CAE Meeting

Hedge Funds – what they are and how to invest

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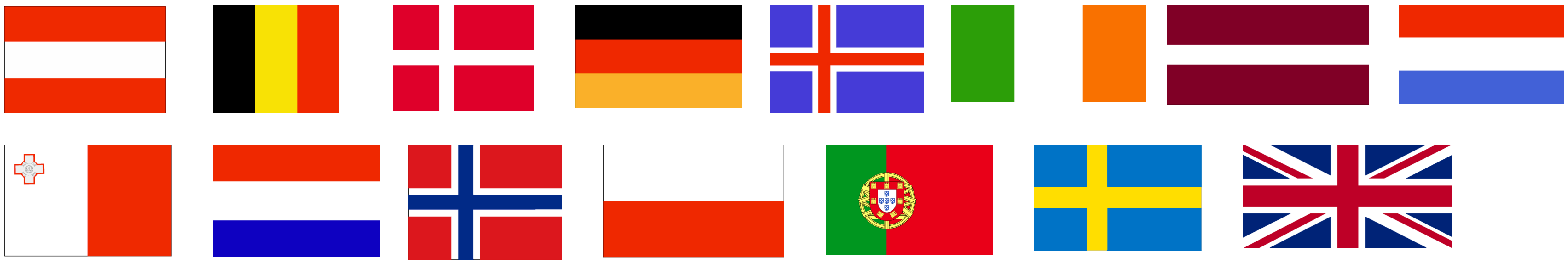
Agenda

- Use of hedge funds by european insurance companies
- The characteristics of hedge funds and the different strategies employed
- The potential benefits of investing in hedge funds
- The risks of investing in hedge funds
- Overview of implementation issues
- The fund of hedge fund market
- Summary

Use of hedge funds by European Insurance Companies

Admissibility of hedge funds as cover for technical provisions

Yes



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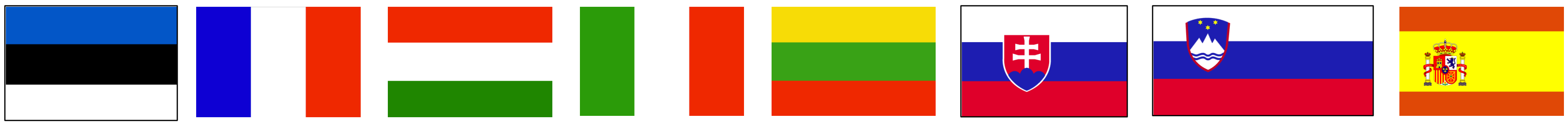

Source: CEIOPS, Reprot on the Possibility for Insurance Companies to use Hedge Funds, CEIOPS-DOC-06/05 Rev. I

The characteristics of hedge funds and the different strategies employed

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Definition

'A vehicle for the unrestrained exercise of investment management skill'

- No easy definition, since hedge funds follow many different investment strategies
- Therefore best to define a hedge fund by its characteristics rather than its investment process

Characteristics (1)

- Investment process involving “shorting”, leverage and derivatives
- Boutiques
- Limited capacity
- High net worth clients

Characteristics (2)

- Limited regulation
- High fees, with performance-related elements
- Limited liquidity
- Limited transparency

Size of the industry

Today:

- 8‘000 – 12‘000 funds
- Over 1 trillion USD under management
- 1990: about 300 hedge funds

Source: Hedge Fund Research

Long and short positions in practice

	Initial value	Up market	Down market
Long holding	100	108	96
Short holding	-100	-104	-90
Cash	100	102	102
Total	100	106	108

The different strategies

- Each strategy has different characteristics
- Unfortunately no universally accepted definitions
- Four broad categories can be defined:
  - **Event-driven**
  - **Long-short equity**
  - **Relative value**
  - **Trading strategies**
- Some ‘multi-strategy’ managers follow several strategies
- As market conditions change strategies fall out of favour and new strategies emerge

Categorizing Hedge Fund Strategies

Directional
(market driven)

Non- Directional
(non-market driven)

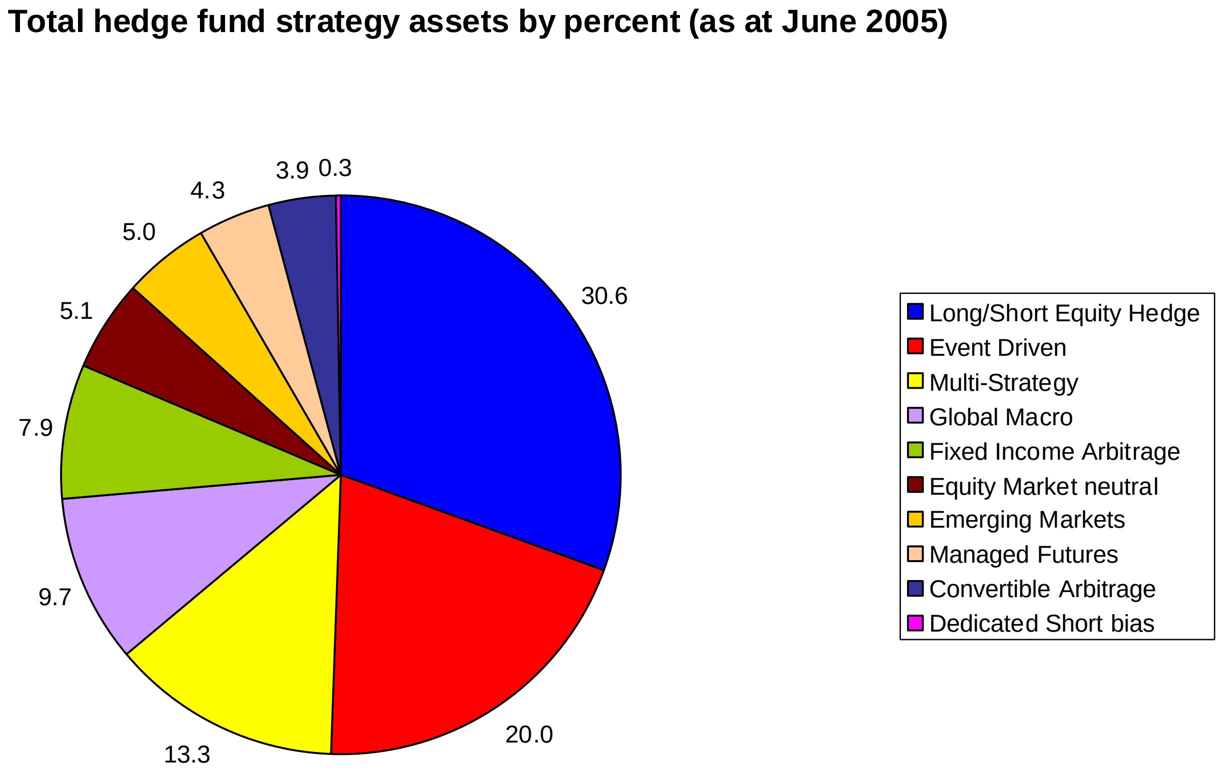
Equity
- Long/Short
- Domestic
- International
- Emerging Markets
- Sector Specialists
- Dedicated Short Sellers

Event Driven
- Distressed
- Merger Arbitrage
- Strategic/Activist
- Trade Claims

Relative Value
- Fixed Income Arbitrage
- Capital Structure Arb
- Convertible Arbitrage
- Equity Market Neutral
- Pairs Trading
- Commodity Arbitrage

Other
- Macro
- Option Volatility Trading
- Catastrophe Bonds

Composition of hedge fund universe



Source: Tremont Asset Flows Report June 2005

Hedge Fund index returns (US$) - period ending December 31, 2005

Highest Return ↕ Lowest Return

1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Global Macro 30.67%	Global Macro 25.58%	Global Macro 37.11%	Managed Futures 20.64%	Long/Short Equity 47.23%	Convertible Arbitrage 25.64%	Distressed 20.01%	Managed Futures 18.33%	Distressed 25.12%	Distressed 15.62%	Distressed 11.74%
Distressed 26.12%	Distressed 25.55%	Fund of Funds 25.94%	Long/Short Equity 17.18%	Fund of Funds 23.43%	Equity Market Neutral 14.99%	Global Macro 18.38%	Global Macro 14.66%	Global Macro 17.99%	Long/Short Equity 11.56%	Long/Short Equity 9.68%
Long/Short Equity 23.03%	Fund of Funds 22.22%	Long/Short Equity 21.46%	Equity Market Neutral 13.31%	Distressed 22.18%	Risk Arbitrage 14.69%	Convertible Arbitrage 14.58%	Equity Market Neutral 7.42%	Long/Short Equity 17.27%	Fund of Funds 9.64%	Global Macro 9.25%
Fund of Funds 21.69%	Convertible Arbitrage 17.87%	Distressed 20.73%	Risk Arbitrage 5.58%	Convertible Arbitrage 16.04%	Global Macro 11.67%	Equity Market Neutral 9.31%	Fixed Income Arbitrage 5.75%	Fund of Funds 15.44%	Global Macro 8.49%	Fund of Funds 7.61%
Convertible Arbitrage 16.57%	Long/Short Equity 17.12%	Equity Market Neutral 14.83%	Fund of Funds -0.36%	Equity Market Neutral 15.33%	Fixed Income Arbitrage 6.29%	Fixed Income Arbitrage 8.04%	Convertible Arbitrage 4.05%	Managed Futures 14.13%	Fixed Income Arbitrage 6.86%	Equity Market Neutral 6.14%
Fixed Income Arbitrage 12.50%	Equity Market Neutral 16.60%	Convertible Arbitrage 14.48%	Distressed -1.68%	Risk Arbitrage 13.23%	Fund of Funds 4.85%	Risk Arbitrage 5.68%	Fund of Funds 3.04%	Convertible Arbitrage 12.90%	Equity Market Neutral 6.48%	Risk Arbitrage 3.08%
Risk Arbitrage 11.90%	Fixed Income Arbitrage 15.93%	Risk Arbitrage 9.84%	Global Macro -3.64%	Fixed Income Arbitrage 12.11%	Managed Futures 4.24%	Fund of Funds 4.42%	Distressed -0.69%	Risk Arbitrage 8.98%	Managed Futures 5.97%	Fixed Income Arbitrage 0.63%
Equity Market Neutral 11.04%	Risk Arbitrage 13.81%	Fixed Income Arbitrage 9.34%	Convertible Arbitrage -4.41%	Global Macro 5.81%	Long/Short Equity 2.08%	Managed Futures 1.90%	Long/Short Equity -1.60%	Fixed Income Arbitrage 7.97%	Risk Arbitrage 5.45%	Managed Futures -0.11%
Managed Futures -7.10%	Managed Futures 11.97%	Managed Futures 3.12%	Fixed Income Arbitrage -8.16%	Managed Futures -4.69%	Distressed 1.95%	Long/Short Equity -3.65%	Risk Arbitrage -3.46%	Equity Market Neutral 7.07%	Convertible Arbitrage 1.98%	Convertible Arbitrage -2.55%

Indices used: CSFB/Tremont Hedge Fund Index

The potential benefits of investing in hedge funds

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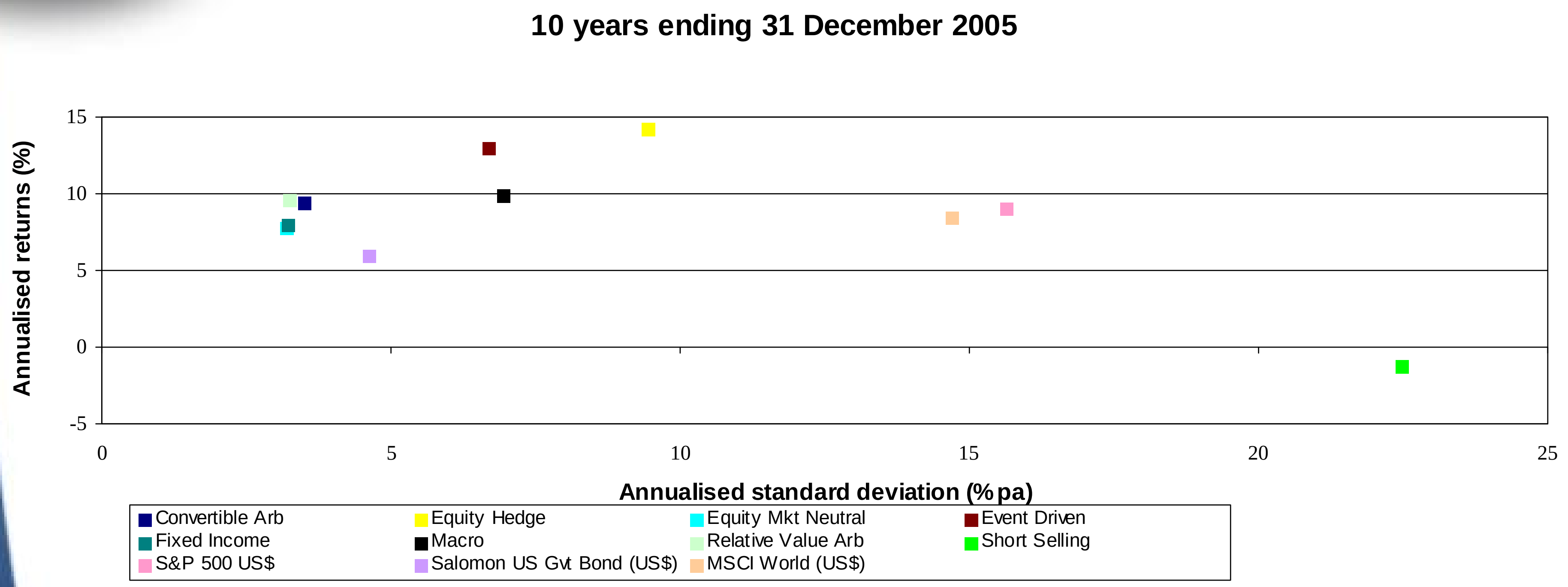
Potential benefits of investment (1)
Analysis of historical hedge fund performance



Source: Hedge Fund Research, Inc.

Strong historical returns

Access to skilled managers

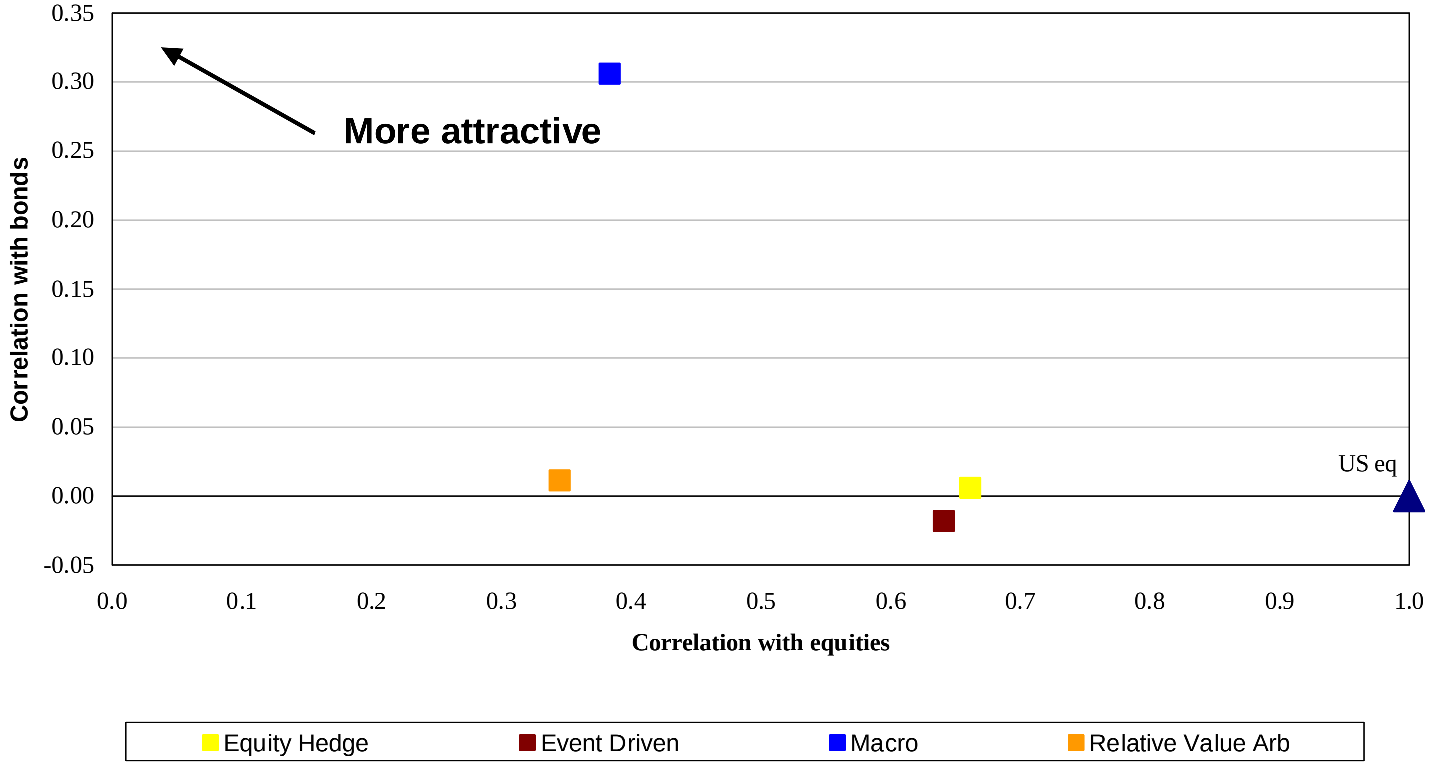
- Accessing strong investment management skill which is free to operate in a flexible way is the key argument for investing in hedge funds
- The returns generated by a fund are by the alpha or outperformance, that the manager can produce
- In simple terms, without skill the return from a hedge fund looks something like:

  cash + a proportion of equity and bond market returns

- This is not worth paying high fees for
- It is arguable whether the ‘average’ hedge fund can generate “alpha”, although we believe there are reasons this might be the case
- However, the wide range of returns in each strategy suggest that the top managers are highly skilled

Potential benefits of investment (2)
Analysis of historical correlations

Strategy correlations with equities and bonds (Jan 1990 to Dec 2005)



Source: Hedge Fund Research, Inc, S&P, Salomon Brothers

Strong diversification benefits, which arise from the hedge fund style of management, which reduces market exposure

The risks of investing in hedge funds

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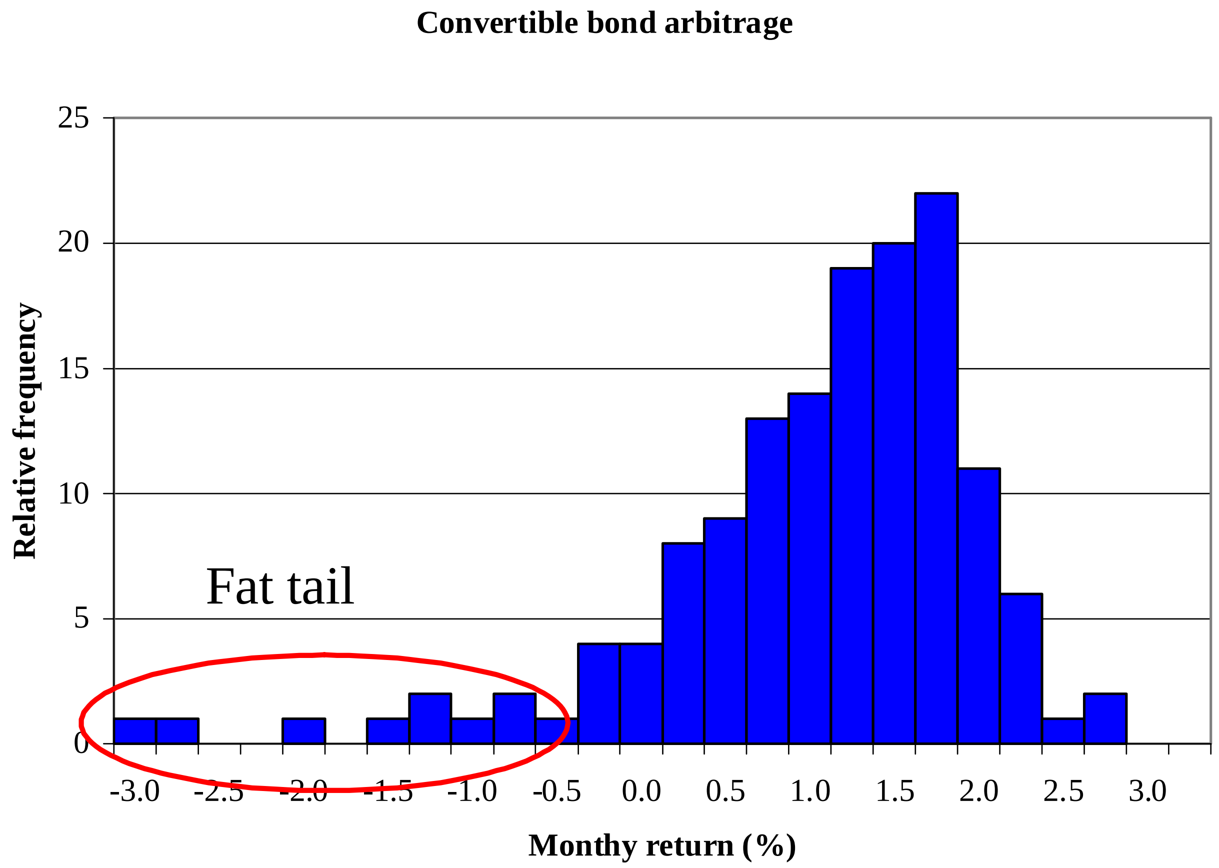
Risks of investing in hedge funds

- Return disappointment
  - Closure of good managers to new investors
  - Dilution of talent
  - Good managers increasing fees
- Event risk
  - Key man risk
  - Operational risk
  - Risk of extreme market movements
  - Liquidity risk
  - Prime broker risk
  - Fraud
- Regret risk

Understatement of risk



Source: Hedge Fund Research, Inc.

Overview of implementation issues

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How to invest in hedge funds

- Could invest in a single hedge fund, for example a long-short equity fund
- But several drawbacks:
  - More volatile returns
  - Event risk
  - Manager selection risk
  - Strategy allocation risk
- These suggest that a diversified portfolio of hedge funds is more attractive than a single fund
- Question then becomes who should pick this portfolio of managers – the insurance company or a specialist fund of hedge funds
- We would suggest that the governance challenges of the insurance company constructing their own portfolio make outsourcing to a fund of funds the best option (despite the extra fees)

How many funds of funds

One fund of fund manager

- ✓ Lower governance burden
- ✓ Insurance company does not have to set a strategy allocation
- ✓ Potential for gains from tactical strategy allocation
- ✓ Easily implementable
- ✓ Lower fees
- ✘ Nature of asset class exposes insurance companies to manager risk
- ✘ Lower diversification benefits

Multiple fund of fund managers

- ✓ Reduces manager risk
- ✓ Returns should be less volatile
- ✓ Access to more capacity
- ✓ Potential to appoint "specialist" managers eg one for long-short equity, one for arbitrage etc
- ✘ Higher cost
- ✘ High governance burden
- ✘ Commonality between portfolios may reduce diversification benefits

Parameters to be set

- **Investment vehicle:** pooled or segregated
- **Risk/return characteristics**: performance target, risk tolerance, (correlation with equities)
- **Strategy allocation**: this will be influenced by the risk/return characteristics
- **Liquidity requirements**
- **Currency hedging**: most hedge fund investments are US dollar denominated, (although managers will offer hedged other currency share classes, if required)
- **Risk controls:** eg maximum allocations to managers and strategies

Choice of investment vehicle

Pooled

- ✓ Gain access to existing (possibly closed) managers and get immediate exposure
- ✓ Should be quicker to invest (less paperwork)
- ✘ Cannot specify investment restrictions/objectives
- ✘ Possibly higher cost
- ✘ Can be disadvantaged by actions of other investors

Segregated

- ✓ The insurance company can specify exactly what it requires
- ✓ Should not be affected by investment restrictions
- ✘ Considerably more paperwork involved in implementation
- ✘ Portfolio may take a while to build, and may not include some closed managers
- ✘ Some managers have little experience of segregated accounts
- ✘ Need to ensure that Scheme has limited liability

The fund of hedge fund market

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Funds of hedge funds

- Around 250 funds of hedge funds in existence
- Invest in a number of managers across a range of strategies
- Conduct research and due diligence into a manager's business, people and process
- Account for around 25% of industry assets
- Predominantly US based
- Add additional layer of fees eg 1% and 10%
- Larger than hedge funds eg $250m to $10 billion in assets
- Still ‘key man risk’
- Likely consolidation

A typical fund of hedge fund investment process

- Process is conceptually little different to that followed by a traditional balanced manager
- Fund of funds manager must allocate to different strategies (equities, bonds, cash of traditional manager)
- And then must decide on individual hedge funds (individual stocks of a traditional manager)

The insurance company needs to be convinced that the manager has a sound process at each stage with clear competitive advantage

Summary

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Summary

- Hedge funds follow many different investment strategies, but the common ingredient is that their returns are highly dependent on manager skill
- The historical risk and return numbers are attractive, but there are grounds for believing that these will not continue for the 'average' hedge funds. Successful investment in hedge funds therefore relies on being able to access and invest with the most skilled managers
- There are risks of investing in a small number of hedge funds
- We recommend investment in hedge funds is implemented through a diversified portfolio of funds managed by a fund of hedge funds manager
- There are various implementation issues that need to be considered when appointing a fund of funds manager

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