	Keli Zhang	Towers Watson
Gareth Jones	MGM Advantage		

Asset classes considered

Example infrastructure project



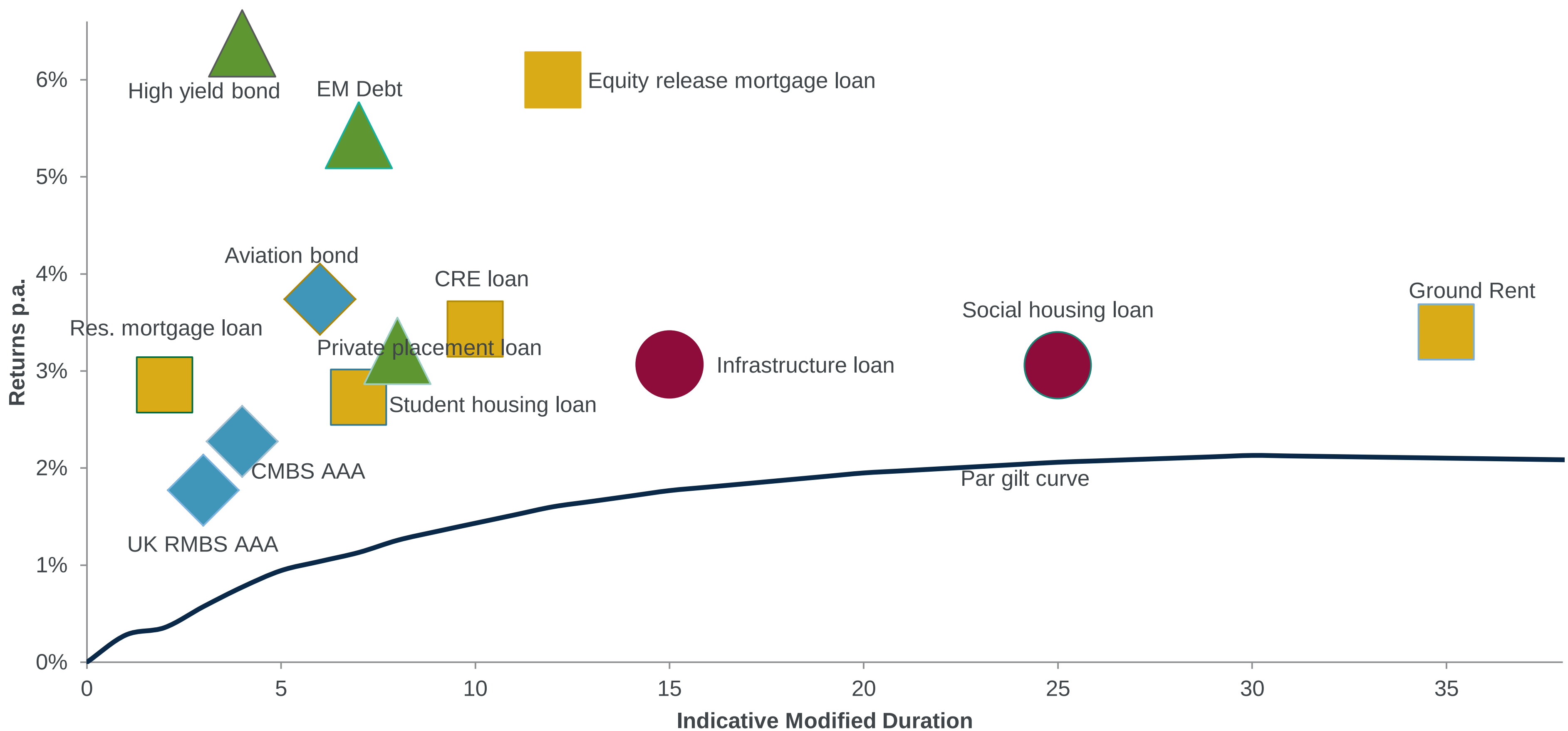
Example Commercial Real Estate project



Broader scope of alternative assets

Type of investment	Examples	Key features
Infrastructure	Social infrastructure, economic infrastructure, energy (including renewables)	Loan to a project; no security; highly illiquid
Real estate backed	Residential & commercial lending, social housing, student accommodation, equity release, ground rent	Formally secured on a property; highly illiquid
Other asset backed	Asset backed securities, collateralised loan obligations, aircraft financing, shipping financing	Formally secured on real assets; often highly structured
Other unsecured	Private placements, SME lending, high yield, overseas (including emerging market) debt	Unsecured; most closely related to corporate bonds
Other	Private equity, hedge funds, insurance linked securities	Various risk / return profiles

Potentially interesting asset classes - returns



Institute and Faculty of Actuaries

As of 31 March 2014, with updates to January 2015. SOURCE: Institute of Actuaries Non-Traditional Working Party, PIMCO
Refer to Appendix for additional investment strategy, issuer and risk information

Challenges and constraints to investment

Challenge 1 – how do I get hold of one?

- Unlike corporate bonds or equities, a pension scheme can't buy non-traditional assets easily. It could buy one through:
  - Pooled fund
  - Segregated mandate
  - Syndicated loan or through a "club"
  - Securitisation
- Or it could lend money directly in the "origination" market or through the secondary market
- If I find one, can I price it?
- And perform a credit assessment?

Institute and Faculty of Actuaries

Challenge 2 – assessing the risk
Specific risk factors - infrastructure

Project type	• Energy, social, private?
Project stage / term	• Operational or development?
Revenue risk	• Demand/availability based revenue criteria
Cost inflation risk	• Typically higher (most volatile) during construction phase.
Revenue source	• Central government, sector of central government, local authorities, foundation or trust, other
Level of explicit security	• Fixed and floating charges on assets of borrowing company
Regulatory and political risk	• Changes in policy or the wider government stance on assets.

Challenge 2 – assessing the risk
Specific risk factors - CRE

Property type	• Asset type and geographic location • Alternative use consideration
Project stage	• Development vs operational
Financial structure	• Refinancing risk can form a major component of the asset yield
Level of security	• Loan to value ratio
Tenant	• Nature of tenants' business and number of tenants • Tenant credit history and covenant strength
Third party risks	• Cost inflation, insurance risks and third party failure

Challenge 3 – what if the assets are not in sterling?

	Pros	Cons
No hedge	• No obvious pros	• No risk mitigation; currency charge is expensive
Cross currency hedge	• Risk mitigating and provides certainty on cashflows • Potentially useful under matching adjustment	• Market value volatility through cross currency basis risk • Geared exposure to overseas default risk • Still not simple under matching adjustment • Expensive
Rolling forwards	• Mark to market protection • Relatively inexpensive	• Doesn't fix cashflows (so problematic for matching adjustment)

Challenge 4 – how do I manage when things change?

- As the scheme has a relationship with the borrower (potentially through an intermediary), terms can be changed either contractually or on a discretionary basis through:
  - Changes in borrower circumstances
  - Borrower optionality
  - Variations (or changes to loan terms)
- As such, schemes may wish to:
  - Hire expertise in house (unlikely)
  - Utilise investment management (or credit insurance) expertise
  - Outsource all management

Institute and Faculty of Actuaries

Summary of challenges

Type of inves-tment	Examples	Pricing Trans-parency	CF certainty	Ability to source	Ongoing mgment
Infra-structure	Social infrastructure, economic infrastructure, energy (including renewables)	Low	High	Medium	Complex
Real estate backed	Residential & commercial lending, social housing, student accommodation, equity release, ground rent	Low	Medium	Medium – difficult	Complex
Other asset backed	Asset backed securities, collateralised loan obligations, aircraft financing, shipping financing	Medium - High	Medium	Easy	Simple
Other un-secured	Private placements, SME lending, high yield, overseas (including emerging market) debt	High	High	Easy	Simple
Other	Private equity, hedge funds, insurance linked securities	Low	Low	Easy - Medium	Medium

Final thoughts

Final thoughts

- Pension schemes should continue to evaluate non-traditional opportunities, being aware of the potential benefits as well as the challenges
- Research will continue to be focused in this area- this is of strategic importance to
  - Insurance and pensions industry,
  - UK government
  - Our profession
- Thoughts, suggestions and contributions for future research are very welcome

Institute and Faculty of Actuaries

Questions

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

Institute
and Faculty
of Actuaries