BROADSTONE

Setting Investment Strategy

23 November 2020

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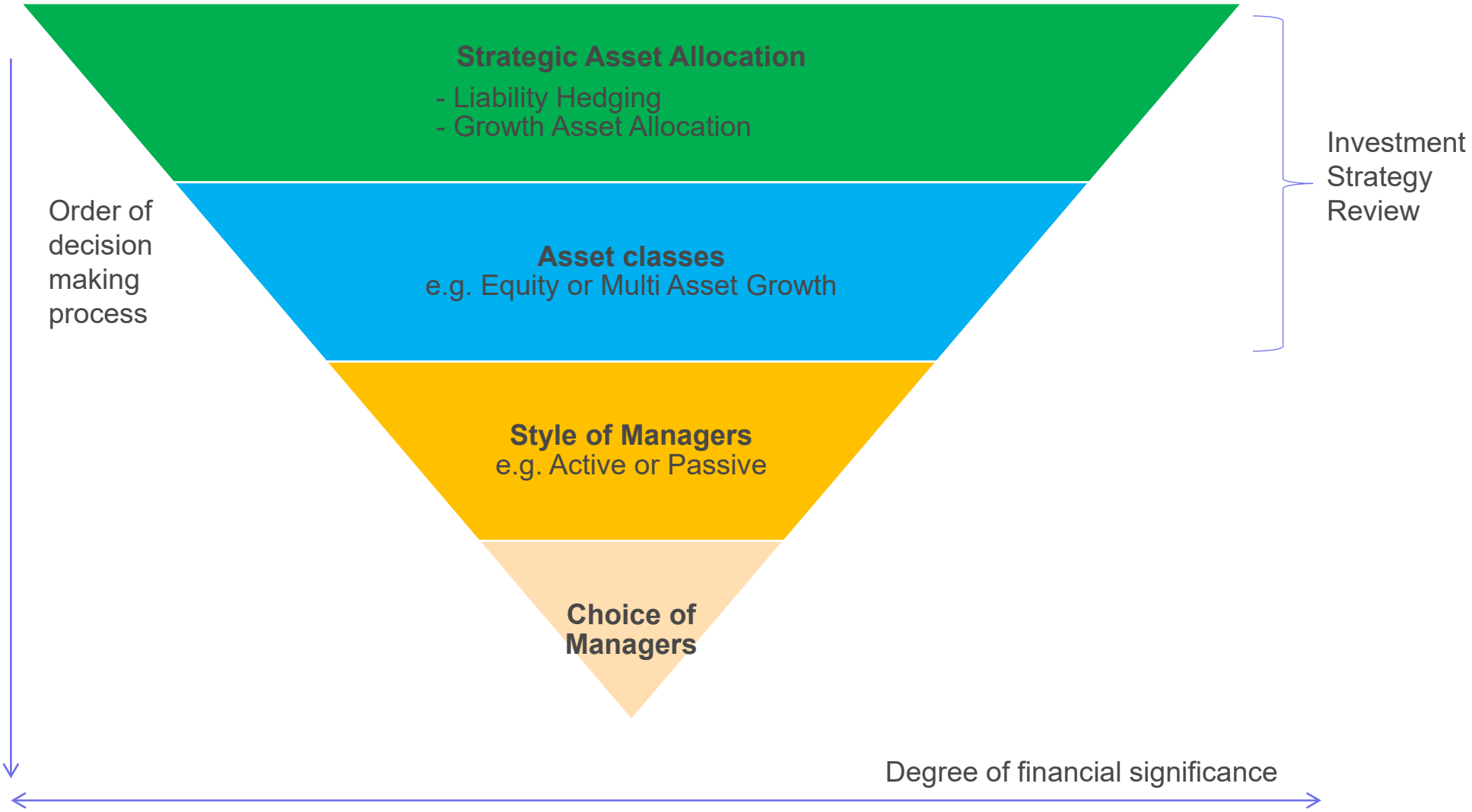
Agenda

- Trustee duties
- Investment objectives
- Risk and return
- Understanding the liabilities
- Investment risks
- Analysis of investment strategies
- Next steps

Investment Decisions



Trustee Duties

Trustee duties

- Trustees are expected to act:
  - In accordance with the scheme’s governing documentation/ trust deed
  - In the best interests of members
  - Impartially
  - Prudently, responsibly and honestly
- Remember responsibility for any defined contribution (DC) and Additional Voluntary Contribution (AVC) members

Pensions law and investment

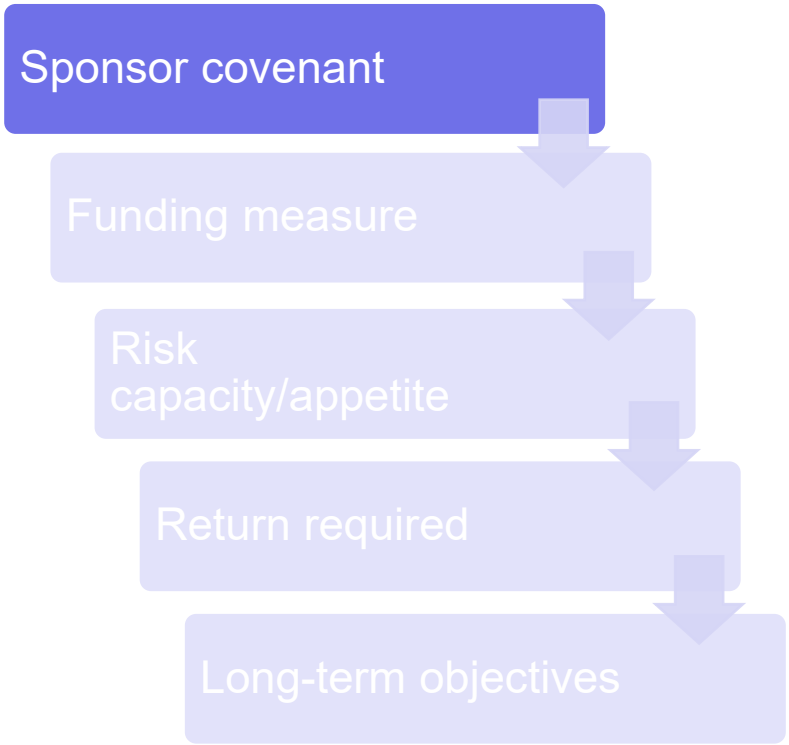
- Take written advice from an authorised person
- Prepare a Statement of Investment Principles
- Invest the assets:
  - in the members' best interests
  - in a manner that, as a whole, ensures the assets have security, quality, profitability and liquidity
  - reflects nature and duration of liabilities
  - generally traded on regulated markets
  - in a diversified manner
- Restrict self-investment to less than 5% of the assets (including property)

Investment Objectives

Key considerations

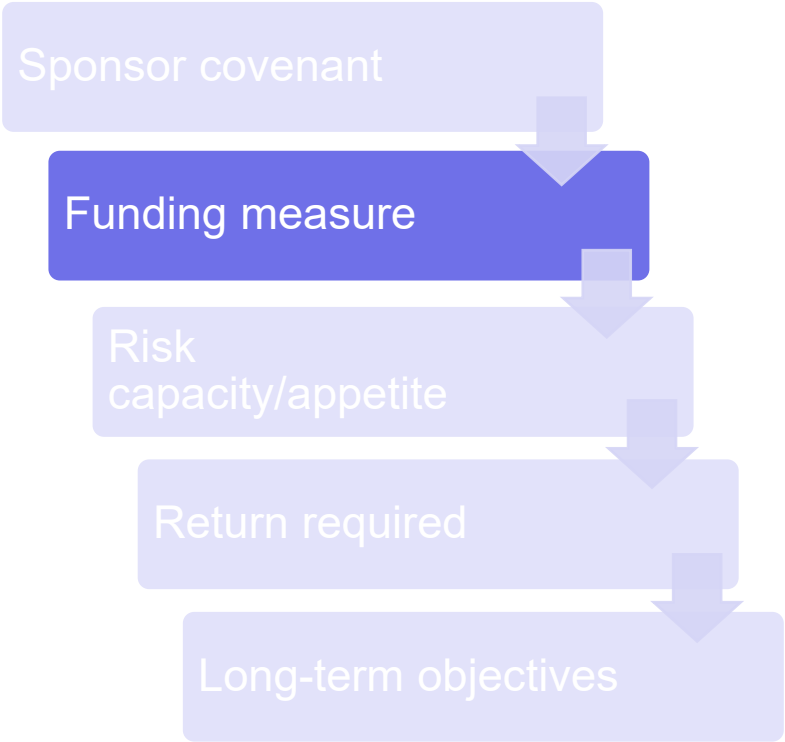
- What is the trustees' view of the sponsor's covenant?
- Which funding measure is being targeted?
- The trustees' and sponsor's capacity and appetite to tolerate funding risk?
- What return is required to meet the funding plan?
- Do the trustees have other objectives, for example long-term de-risking or cashflow matching?

Sponsor covenant



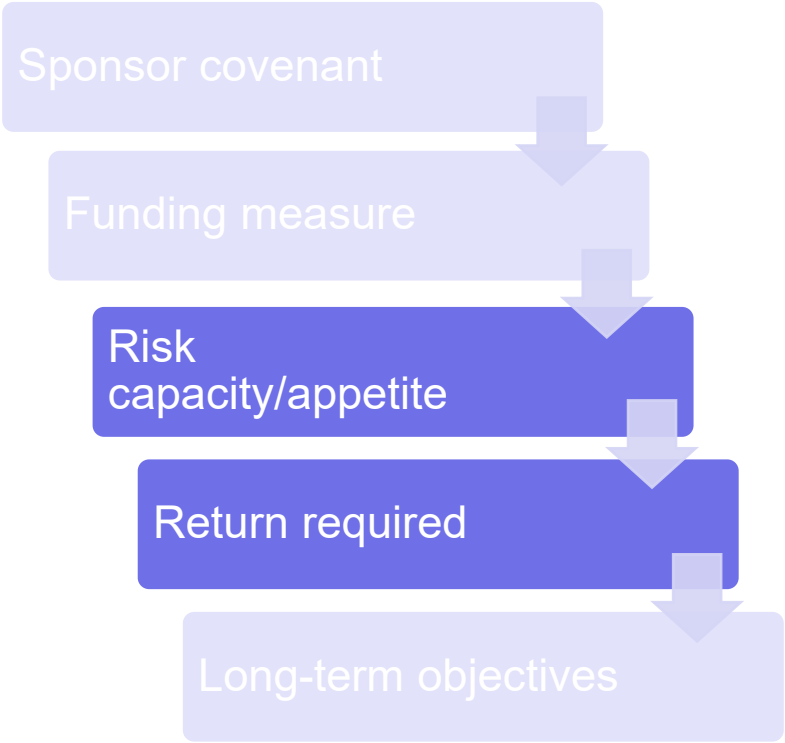
- To what extent can the trustees rely on the sponsor to support the scheme?
- Covenant strength fundamentally affects the trustees' capacity and appetite to accommodate risk:
  - the weaker the covenant the more concerned the trustees ***should be*** about the volatility of the funding position
  - the stronger the covenant the more relaxed the trustees ***can be*** about the volatility of the funding position
- Why worry about the funding position?
  - it reflects what proportion of the full benefits a scheme can provide with the existing assets

Funding measure



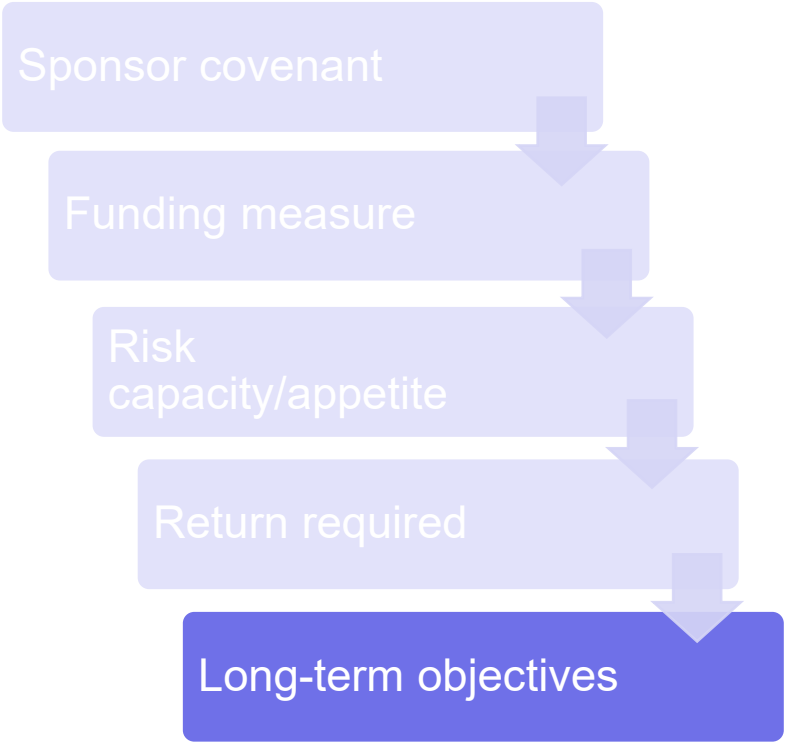
- The trustees and sponsor should agree the appropriate funding measure for investment purposes, for example:
  - Statutory Funding Objective
  - Self-sufficiency/low dependency
  - Buy-out with an insurance company
  - Accounting
- Different funding measures can lead to different strategies

Risk and return characteristics



- Trustees should consider to what extent they wish to mitigate risks
- Trustees view will be driven by:
  - the **capacity** of the sponsor to absorb risk
  - the **appetite** of the sponsor to take on risk
  - The trustees' views on the way specific risks may develop over the longer term
- What level of return is required to meet:
  - the current funding plan
  - any secondary objectives, e.g. attaining buy-out

Longer term objectives



- Trustees should consider the long-term objectives of the Scheme – do they wish to:
  - reduce risk as funding improves
  - reduce risk as time passes
  - reach self-sufficiency or buy-out?
- Trustees should consider the timeframe for achieving their aims – different timeframes can impact the practical strategy and implementation

Example objectives

- The trustees have agreed the following investment objectives:
  - to meet the scheme's liabilities as they fall due
  - to invest in a diverse and liquid range of investments
  - to invest in a way that is consistent with the funding objectives
  - to target an exposure to downside equity market risk of 55%
  - to target a level of protection against interest rate risk of 60%
  - to target a level of protection against inflation risk of 70%
  - where future opportunities arise to improve protection against key risks the trustees will consider steps to further reduce the volatility of the funding position

Asset Risk and Return

Growth and protection assets

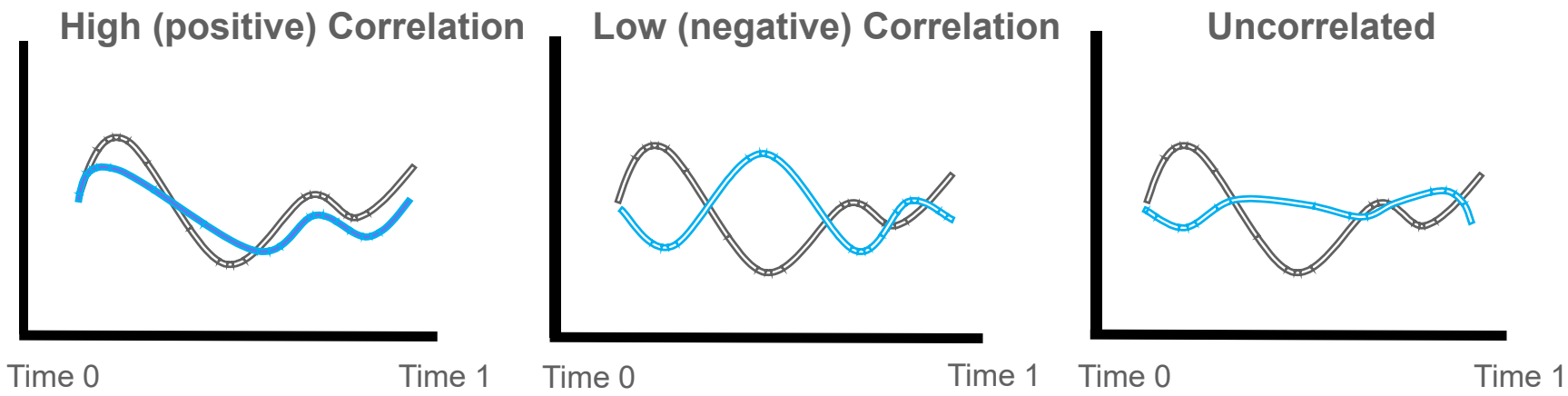
- Growth assets
  - generate long-term growth, typically 5%-10% per annum
  - higher returns are associated with higher risk – i.e. the returns can be relatively volatile
  - greater risk of default
- Protection/hedging assets
  - relatively secure, with limited expectation of default
  - cashflows can be used to match payments due from the scheme
  - commonly used as the basis to value liabilities – hence ability to use protection assets to dampen volatility of funding position

Growth and protection assets

Growth assets	Protection assets
• Equities • Diversified growth funds • Property • High yield bonds • Emerging market debt • Commodities • Private equity/markets	• Government bonds • High quality corporate bonds • ‘Buy & maintain’ corporate bonds • Liability Driven Investment vehicles • Annuities • Cash

Correlation and diversification

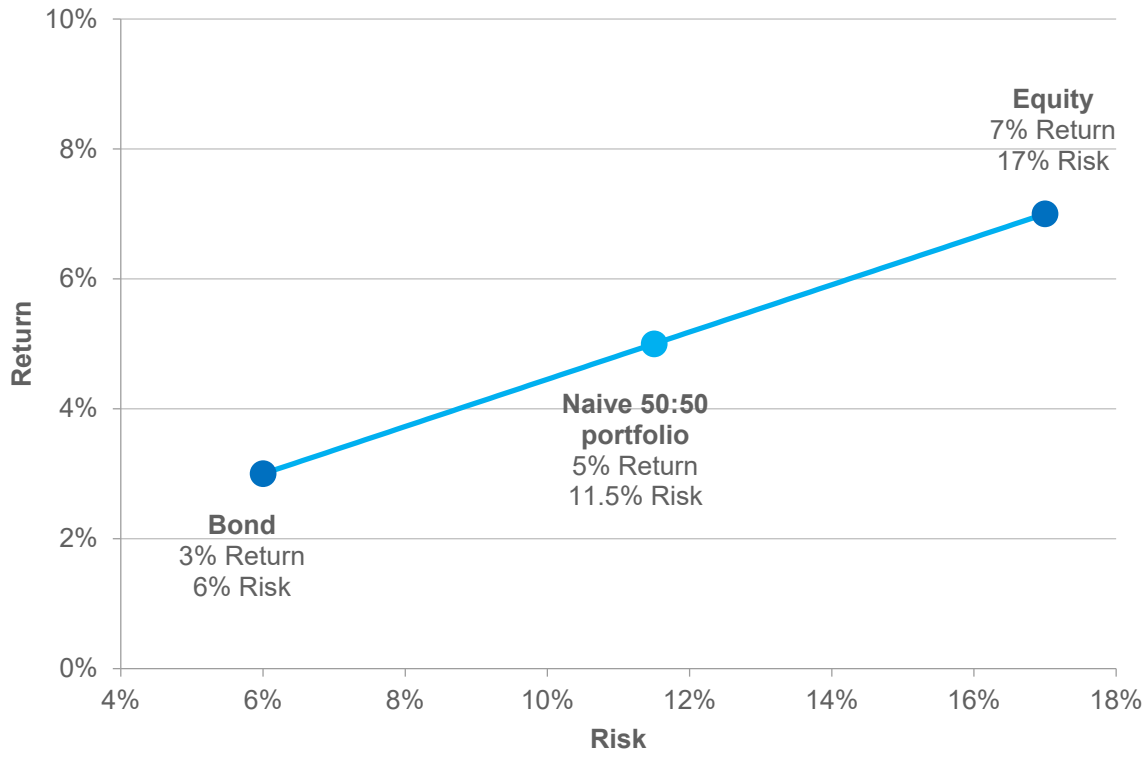
- Correlation is the key to the theory of diversification
- It measures how the returns from two assets move relative to each other over time



Correlation

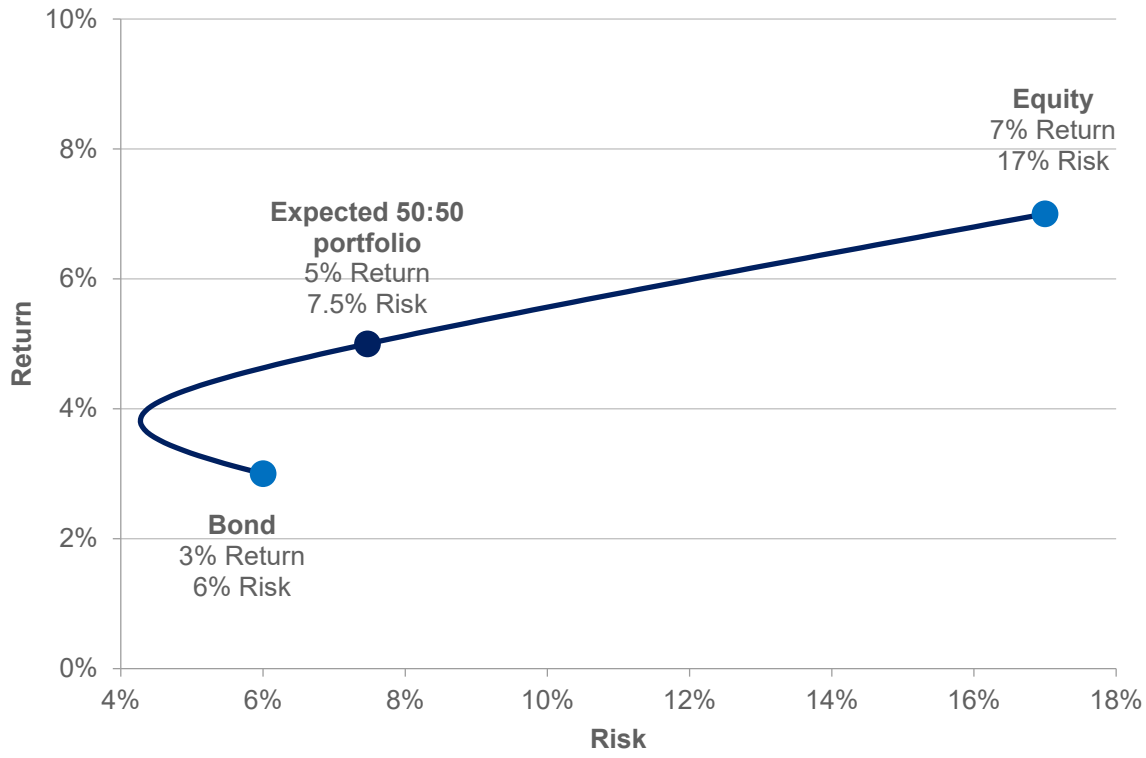
	UK Equities	Overseas Equities	Property	Fixed Interest Gilts
Overseas Equities	0.83			
Property	0.02	-0.09		
Fixed Interest Gilts	-0.12	-0.06	-0.12	
Cash	-0.15	-0.19	-0.05	0.12

What you might expect…



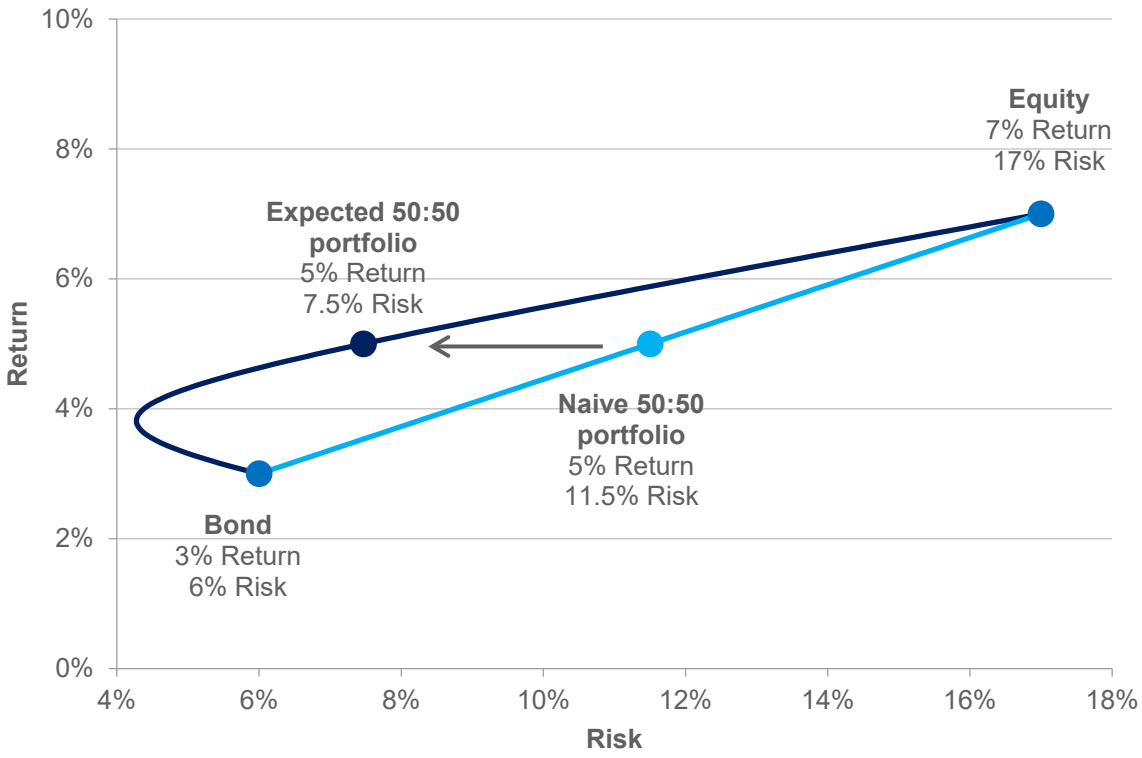
…taking no account of correlation

What the theory tells us…



…assuming a ***strong negative*** correlation between equities and bonds

The benefits of diversification



Understanding the Liabilities

Marking to market

- Market-related liability values are derived to be consistent with market prices of assets
- Different liability measures are linked to market movements in different asset classes
- Investment return assumptions are set with respect to different market rates of return:
  - **Technical Provisions** – commonly based on fixed interest and index-linked gilts
  - **Self-sufficiency/low dependency** – gilts/corporate bonds/swaps
  - **Buy-out** – gilts/corporate bonds/swaps
  - **Accounting** – AA-rated/high quality bonds

Understanding liabilities

- Liability measures are driven by bond prices
- Higher price of bonds leads to a higher value of liabilities and vice versa
- Can reduce funding volatility by investing in lower returning protection assets…
- …but the asset returns must support the funding assumptions

Sensitivity of liabilities

- The sensitivity of the liabilities to changes in long-term interest rates and inflation expectations are key risk metrics
- These measures are commonly referred to as ‘duration’ and are measured in years
- They refer to the (actuarial) average duration of the scheme liabilities – for example, if the average term of the benefit payments is 20 years then the scheme is said to have a 20 year duration
- These sensitivities vary over time and with market conditions
- They are used when assessing to what extent the assets protect funding against changes in interest rates and inflation

Investment risks

Rewarded and unrewarded risks

- Rewarded risks offer higher investment returns in exchange for taking on the risk, unrewarded risks are not expected to be
- Risks have upside as well as downside – for example, rising interest rates reduce the value of liabilities

Rewarded risks	Unrewarded risks
• Growth asset volatility risk • Default risk • Liquidity risk	• Interest rate risk • Inflation risk • Longevity risk • Concentration risk • Manager risk • Currency risk

Key investment risks

- Based on historical experience, the risks with most significant impact on development of funding position are:
  - Growth asset volatility risk
  - Interest rate risk
  - Inflation risk
- Other risks are important, but tend to have lower impact and can be mitigated through implementation

Growth asset volatility risk

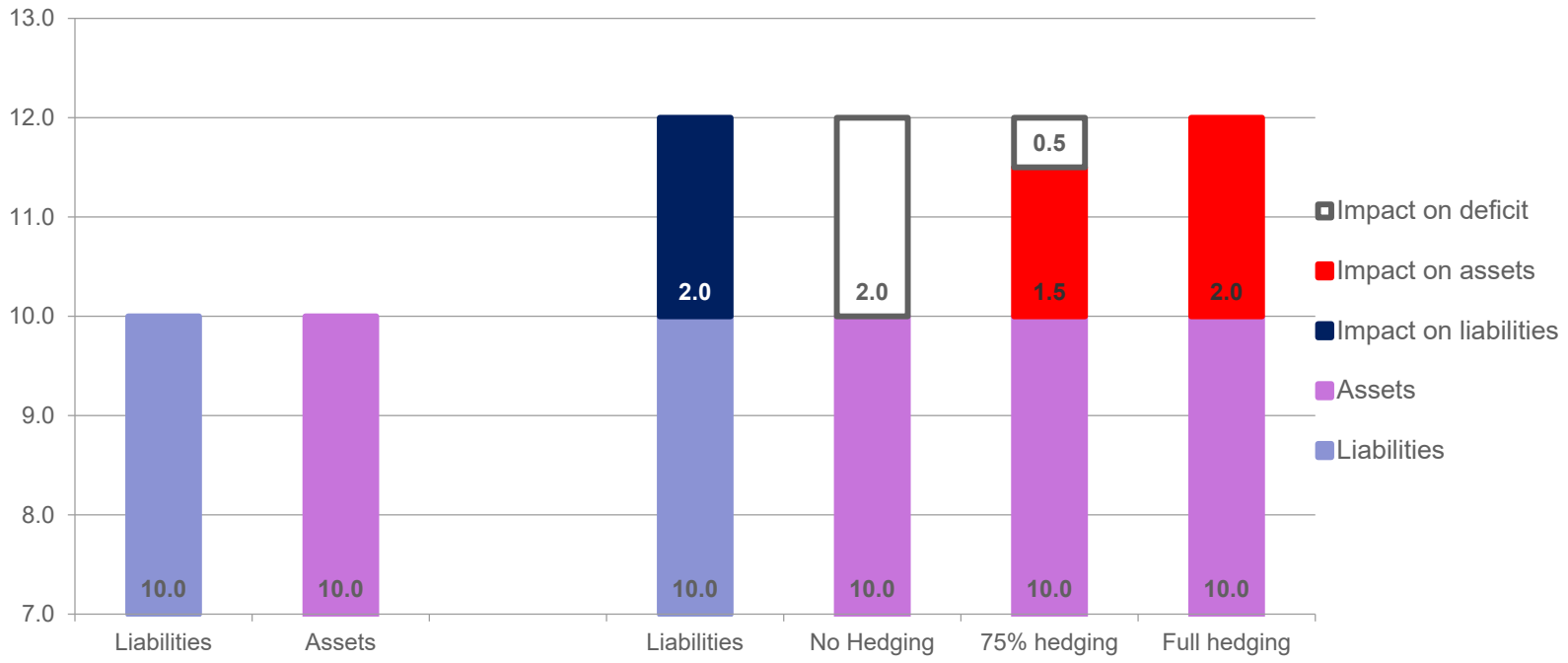
- Growth asset volatility (GAV) risk is expressed in terms of the risk associated with developed market equities
- Historically, developed equity market returns have typically varied by between 15% and 20% around their average return, with large falls in value from time to time
- Some growth assets have less sensitivity to equity market rises and falls, e.g. property and diversified growth funds
- For example, if a £10m portfolio has 50% GAV risk and equity markets were to suffer a 20% fall – one might expect the portfolio to lose 50% x 20% x £10m = £1m

Interest rate and inflation risk

- Interest rate and inflation risk mitigation is expressed in terms of hedging ratios – the extent to which the investment strategy would provide protection against changes in the liabilities caused by movements in long-term interest rates and inflation expectations
- The sensitivity of assets or liabilities is measured as how they react to a small change in interest rates or inflation
- For example, if a 0.1% p.a. fall in interest rates leads to a 2.0% increase in liabilities we say the sensitivity is 20 – also referred to as duration since it represents the average term to payment (in years)
- If scheme liabilities have a duration of 20 years and the assets have a duration of 15 years, the strategy has a 75% hedging ratio
- Hedging ratios can be reduced in practice by the presence of funding deficits

Example of interest rate risk

- Impact of a 1% fall in interest rates on £10m of fully funded liabilities with a 20 year duration: a 20% rise (£2m)



Neutral position on risks

- A neutral position is taken by fully removing (or hedging against) that risk – if a risk is fully hedged, the future development of the Scheme's funding position will be unaffected by that risk
- Any material exposure to a particular risk should, ideally, be made explicitly and with a clear rationale
- If a funding deficit is present, even a 100% funded liability hedging ratio against interest rate or inflation risk will not remove all the risk

Analysis of investment strategies

Risk and return analysis

- Consideration should be given to
  - the current investment strategy, and
  - potential alternatives

  in the context of the trustees' objectives
- The key risk metrics for the current and alternative strategies can be compared directly

Stress tests

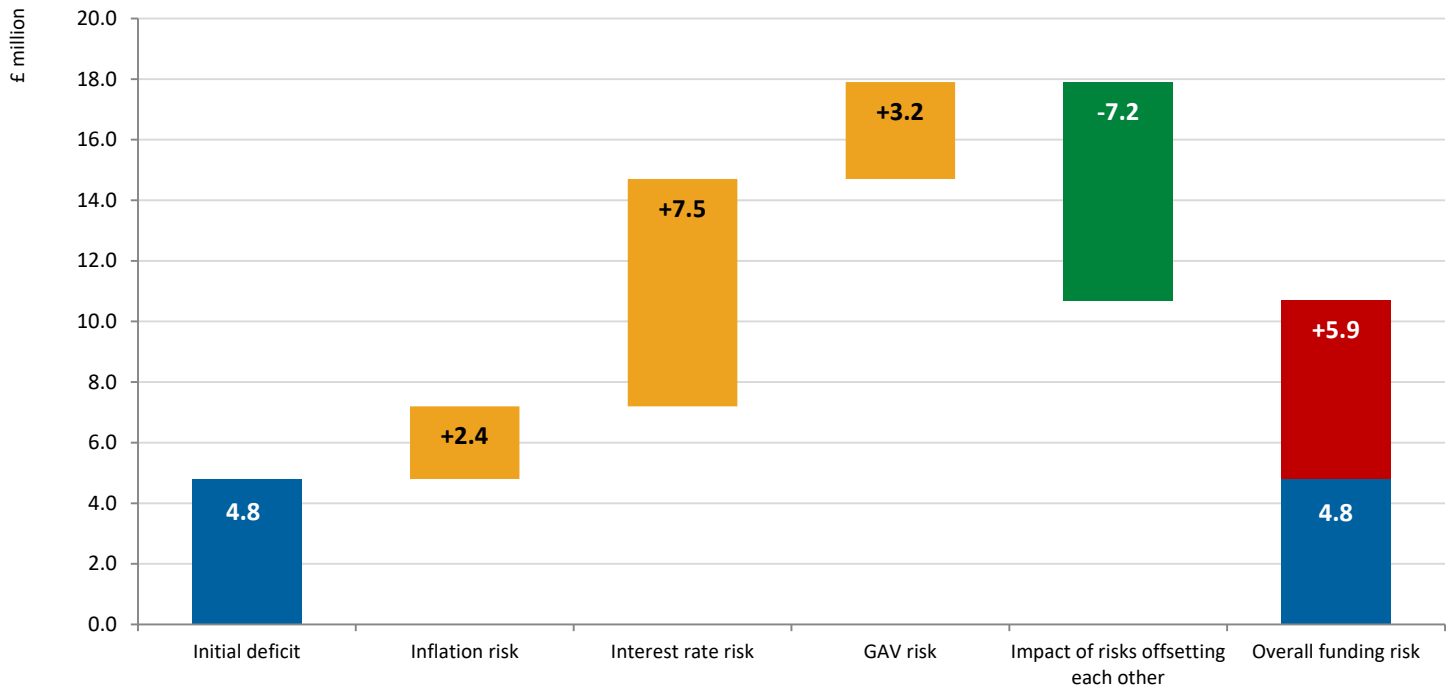
- Stress tests show the impact of an individual market movements on the funding position in monetary terms
- Example stresses illustrated might be:
  - 20% fall in global equity markets
  - 0.5% per annum fall in long term interest rates
  - 0.5% per annum rise in inflation expectations
  - 0.5% per annum widening of the credit spread (difference in yields between corporate bonds and government bonds)

Value at risk

- Value at Risk (VaR) provides a broad measure of risk
- It illustrates the overall funding loss that might be expected to be exceeded with a given probability over a specified timescale
- Can be based on past market experience or a model of future risks and returns
- Allows for the interaction of the key risks that occur in practice, whereas the stress tests tend to focus on the impact of a single risk

Example of one-year 95% Value at Risk

- In this case, the deficit is expected to increase by more than £5.9m only 5% of the time



Expected return

- The expected return of any strategy should be compared with the return assumed in the Trustees' funding plan (as advised by the Scheme Actuary)
- The expected return on a prudent basis should be sufficient to support the valuation assumptions used for the Technical Provisions
- The expected return on a best estimate basis should be sufficient to support the assumptions used for any Recovery Plan

Example risk and return analysis

Strategy	CURRENT STRATEGY	STRATEGY A	STRATEGY B
General risk characteristics			
Equity-like downside GAV risk (as % of assets)	75%	55%	25%
Target hedging ratio against interest rate risk	0%	65%	90%
Target hedging ratio against inflation risk	0%	70%	90%
Market stresses			
Negative impact of a 20% fall in global equity markets	£3.0m	£2.2m	£1.0m
Negative impact of a 0.5% p.a. fall in long-term interest rates	£2.9m	£1.2m	£0.6m
Negative impact of a 0.5% p.a. rise in inflation expectations	£1.5m	£0.6m	£0.3m
One-year 95% Value at Risk			
One year increase in deficit exceeded, with a 5% probability	£5.9m	£3.1m	£1.0m
% risk reduction relative to current strategy	-	-48%	-83%
Expected returns relative to gilt yields			
Prudent expected return (relative to gilt yields)	2.0% p.a.	1.5% p.a.	1.1% p.a.
Best-estimate expected return (relative to gilt yields)	3.7% p.a.	3.2% p.a.	2.2% p.a.

Other considerations

- Long-term strategy
  - putting a de-risking plan in place
- Cashflow sustainability
  - is the scheme cashflow positive or negative?
  - will the assets help support cashflow requirements?
  - would poor investment performance at a time of heavy outgo mean selling at a permanent loss?
- Transaction costs
- Ongoing investment management costs

Next steps

- Consideration of the strategy by the trustees
- Consultation with the sponsor
- Decide upon a suitable manager structure
- Transition the assets to the new structure
- Produce a Statement of Investment Principles
- Monitor the investment arrangements

Questions?