



# Investment Strategy Statement 2009

April 2009

### 1. Introduction

- **1.1.** The Fund has reviewed its investment strategy following the worldwide market turmoil during 2008 and formulated a revised investment strategy. The revised strategy is set out in this document although the 2007 ISS provides the history and origins of this strategy.
- **1.2.** This Investment Strategy Statement (ISS) is produced to outline the Fund's investment strategy and how the risk and return issues have been managed relative to the Fund's investment objectives and underlying pension liabilities.
- **1.3.** The ISS is also a key supporting statement to the Funding Strategy Statement (FSS) and Statement of Investment Principles (SIP). The relationship can be illustrated by the diagram below:

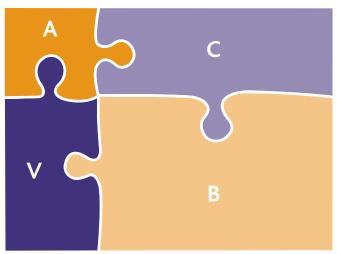


Funding Strategy Statement How solvency and risks will be managed having regard to liabilities. Statement of Investment Principles How the Fund will be invested and managed.

# 2. Risk Budget

- 2.1. As the pursuit of returns becomes ever more complex, combined with the prospect of diminishing returns, the Fund is becoming increasingly aware of the need to balance the relationship between the different asset classes, their returns, their volatility and their correlation with equities. This constitutes the 'risk budget'.
- **2.2.** The Fund's risk budget can be considered as having four elements, illustrated as follows:

### **Risk Budget**



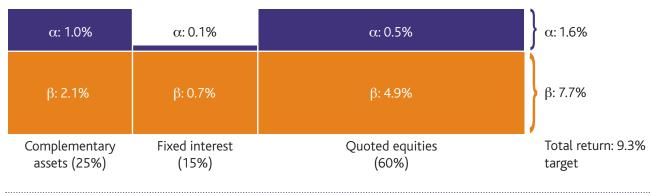
- A Alpha or manager skill
- C Correlation of asset classes
- B Beta or market returns
- V Volatility of Fund
- 2.3. i) The market returns from the asset classes are structured to deliver the long term return, currently 7.7% pa, as identified by the 2007 investment strategy.
  - ii) Ideally the excess market returns (alpha) should deliver anything over and above the 7.7% pa and will contribute positively to the funding level. The revised investment strategy is designed to deliver alpha of around 1.8%.
  - iii) Volatility tends to dictate whether the
    7.7% pa is likely to be delivered smoothly over the years or more in peaks and troughs.
    Combining different asset classes reduces overall volatility. There are two types of volatility, one associated with market returns and one with active management.
  - iv) Correlation reflects the relationship between the different asset classes, for example, commodities and property have a low correlation to quoted equities and are more likely to generate modest positive returns when quoted equities are performing poorly. Using different asset classes with negative or low correlation is the key diversification, smoothing returns and protecting downside risks of under performing the investment objectives.

- 2.4. i) One of the main challenges facing the Fund going forward is which asset classes offer a greater likelihood of generating superior alpha. Some asset classes are more efficient or most information relevant to valuing stock is freely available, so there is less opportunity to select outperforming assets. This makes it harder for manager skill to deliver superior returns over the market return.
  - ii) Some markets are less efficient an example of this being emerging market equities. As a result, the Fund only has active managers for this asset class. The opposite is found in quoted US equities where there are few market inefficiencies. The Fund has most of its investment in a passive fund structured to deliver beta and a small investment in enhanced indexed funds, designed to offer modest returns over beta with low risk.
  - iii) Although it is impossible to separate beta and alpha within all asset classes, the Fund is attempting to identify those assets where alpha should be stronger and more readily obtained. This is particularly true in the area of complementary investments, where it is widely believed that superior manager skill is greater. The following diagram shows the 2007 benchmark and illustrates this over the three broad asset classes – quoted equities, fixed interest and complementary assets (property, private equity, active currency, commodities, emerging market debt and infrastructure).

- **2.5.** The table shows that:
  - i) The bulk of the Fund's overall return (4.9%) comes from its allocation to core/passive equity investments,
  - ii) Although the Fund only has a 25% allocation to 'complementary' asset classes, well over 50% of the alpha is derived from these.

The introduction of these complementary asset classes increases the overall returns whilst reducing the overall level of risk due to diversification. Volatility also forms part of the overall equation, acknowledging there is market risk plus active risk (associated with any active management). The key is to find investments where the extra alpha more than offsets any increase in volatility.

2.6. The 2009 investment strategy takes the Fund's diversification a step further by increasing 'complementary' by another 10% and is detailed in Section 4.



iv)

### 3. 2007 Investment Strategy

- **3.1.** Although the Fund remains committed to the equity risk premium over the long-term, there has been a modest move over recent years from equities into complementary investments as part of the ongoing management of investment risk and overall process of diversification. A further shift from equities to complementary investments is likely as going forward this is a natural development of the risk budget.
- **3.2.** Pursuing a high allocation to equities has served the Fund well over the long-term, however, it is a fairly high-risk strategy relying heavily on the performance of one volatile asset class. The introduction of complementary asset classes reduces the overall risk whilst achieving the same expected returns, when fixed interest markets offer such poor returns. If structured correctly,

complementary investments can also maintain the same overall risk, but slightly increase returns. In addition, in times of equity bear markets, fixed interest and complementary investments should provide an element of cushioning the fall in the overall Fund value.

- **3.3.** The market returns from the asset classes are structured to deliver the long term return target, currently 7-8% pa, as identified by the 2007 actuarial review and resulting strategy, as illustrated by the table in 2.4. (iv).
- **3.4.** As already referred to in the risk budget, combining different asset classes with low or negative correlation will reduce the overall volatility of the total Fund.
- **3.5.** The expected risk and return characteristics of different asset classes is illustrated below:



### Risk/Return Grid of Asset Classes

15 .

\* Volatility is defined as the fluctuations in an assets return

- **3.6.** At present, by far the greatest risk in the budget is still the high allocation to equities. This can be reduced by introducing new or further increasing existing complementary investments which have similar returns, but a low or negative correlation to quoted equities. Although some have high individual volatility, combining them with quoted equities lowers the overall volatility of the Fund and provides diversification.
- **3.7.** In addition, the introduction of these asset classes can decrease the exposure to unrewarded risks such as interest rate and inflation, and increases exposure to those risks which are potentially rewarded (fund manager skill, illiquidity and inefficient markets).
- **3.8.** In considering the suitability of an asset class, the following criteria are used:

### First Level

- Must contribute to risk/return (performance/diversification) objectives.
- Must be legal (legal and regulated).
- Assist efficient portfolio management.

### Second Level

- Transparency
- Liquidity
- Management fees
- Reputation
- Conflict with other objectives (e.g. corporate governance)
- Leverage
- Access
- **3.9.** Against this background, the Superannuation Committee agreed in June 2007 as part of the overall risk budget to make a phased further 10% reduction in equities, changing the benchmark as follows:

	2007 Benchmark %	2004 Benchmark %
UK equities	30.0	37.0
Global	6.0	6.0
Europe	9.5	10.0
US	5.5	8.0
Japan	3.0	3.5
Pacific Basin	3.0	3.0
Emerging markets	3.0	2.5
Total equities	60.0	70.0

## 4. Revised Investment Strategy 2009

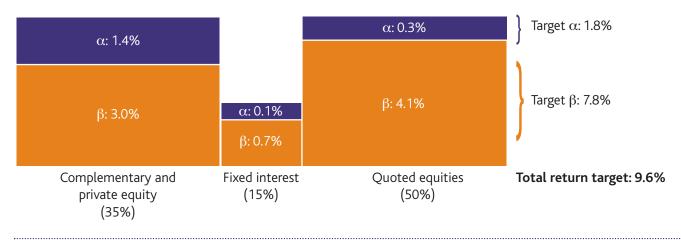
- **4.1.** Due to the unprecedented turmoil and volatility experienced in the financial markets during 2008, it was seen as necessary and prudent to again review the investment strategy set in 2007.
- **4.2.** The target objectives remained the same and are as follows:
  - i) Retain the same level of return at a slightly lower level of risk, or
  - ii) Increase the overall level of returns at the same level of risk, or
  - iii) Ideally, increase the overall level of returns at a slightly lower level of risk.
- **4.3.** The senior officers of the Fund worked in partnership with the Morgan Stanley Investment Management Global Portfolio Solutions team to ascertain which particular combination of asset classes, as set out in the graph 3.5. achieved any of the three objectives listed above.
- **4.4.** As a result of analysing a number of factors including expected market returns and volatility, expected correlations, expected shortfall risks and various economic scenarios, a revised investment strategy evolved.

**4.5.** The revised benchmark as agreed at the January 2009 committee is shown below set out below:

	Asset A	um-Term Allocation ary 2009
	%	%
Quoted equities		50
UK	14.0	
Europe	11.0	
North America	8.0	
Japan & Far East	5.5	
Frontier & emerging markets	5.5	
Global equities	6.0	
*Private equity	10.0	
Total equities		60
Fixed interest		15
UK index-linked	4.7	
UK gilts	4.7	
UK corporate bonds	4.6	
Cash	1.0	
Complementary		25
Property	9.0	
Emerging market debt	2.0	
Commodities	3.0	
Infrastructure	3.0	
Absolute return strategies	8.0	
Total non-equities		40
Total Fund		100
* Dreviewsky in Correctory		

- i) The table illustrates that well over half of the market return is still expected to be generated by quoted equities, while nearly all the alpha or manager skill is expected to come from complementary and private equity investments.
- ii) The target beta is maintained at just below 8% and it is this return that is vital for the Fund to meet its long-term liabilities. Any additional returns in the form of alpha will be 'banked' for when markets do not deliver.
- iii) The revised investment strategy meets the Fund's objectives as it should modestly increase the expected level of alpha. As the level of volatility is also expected to fractionally fall from 11.4% to 11.3%, this achieves the best possible objective as specified in 4.2. iii).
- **4.7.** More detailed analysis carried out by Morgan Stanley is included in the appendices. There is continual reference to a potential future target strategy which shows further improvement in the risk/return relationship achieved by another 10% reduction in equities. It is intended to review this by no later than the next valuation.

\* Previously in Complementary



**4.6.** The benchmark has the following return targets in respect of alpha and beta.

# Appendices i) to vi) Morgan Stanley Investment Management

Information extracted from the asset allocation analysis (the 'Analysis') conducted by Morgan Stanley Investment Management Ltd ('Morgan Stanley').

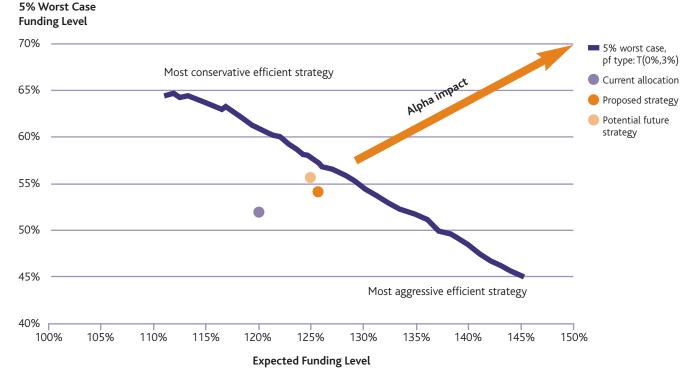
### Appendix i • Investment Strategy (including 3% risk budget)

The graph contains the position of the current allocation, the proposed strategy and the potential future strategy.

The potential future strategy comes closest to efficiency in this risk space, compared with the current and the proposed, although the current is by far the worst.

Adding alpha improves the risk profile of the fund further in the direction of the arrow.

	Current Allocation	Proposed Strategy	Potential Future Strategy
Equity	64%	60%	50%
Fixed income	20%	15%	15%
Complementary	16%	25%	35%
5% worst case funding (2028)	52.0%	54.3%	55.7%
Expected funding (2028)	120.0%	125.6%	124.8%



Past performance is not necessarily a guide to future performance. This analysis requires the use of quantitative models that make assumptions on risks and returns in the forecast horizon, and are no guarantee of results achieved in reality. Please also refer to the important risk warning at the end of the document.

#### **Investment Strategy Risk Analysis**

# Appendix ii • Expected Volatility and Return

This table shows expected risk/return characteristics of the current portfolio, the proposed portfolio as well as the potential future strategy.

- The current allocation has
  - lowest expected return
  - highest expected volatility

### Appendix iii • Expected Shortfall Risks

The table shows shortfall risks of selected portfolios. A shortfall risk is the probability of not achieving a certain return target.

For instance, the current allocation has a probability of 26.2% of not returning at least 0.0% on a one-year horizon.

	Expected Risk/Return Characteristics					
Asset Mix	Return	Volatility	Sharpe Ratio			
Current allocation Proposed strategy	7.6% 7.8%	11.4% 11.3%	0.27 0.29			
Potential future strategy	7.8%	10.5%	0.32			

- The potential future strategy has the lowest shortfall risks
  - measured in two dimensions
    - investment horizon
    - return target
  - The proposed strategy is in between the current and the potential future strategy

	o	ne-Year Hor	izon		isks: Risk a R ive-Year Hor	eturn Below: izon		10-Year Hori	zon
Asset Mix	r < -3%	r < 0%	r < 8%	r < 0%	r < 5%	r < 8%	r < 0%	r < 5%	r < 8%
Current allocation Proposed strategy	17.7% 16.9%	26.2% 25.2%	55.070	,.	34.7% 32.7%	501070	2.2% 1.7%	28.9% 26.3%	0.1070
Potential future strategy	14.9%	23.4%	52.6%	5.2%	30.8%	55.8%	1.1%	23.9%	58.2%

### Appendix iv • Expected Value-at-Risk

The table shows the value-at-risk of selected portfolios. The value-at-risk is the maximum expected loss at a certain level of confidence.

For instance, the current allocation has an expected maximum loss of 16.4% at a 99.0% confidence level in any given year.

- The potential future strategy has the lowest value-atrisk
  - measured in two dimensions
    - investment horizon
    - confidence level
  - The proposed strategy is in between the current and the potential future strategy

	Expected Value-at-Risk Relativ			ve to Target r at Confidence Level c, as Pe			ercentage of Invested Capital		
	One-Year Horizon			Five-Year Horizon			10-Year Horizon		
Asset Mix	c = 90%	c = 95%	c = 99%	c = 90%	c = 95%	c = 99%	c = 90%	c = 95%	c = 99%
	r = 0%	r = 0%	r = 0%	r = 0%	r = 0%	r = 0%	r = 0%	r = 0%	r = 0%
Current allocation	6.6%	10.1%	16.4%	0.0%	5.1%	19.2%	0.0%	0.0%	9.9%
Proposed strategy	6.2%	9.7%	15.9%	0.0%	3.5%	17.7%	0.0%	0.0%	6.9%
Potential future strategy	5.3%	8.5%	14.4%	0.0%	0.4%	14.1%	0.0%	0.0%	0.9%

# Appendix v • Risk Diversification

The risk diversification parameter shows how well or poorly diversified the asset mix is. We calculate three different numbers:

- 1) Diversified shows the volatility if all correlations are minimal.
- 2) Actual is the actual volatility of the asset mix.
- 3) Undiversified is the volatility in case all correlations are 1.

- The potential future strategy has the lowest implied correlation
  - the proposed strategy is in between the current and the potential future strategy

	Risk Diversification						
Asset Mix	Diversified	Actual	Undiversified	Implied Correlation			
Current allocation Proposed strategy		11.4% 11.3%	15.8% 16.0%	0.45 0.46			
Potential future strategy	2.4%	10.5%	15.7%	0.40			

### Appendix vi • Economic Factor Exposure

Economic factor exposure shows how each asset mix would have performed under different economic circumstances.

The potential future strategy has the best economic factor return profile.

The proposed strategy is in between the current and the potential future strategy

	Economic Factor Exposure								
		Factor Ret	urn Profile		Probability of Positive Return				
Asset Mix	Lower Inflation, Slower Growth	Higher Inflation, Slower Growth	Lower Inflation, Faster Growth	Higher Inflation, Faster Growth	Lower Inflation, Slower Growth	Higher Inflation, Slower Growth	Lower Inflation, Faster Growth	Higher Inflation, Faster Growth	Total
Current allocation Proposed strategy	4.1% 4.7%	-9.8% -8.9%	7.9% 9.3%	18.8% 18.9%	55.2% 58.6%	48.4% 48.4%	61.3% 64.5%	82.8% 82.8%	61.7% 63.3%
Potential future strategy	5.4%	-8.0%	9.7%	18.6%	58.6%	51.6%	61.3%	82.8%	63.3%

# Definitions

### Alpha $\alpha$

Statistical measure of the incremental return added by an investment manager through active management.

### Beta $\beta$

Indicates the sensitivity of a security or portfolio to movements in the market index. Securities/portfolios with a beta of greater than one are expected to be more volatile than the market as a whole, outperforming in rising markets and underperforming in failing ones.

### **Efficient strategy**

Line of expected funding level that graphs the characteristics of different asset classes to produce the best trade-off between risk and overall return.

### **Risk Budget**

A mathematical assessment of the total amount of risk that an investor is prepared to take and the allocation of that risk between the various possible asset classes based on a target level of return.

## **Risk Warning**

Past performance is not necessarily a guide to future performance. The value of investments and income from them may fall as well as rise and the investor may not receive back the amount invested. Investments may be in a variety of currencies and, therefore, movements in the value of currencies may also affect the value of an investor's holdings. Furthermore, the value of investments may be adversely affected by fluctuations in exchange rates between the investor's reference currency and the base currency of the investments.

International investing involves certain risks including currency fluctuations and controls, nationalisation or expropriation, confiscatory taxation, restrictions on foreign investments and on repatriation of capital, less governmental supervision and regulation, less liquidity, the potential for market volatility and political and social instability.

High yield securities; investment in higher yielding securities is speculative as it generally entails increased credit and market risk. Such securities are subject to the risk of an issuer's inability to meet principal and interest payments on the obligations (credit risk) and may be subject to price volatility due to such factors as interest rate sensitivity, market perception of the creditworthiness of the issuer and general market liquidity.

The analysis was conducted by Morgan Stanley solely for the benefit of the trustees of the West Midlands Pension Fund and cannot be relied on by anyone else including Scheme members of the West Midlands Pension Fund. This Investment Strategy Statement (ISS) has not been reviewed by Morgan Stanley. Morgan Stanley does not provide advice on or accept responsibility for the content of the ISS.





# Investment Strategy Statement 2007

December 2007

### 1. Introduction

- 1.1. This Investment Strategy Statement (ISS) is produced to outline the Fund's investment strategy and how the risk and return issues have been managed relative to the Fund's investment objectives and underlying pension liabilities.
- **1.2.** The ISS is also a key supporting statement to the Funding Strategy Statement (FSS) and Statement of Investment Principles (SIP). The relationship can be illustrated by the diagram on the right:

### 2. Changes in Investment Strategy

2.1. At the 2004 valuation, a revised investment strategy was agreed following consultation and based upon the work performed by Mercer Investment Consulting and contained in their report – Summary of Review of Investment Strategy (WMPF) September 2004. This resulted in the following investment benchmark:

Valuation Results How much to pay and when to meet current and future payments.

Funding Strategy Statement How solvency and risks will be managed having regard to liabilities. Statement of Investment Principles How the Fund will be invested and managed.

		%	Allowable	Ranges
Quoted equities	70		65 – 72.5	
Global		6		5 – 7
UK		37		33 - 41
Europe (excluding UK)		10		8 – 12
North America		8		6 – 10
Japan		3.5		2.5 – 4.5
Pacific Basin (excluding Japan)		3.0		2 – 4
Emerging markets		2.5		1.5 – 3.5
Bonds	15		12.5 – 17.5	
Index-linked gilts		5		3 – 7
Fixed interest gilts		5		3 – 7
Corporate bonds		5		3 – 7
Private equity	5*		3 – 7*	
Property	8*		6 – 10*	
Alternative investments	2		0 – 3	
Cash	0		0 - 2	

\* Please note that these allocations and ranges are indicative, as it is recommended that fixed cash ranges are implemented for the Fund's property and private equity investments.

Possible ranges would be as follows:

	Private Equity	Property
Value at 31 March 2004 (M)	170 (3.6% of the Fund)	349 (7.4% of the Fund)
Range 2004/05 (£M)	160 – 200	320 – 400
Range 2005/06 (£M)	200 – 260	360 – 440
Range 2006/07 (£M)	240 - 300	400 - 480

**2.2.** The Investment Sub-Committee spent some time following agreement to the revised benchmark gaining an understanding of the options available and formulating an approach to investing in the options considered acceptable.

As a result the 2% allocation to alternatives was temporarily housed in the allocation to UK equities until the autumn of 2006. By the end of 2006 the position was as follows:

	Pre	hmark 2-2004 uation %	Benchmark Post-2004 Valuation %	Actual Benchmark 15 December 2006 %
Quoted equities				
UK		41.0	37.0	38.7
Global		4.0	6.0	5.8
Europe (excluding UK)		10.0	10.0	11.4
North America		8.0	8.0	5.8*
Japan		3.5	3.5	3.2
Pacific Basin (excluding Japan)		3.0	3.0	3.4
Emerging markets		2.5	2.5	3.3
	Sub total	72.0	70.0	71.6
Complementary investments				
Private equity		3.0	5.0	3.9
Property		6.0	8.0	7.8
Active currency	1			
Emerging market debt		0.0	2.0	0.9
Commodities	J			
	Sub total	9.0	15.0	12.6
Fixed interest				
Index-linked gilts		8.0	5.0	4.0
Fixed interest gilts		5.0	5.0	4.6
Corporate bonds		5.0	5.0	4.0
	Sub total	18.0	15.0	12.6*
Cash		1.0		3.2
Total		100	100	100

Notes:

1. The strategic benchmark is influenced short term by Gartmore's tactical asset allocation recommendations which currently underweight positions in US equities and fixed interest.

- 2. The target was for active currency, emerging market debt and commodities to reach 3% by February 2007 following implementation of the new management arrangements.
- 3. A number of new managers had been appointed and resources moved to meet the benchmark allocation.

### 3. Risk Budget

- **3.1.** As the pursuit of returns becomes ever more complex, combined with the prospect of diminishing returns, the Fund is becoming increasingly aware of the need to balance the relationship between the different asset classes, their returns, their volatility and their correlation with equities. This constitutes the 'risk budget'.
- **3.2.** The Fund's risk budget can be considered as having four elements, illustrated as follows:



- **3.3.** i) The market returns from the asset classes are structured to deliver the long term return, currently 7.8% pa, as identified by the 2004 investment strategy.
  - ii) Ideally the excess market returns (alpha) should deliver anything over and above the 7.8% pa and will contribute positively to the funding level. At present the target alpha return is around 1% pa.
  - iii) Volatility tends to dictate whether the
    7.8% pa is likely to be delivered smoothly over the years or more in peaks and troughs.
    Combining different asset classes reduces overall volatility. There are two types of volatility, one associated with market returns and one with active management.

- iv) Correlation reflects the relationship between the different asset classes, for example, commodities and property have a low correlation to quoted equities and are more likely to generate modest positive returns when quoted equities are performing poorly. Using different asset classes with negative or low correlation is the key diversification, smoothing returns and protecting downside risks of under performing the investment objectives.
- 3.4. i) One of the main challenges facing the Fund going forward is which asset classes offer a greater likelihood of generating superior alpha. Some asset classes are more efficient or most information relevant to valuing stock is freely available, so there is less opportunity to select outperforming assets. This makes it harder for manager skill to deliver superior returns over the market return.
  - ii) Some markets are less efficient an example of this being emerging market equities. As a result, the Fund only has active managers for this asset class. The opposite is found in quoted US equities where there are few market inefficiencies. The Fund has most of its investment in a passive fund structured to deliver beta and a small investment in enhanced indexed funds, designed to offer modest returns over beta with low risk.
  - iii) Although it is impossible to separate beta and alpha within all asset classes, the Fund is attempting to identify those assets where alpha should be stronger and more readily obtained. This is particularly true in the area of complementary investments, where it is widely believed that superior manager skill is greater. The following diagram shows the post-2004 benchmark and illustrates this over the three broad asset classes – quoted equities, fixed interest and complementary assets (property, private equity, active currency, commodities, emerging market debt and infrastructure).

α: 0.5%	α: 0.04%	α: 0.6%	} α: 1.1%
β: 1.2%	β: 0.6%	β: 5.9%	β: 7.7%
Complementary assets (15%)	Fixed interest (15%)	Quoted equities (70%)	Total return: 8.8% target

Further details of the split between the asset classes and their respective alpha and beta is found in Appendix 1.

- **3.5.** The table shows that:
  - i) The bulk of the Fund's overall return (5.9%) comes from its allocation to core/passive equity investments,
  - ii) Although the Fund only has a 15% allocation to 'complementary' asset classes, almost 50% of the alpha is derived from these.

The introduction of these complementary asset classes increases the overall returns whilst reducing the overall level of risk due to diversification. Volatility also forms part of the overall equation, acknowledging there is market risk plus active risk (associated with any active management). The key is to find investments where the extra alpha more than offsets any increase in volatility.

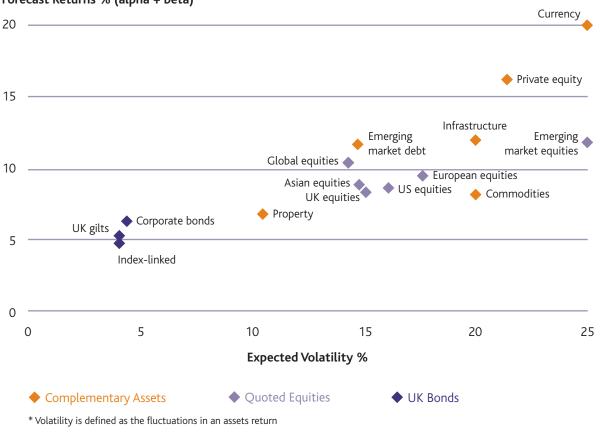
### 4. 2007 Changes to Investment Strategy

**4.1.** Although the Fund remains committed to the equity risk premium over the long-term, there has been a very small move over three years from equities into complementary investments as part of the ongoing management of investment risk and overall process of diversification. A further

modest shift from equities to complementary investments is likely as going forward this is a natural development of the risk budget.

- **4.2.** Pursuing a high allocation to equities has served the Fund well over the long-term, however, it is a fairly high-risk strategy relying heavily on the performance of one volatile asset class. The introduction of complementary asset classes reduces the overall risk whilst achieving the same expected returns, when fixed interest markets offer such poor returns. If structured correctly, complementary investments can also maintain the same overall risk, but slightly increase returns. In addition, in times of equity bear markets, fixed interest and complementary investments should provide an element of cushioning the fall in the overall Fund value.
- **4.3.** The market returns from the asset classes are structured to deliver the long term return target, currently 7-8% pa, as identified by the 2004 actuarial review and resulting strategy, and illustrated in paragraph 3.4.
- **4.4.** As already referred to in the risk budget, combining different asset classes with low or negative correlation will reduce the overall volatility of the total Fund.

# Risk/Return Grid of Fund's Asset Classes



#### Forecast Returns % (alpha + beta)

- **4.5.** At present, by far the greatest risk in the budget is still the high allocation to equities. This can be reduced by introducing new or further increasing existing complementary investments which have similar returns, but a low or negative correlation to quoted equities. Although some have high individual volatility, combining them with quoted equities lowers the overall volatility of the Fund and provides diversification.
- **4.6.** In addition, the introduction of these asset classes can decrease the exposure to unrewarded risks such as interest rate and inflation, and increases exposure to those risks which are potentially rewarded (fund manager skill, illiquidity and inefficient markets).

**4.7.** In considering the suitability of an asset class, the following criteria are used:

### First Level

- Must contribute to risk/return (performance/diversification) objectives.
- Must be legal (legal and regulated).
- Assist efficient portfolio management.

### Second Level

- Transparency
- Liquidity
- Management fees
- Reputation
- Conflict with other objectives (e.g. corporate governance)
- Leverage
- Access

**4.8.** Against this background, the Superannuation Committee agreed in June 2007 as part of the overall risk budget to make a further 4% reduction in equities, changing the benchmark as follows:

	% of Fund	Former Benchmark
UK equities	34.0	37.0
Global	6.0	6.0
Europe	11.0	10.0
US	6.0	8.0
Japan	3.0	3.5
Pacific Basin	3.0	3.0
Emerging markets	3.0	2.5
Total equities	66.0	70.0

The target objective of the above is to:

- i) Retain the same level of overall returns at a lower level of risk, or
- ii) Increase the overall returns and maintain the same level of risk.
- **4.9.** The following table illustrates that a 5% increase in complementary investments meets the above objectives:

The table shows the following changes to the current position:

 i) The beta generated by complementary assets has increased by 50bp with a corresponding reduction in the equity beta. ii) Over half the alpha (or manager skill) is now generated by complementary assets with the Fund's total return increasing by 20bp to 9%.

**Note:** It is crucial when structuring the Fund to ensure that the beta generated remains at 7.7% as this is the level of return identified by the actuarial review as necessary to meet the Fund's liabilities.

**4.9.** The above step was seen as an initial move with a view to a further transfer of 5% from equities into complementary assets later in 2007 and early 2008. A cautious approach has been adopted to investing in asset classes new to the Fund with the aim of building the exposure over time. The nature of complementary assets also dictates a gradual move, as often investments are made as and when required on a similar basis to private equity.

α: 0.7%	α: 0.04%	α: 0.6%	} α: 1.3%
β: 1.7%	β: 0.6%	β: 5.4%	β: 7.7%
Complementary assets (20%)	Fixed interest (14%)	Quoted equities (66%)	Total return: 9.0% target

### 5. Revised Future Investment Strategy

**5.1.** Against the above background, it is considered appropriate to move over the coming medium-term period to the following benchmark.

### West Midlands Pension Fund Response

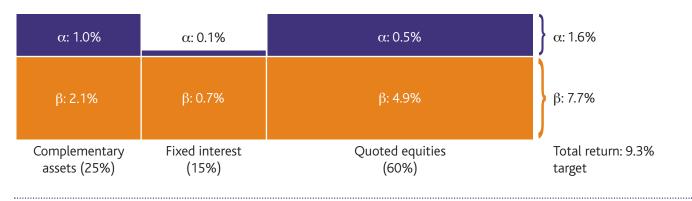
Asset Allocation Conclusion

	June 2007 Benchmark %	Medium-term Benchmark %
Equity		
- UK	34	30
- Overseas	26	24
- Global	6	6
	66	60
Fixed interest	14	15
Complementary	20	25
	100%	100%

**5.2.** The following table illustrates the medium-term benchmark in respect to alpha and beta.

The table shows the following changes to the current position:

- (i) The beta generated by complementary asset has increased by 50bp with a corresponding reduction in the equity beta, with the overall target for beta remaining at 7.7%.
- (ii) Over 60% of the alpha should be generated by the complementary assets with the total return target increasing by 30bp to 9.3%.
- (iii)The long-term return target for the Fund is still maintained at around 7.7% beta.
- **5.3.** The following information is attached showing how the Fund's investment strategy has changed over time (1994 to 2007).
  - Appendix 1 Trend in Fund benchmarks
  - Appendix 2 Trend in return targets
  - Appendix 3 Trend in risk/return feature
  - Appendix 4 Alpha and beta target returns for different asset classes and Fund medium to long-term returns where a long-term position has been held.



• Appendix 5 – Investment management style

### 6. Mercer Investment Consulting – Comments on Strategy

- 6.1. Mercer Investment Consulting (MIC) have been engaged at all recent valuations to review the risks associated with the Fund's investment strategy and make recommendations for managing that risk. MIC have again been requested to quantify the risk being taken by the Fund on how the investment strategy could affect the funding strategy in respect of the Fund's current benchmark (66% equities; 14% bonds; 20% complementary) and proposed benchmark (60% equities; 15% bonds; 25% complementary).
- **6.2.** The MIC review is an extension of the traditional asset liability modelling, and looks at the risk inherent in the Fund's strategies in terms of the likelihood of achieving or indeed failing to achieve, specified funding levels or contribution rates by the time of the next valuation in March 2010.
- **6.3.** The key assumptions for the evaluation of the strategy are:
  - cashflows and liability values are based upon the actuarial valuation work,
  - asset returns and risk projections are based upon MIC standard assumptions at June 2007,
  - changes in benefits proposed from April 2008 have not been fully factored in.
- 6.4. The current asset portfolio (66% equities; 14% bonds and 20% complementary) gives a central expectation (50% probability) of a 7.8% p.a. return, which excludes the contribution from active management return. This return is 2.9% p.a. above the return on a least risk portfolio (LRP) of gilts of 4.9% which is a good proxy of the expected rate of growth of the Fund's liabilities. Strategic risk is the risk inherent in the assets in which the fund invests and is considered relative to the LRP.

- **6.5.** The strategic risk for the current benchmark is 13.9% which means:
  - in a year's time, there is a 2 in 3 chance that the funding level will be within ± 11% of the current funding level,
  - there is a 50% probability that funding will be 100% by 2015.

The downside risks from returns overall falling short of expectations are:

- A 23% probability (almost 1 in 4) of the funding level falling below the current level (81%) at the end of the ten year period in 2017.
- A 37% probability (greater than 1 in 3) of the funding level falling below the current level (81%) at the 2010 valuation.
- A 25% probability (1 in 4) that the funding level will have fallen below 75% at the 2010 valuation.
- A 5% probability (1 in 20) that the funding level will have fallen below 57% by the end of the ten year period.

The potential impact on contribution rates (allowing only for the impact of investment returns) would be:

			2010	
		50%	25%	5%
	2007	Probability	Probability	Probability
Total cost of accrual	18.7	19.4	23.3	29.8
Employee share	(6.5)	(6.5)	(6.5)	(6.5)
Employer share	12.2	12.9	16.8	23.3
Deficit recovery	4.5	3.1*	6.9*	12.8*
Total employer cost	16.7%	16.0%	23.7%	36.2%

\* assumes deficit respread over 25 years

Approximately 1 in 3 chance of total employer's contribution rate rising by more than 20% above the current rate at the next valuation, due to investment-related effects.

- 6.6. The proposed move to an equity allocation of 60% with 25% in complementary and 15% in fixed interest leads to the following outcome:
  - a medium-term benchmark with similar return return/risk characteristics to the current benchmark giving a central expectation of a 7.8% p.a. return and a strategic risk of 14.0% pa,
  - downside risks similar to above.
- 6.7. Both benchmarks have manager risk which has not been evaluated, but is expected to increase overall risk to around 14.2%, however, the medium term benchmark is expected to produce an additional 160bp of return from manager skill (alpha) compared to the present expectation of 130bp, which more than offsets the additional risks.
- **6.8.** Associated strategic issues to note are:
  - hedging 70% of overseas currency with 50% split between UK and overseas equities could lead to shift towards overseas equities bias,
  - no significant risk mitigation applied to interest rate or inflation risk,
  - essential to monitor and assess risk with the objective of actively managing the overall risk through appropriate diversification, with less over-reliance on equity returns going forward.

# Trend in Pension Fund Benchmarks

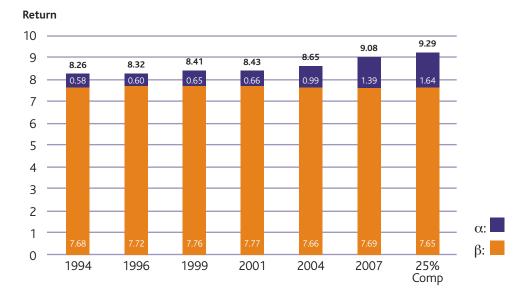
# Appendix 1

		1994		1996		1999		2001		March 2004		June 2007		25% Comp
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Equities														
UK Equities		58.5		59.5		57.5		56.0		37.0		34.0		30.0
Overseas		22.5		24.5		25.5		27.0		27.0		26.0		24.0
North America	6.2		6.5		7.0		8.0		8.0		6.0		5.5	
Japan & Far East	7.2		7.5		7.5		7.5		6.5		6.0		6.0	
Continental Europe	6.7		8.0		8.5		9.0		10.0		11.0		9.5	
Emerging markets	2.4		2.5		2.5		2.5		2.5		3.0		3.0	
Global equities		0.0		0.0		0.0		0.0		6.0		6.0		6.0
		81.0		84.0		83.0		83.0		70.0		66.0		60.0
Fixed Interest														
UK fixed interest		0.0		0.0		0.0		0.0		5.0		4.3		4.7
UK index-linked		8.0		8.0		8.0		8.0		5.0		4.4		4.7
Corporate bonds		0.0		0.0		0.0		0.0		5.0		4.3		4.6
Cash		1.0		1.0		1.0		1.0		0.0		1.0		1.0
		9.0		9.0		9.0		9.0		15.0		14.0		15.0
Complementary														
Private equity		2.0		2.0		3.0		3.0		5.0		6.0		7.0
Property		8.0		5.0		5.0		5.0		8.0		8.0		8.0
Overseas property		-		-		-		-		-		-		2.0
Currency		-		-		-		-	1			1.5		2.0
Emerging market de	ebt			-		-		-	- L			1.5		2.0
Infrastructure		-		-		-		-	ſ	2.0		1.5		2.0
Commodities		-		-		-		-				1.5		2.0
		10.0		7.0		8.0		8.0		15.0		20.0		25.0
		100%		100%		100%		100%		100%		100%		100%

# Trend Total Return Targets 1994 – 2007

# Appendix 2

### Total Return (alpha + beta)



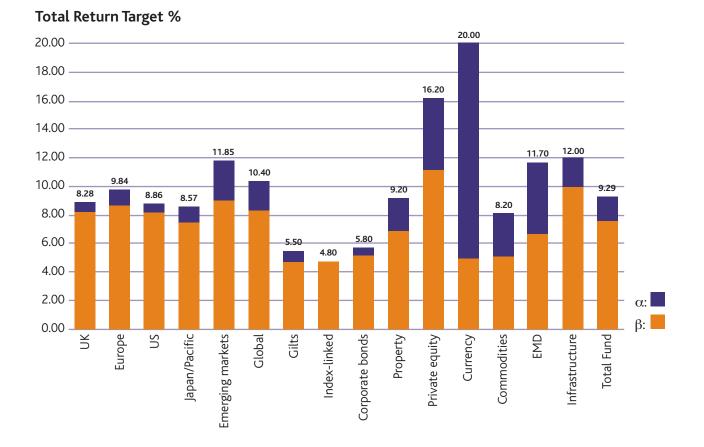


Appendix 3



## Alpha and Beta Targets Per Asset Class





	Index	Enhanced Index/	Div		
		In-House 'Core'	Active	Groups	Opportunities
Asset Class					
Equities					
UK	$\checkmark$	$\checkmark$	$\checkmark$	-	$\checkmark$
Global	-	-	-	$\checkmark$	$\checkmark$
North America	$\checkmark$	$\checkmark$	-	-	-
Europe	-	$\checkmark$	-	-	$\checkmark$
Japan	$\checkmark$	$\checkmark$	$\checkmark$	-	-
Pacific Basin	-	$\checkmark$	$\checkmark$	-	-
Emerging markets	-	-	-	$\checkmark$	-
Bonds					
Index-linked gilts	1	-	-	-	-
UK fixed interest	$\checkmark$	-	-	-	1
Corporate bonds UK	-	$\checkmark$	1	-	-
Cash					
Complementary					
Property	-	$\checkmark$	-	1	-
Private equity	-	-	1	1	1
EM debt	-	-	1	-	-
Active currency	-	-	-	1	-
Commodities	-	$\checkmark$	-	1	-
Infrastructure	-	-	-	<i>✓</i>	$\checkmark$

# Investment Management Structure

Index: passive management capturing index returns Definitions: Enhanced Index/In-house core: target lpha 0.5 to 1.0% (modest volatility)

Active (traditional): target  $\alpha$  2% + (higher volatility)

Diversified manager groups: combining different active manager styles to reduce overall volatility Opportunities (non-traditional): target  $\alpha$  2%+ in 'new' products, approaches and asset classes

# Appendix 5

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