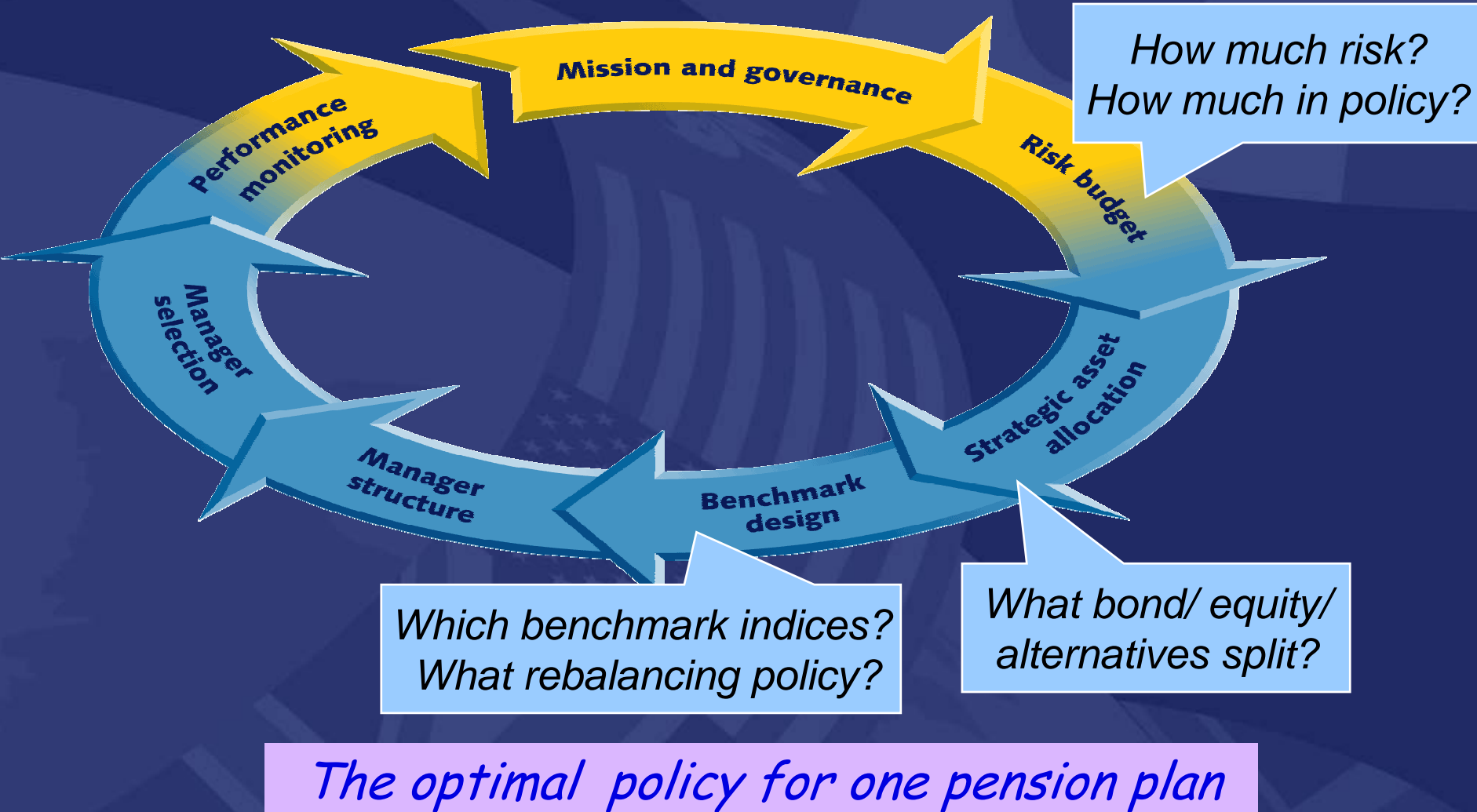


# IACA Biennial Conference Global Asset Liability Modelling

Roger Urwin, June 25 2002



# The focus of this talk (1): ALM across global markets

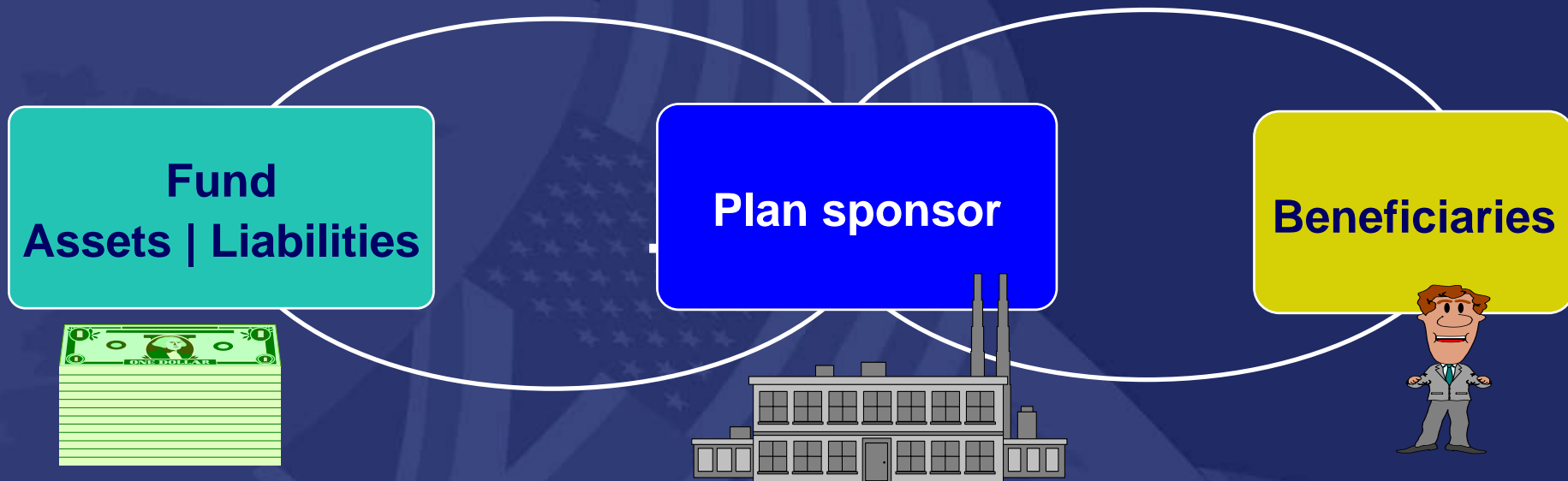


# The focus of this talk (2): the pension fund mission

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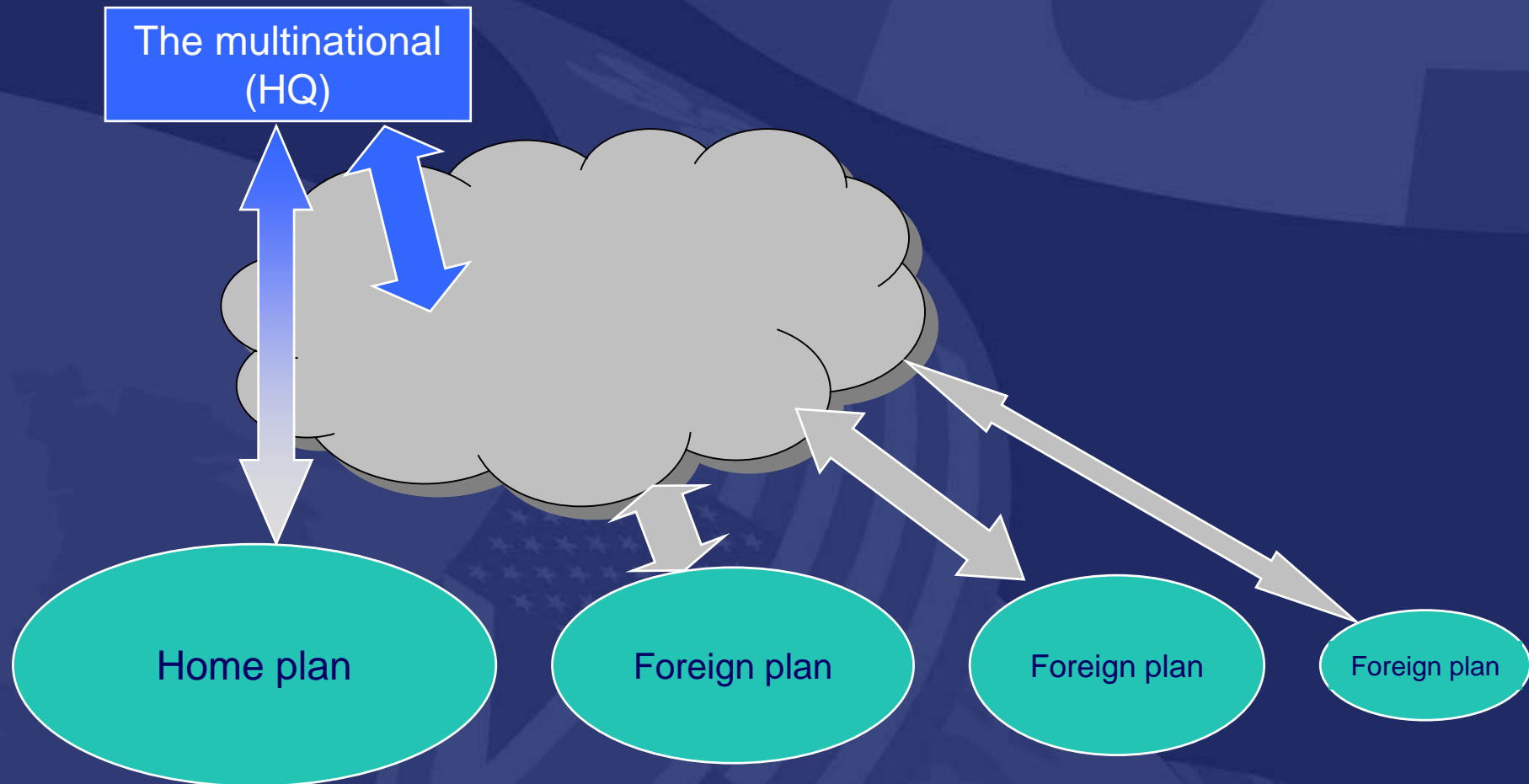
The mission is jointly agreed between the company, fiduciaries and the beneficiaries (the stakeholders)

In a multinational's case, there are multiple plans and multiple missions



# The focus of this talk (3): a global policy for multinationals

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*'Bottom up' or 'top down'*

# Pension accounting on its travels

- Measures are moving more 'on-market' over time

Off-market		On-market		
Book values/ Fixed discount rates	Market values/ Fixed but changing discount rates	FAS87 (US)	IAS19	FRS17 (UK)

*Under on-market measures, the equity risk premium looks less attractive*

# Best practice asset allocation for a local plan

- Risk/ return measures: ongoing funding, contributions, accounting
- Risk tolerance: trustee board view, local company
- ALM process
  - what do the liabilities look like
  - (local) asset classes
  - (local) assumptions
- Decision process
  - local (generally trustee board) governance



# Best practice asset allocation for a multinational

- Risk/ return measures - common
- Risk tolerance
  - the sponsor's perspective, total enterprise
- ALM process
  - common asset classes as building blocks
  - common (and globally consistent) assumptions
- Decision process
  - an 'in parallel' approach, lead from the center?



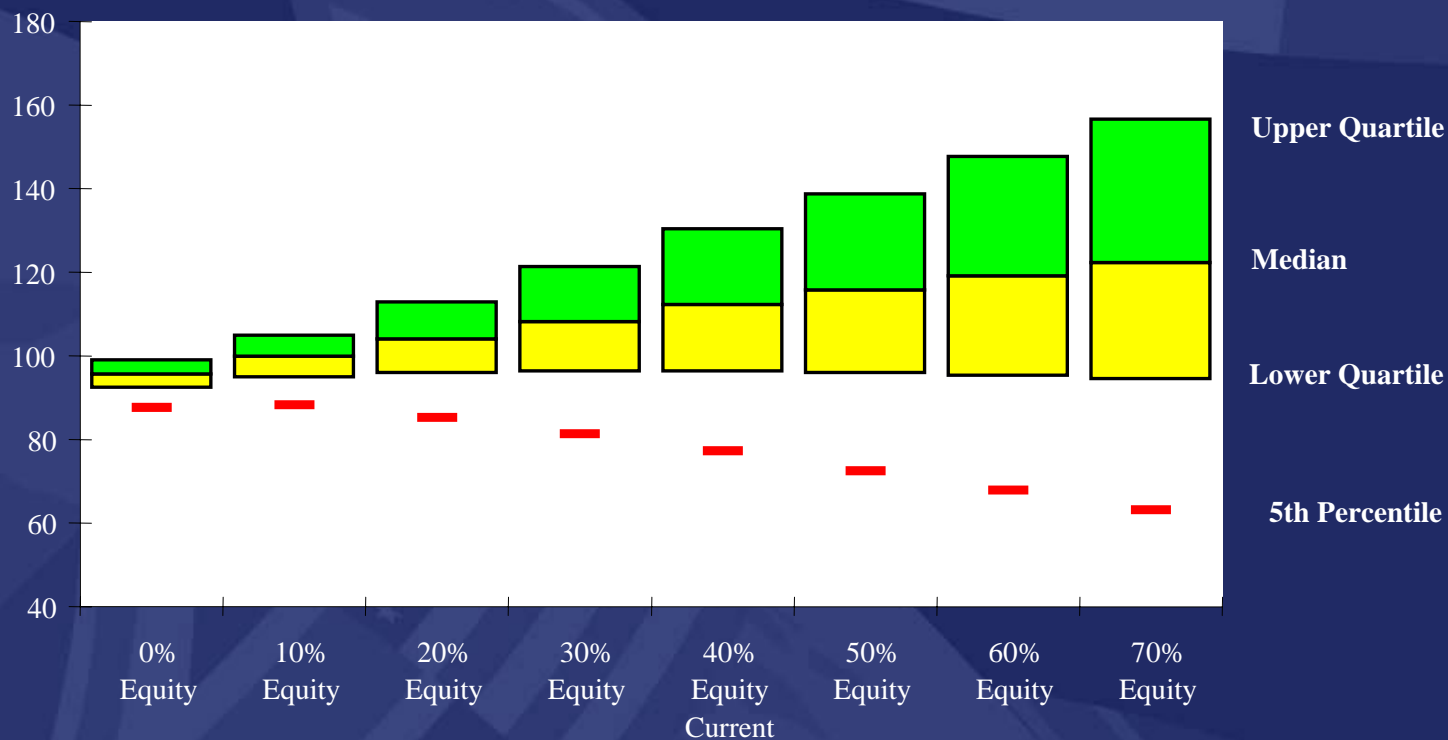
# Local ALM

## Example of equity/ bond split

In this example:

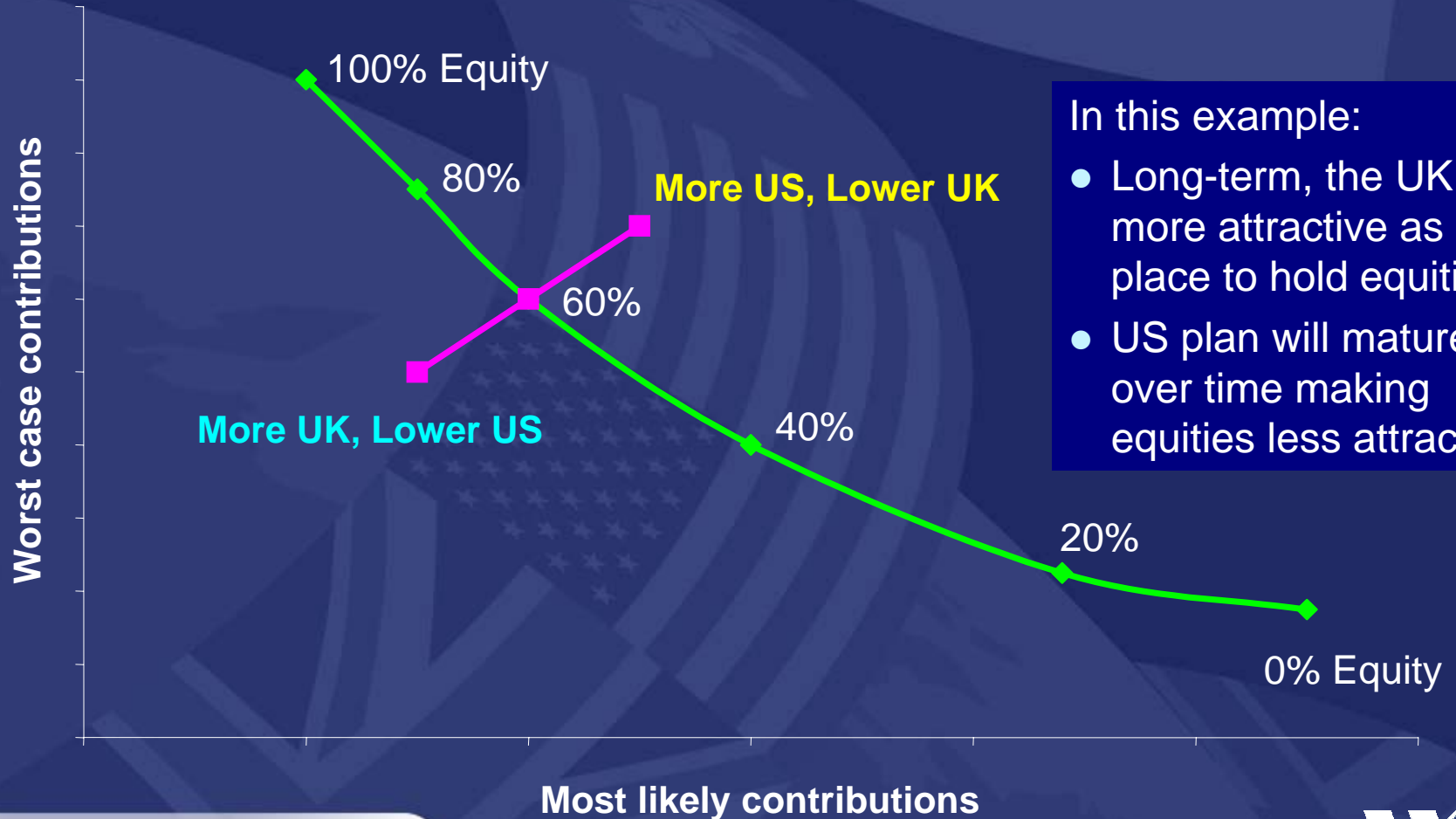
- Equity risk leads to a trade-off decision
- Downside risk measures make low bond allocations less attractive

Ongoing funding level after 10 years



# Global ALM example of risk exchange

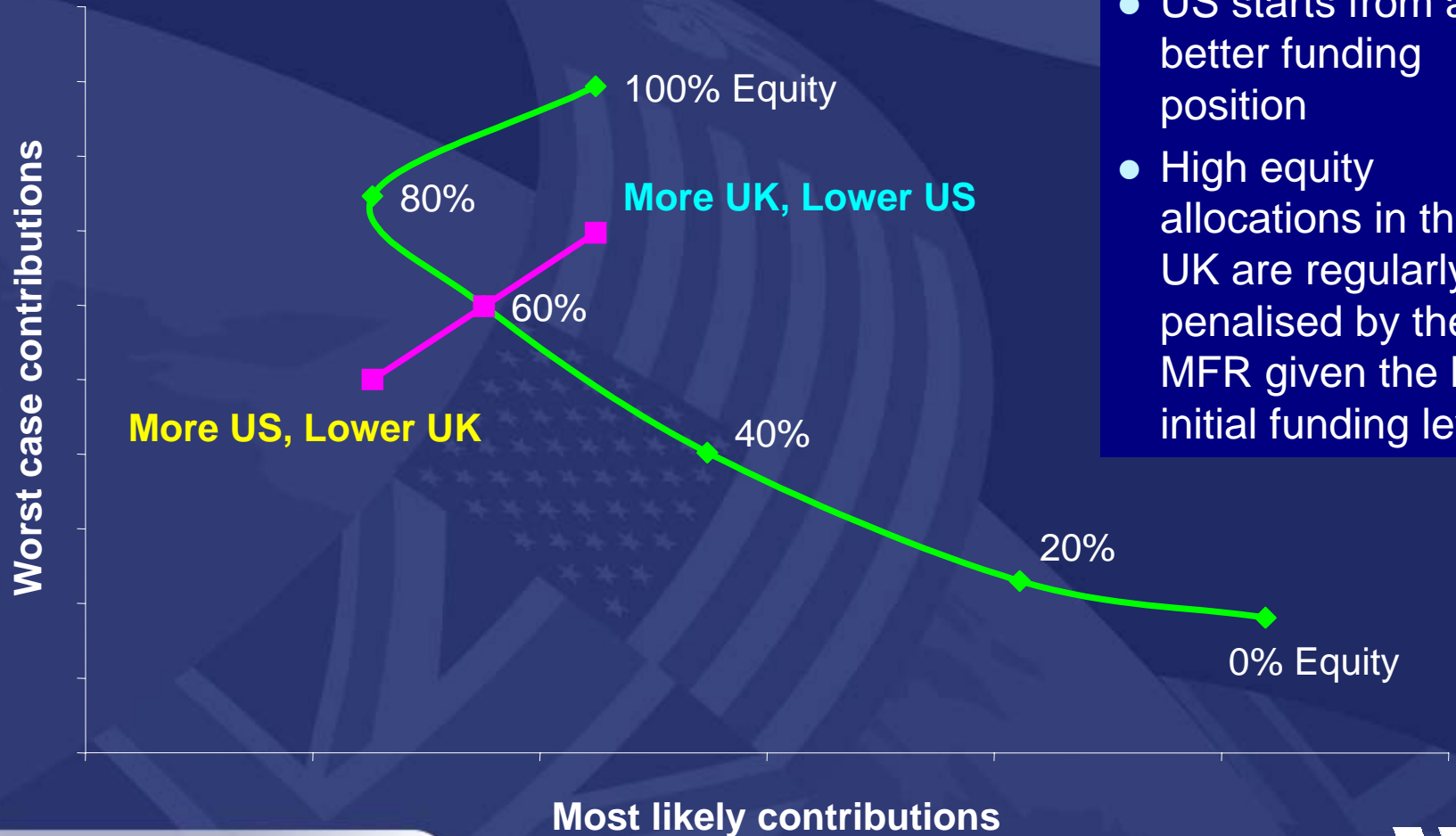
Long-term cost - all plans combined



# Global ALM

## example of risk exchange

Mid-term cost - all plans combined



- US starts from a better funding position
- High equity allocations in the UK are regularly penalised by the MFR given the low initial funding level

# ALM on its travels

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*Considerable variation in practice*

# Setting the total plan risk budget

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- Contingent on the relationship of the pension plans to the sponsoring employer

## **Covenant**

the employer/sponsor covenant to meet future funding

stronger  more risk

---

## **Maturity**

the term of the liabilities and the period of future funding

longer  more risk

---

## **Surplus**

the current funding cushion: current assets minus liabilities

larger  more risk

---

## **Risk beliefs**

the subjective view that the fiduciaries have about risk and return

stronger  more risk

# Setting the total plan risk budget

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- Look by plan, and estimate impact of each on consolidated measures
- Consider degree of correlation between risks in different plans
- Work out what is currently the total plan risk
- Consider possible shifts in total plan risk exposure
- Consider possible risk exchanges
- Consider possible risk budget improvements



# Changes to the total risk budget

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## Principle

- ***Risk tolerance***  
Multinationals should plan their total risk exposures more carefully
- ***Risk exchange***  
Risk employed to exploit the local plan's characteristics (regulation, maturity, surplus, governance)
- ***Risk budget improvement***  
Better diversification, better use of governance

## Impact

'potentially significant'

'significant'

'very significant'



# Changes to the total risk budget

---

- Option A - step-wise regression (allocate risk to plan, guide them in spending)
  - 1. Across plans
  - 2. In policy space
  - 3. In manager space
- Option B - optimisation (spend risk in aggregate efficient manner, tell plan what its arrangements should look like)
  - 1. In policy space
  - 2. In manager space
  - 3. Across plans

*The art of the possible*

*Theoretically elegant  
- in our dreams*

# The financial outlook is tough

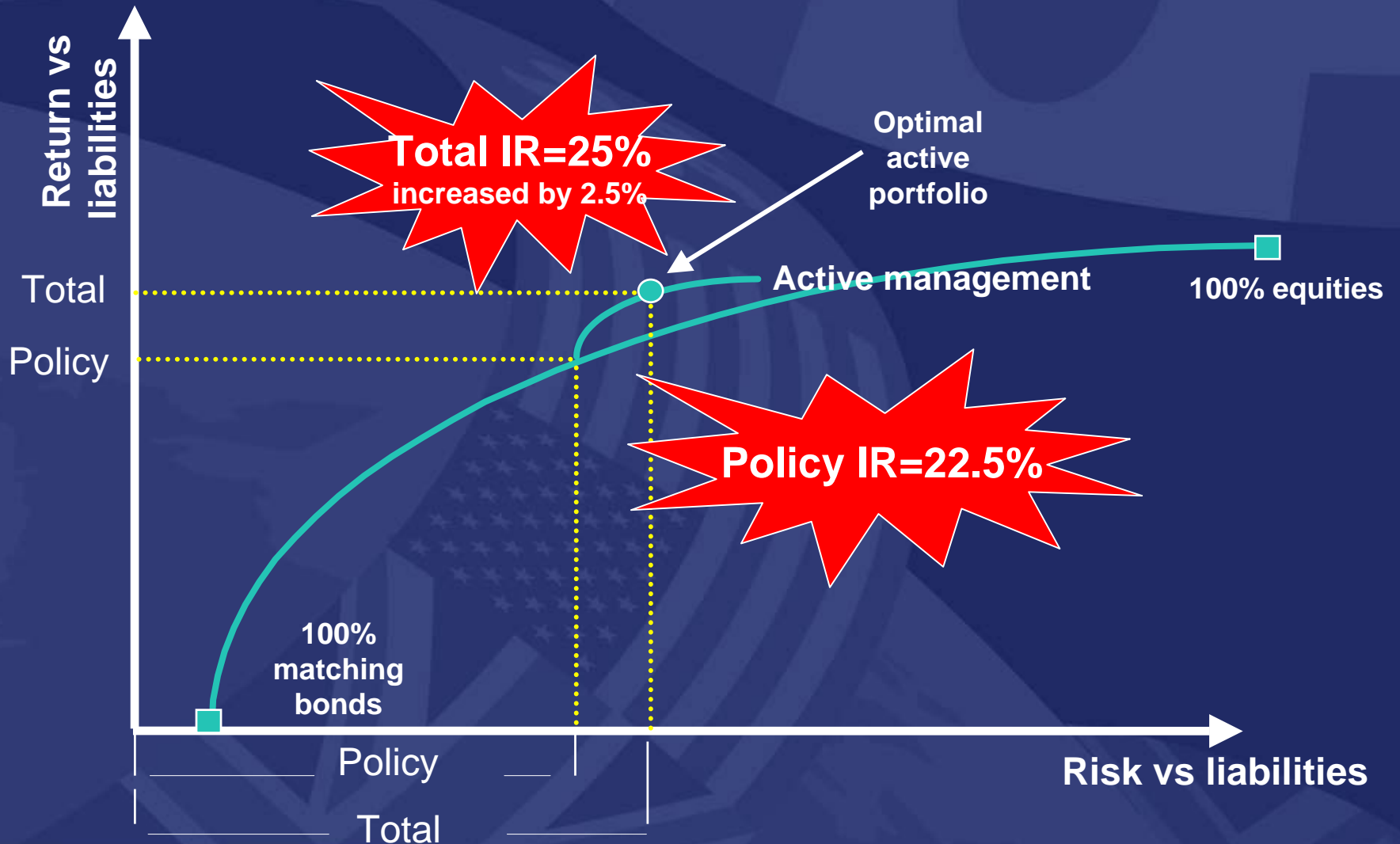
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- We have operated in a double digit return era but a single digit return era is very likely to lie ahead with current doubts about the equity risk premium going forward
- In this world, other active opportunities will look attractive
  - alternative assets seem attractive but they rely heavily on capacity and alternative strategies require large governance budgets
  - hedge funds seem particularly attractive but do they have the capacity going forward to deal with institutional demand

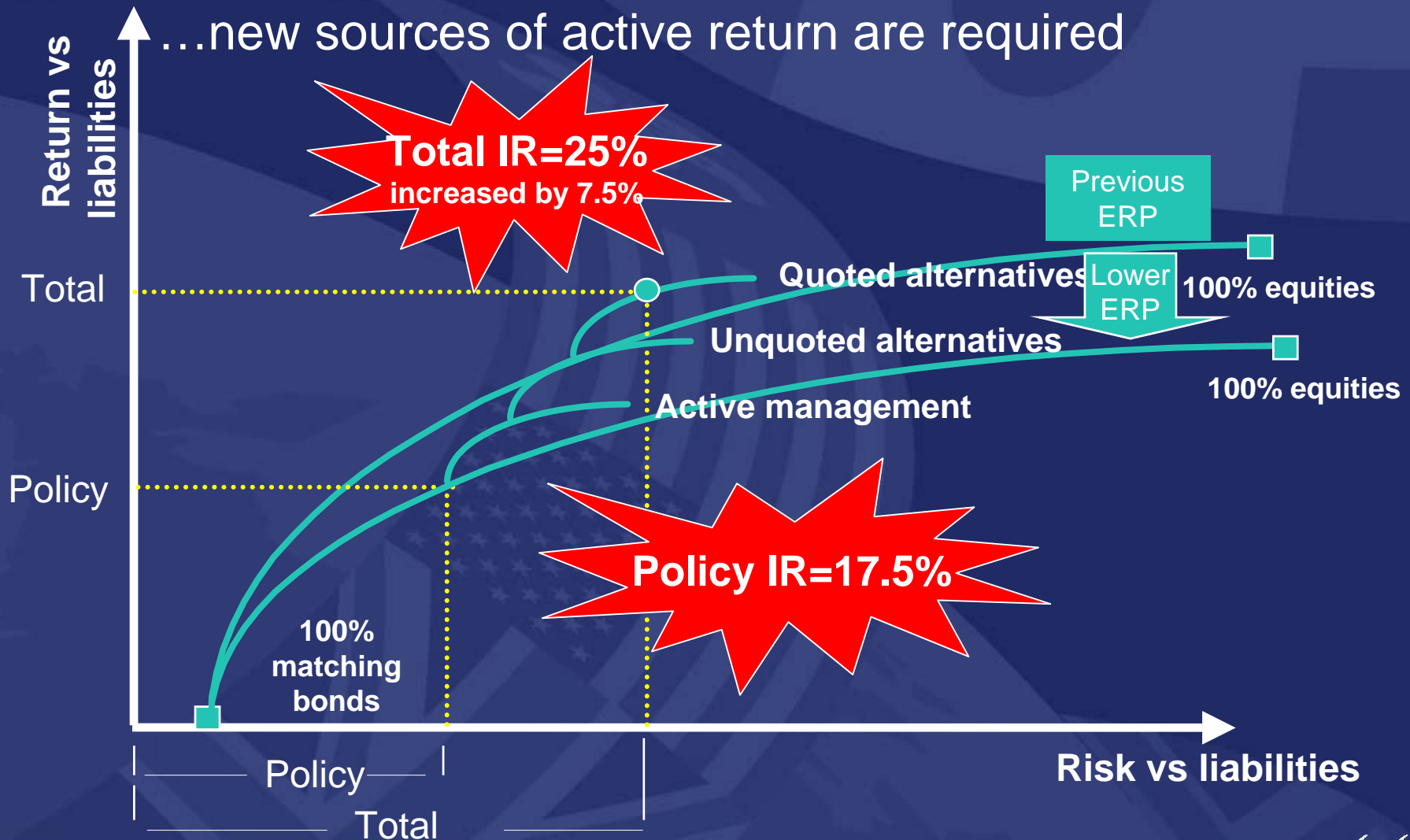
*A case of unlearning our recent experiences*



# Risk budgeting 1990s style



# In a lower equity risk premium world...

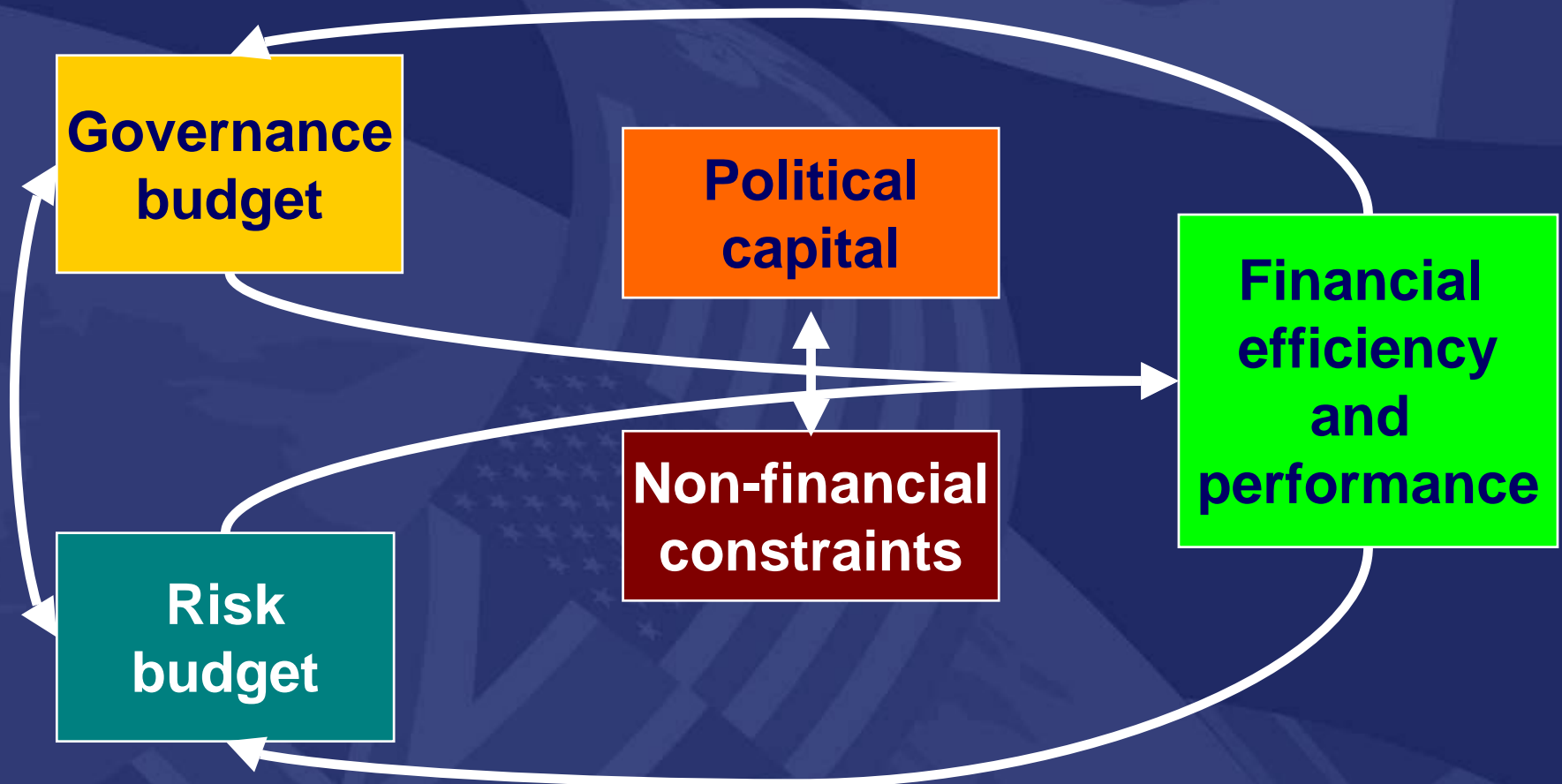


*These are goals!*



# ALM helps to make better connections

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# Some key conclusions

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- DB investment should be heading over time to more in matching bonds because of:
  - market value accounting
  - corporate focus, shareholder perspective
- DC investing should be heading over time to more in equities:
  - human wealth accounting
  - increased sophistication of buyers and providers
  - lifecycle design
- ALM is the principal tool decision-makers require to decide these allocations



# Workshop topics



# The asset model and assumptions

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- Historic performance is only a guide
- Use forward looking assumptions
  - current valuations
  - capital market line: equity risk premium
  - capital market line: illiquidity premium
- Identify *longer term* risk
- Consider the range of good assumptions

# Part 1: choice of global assumptions

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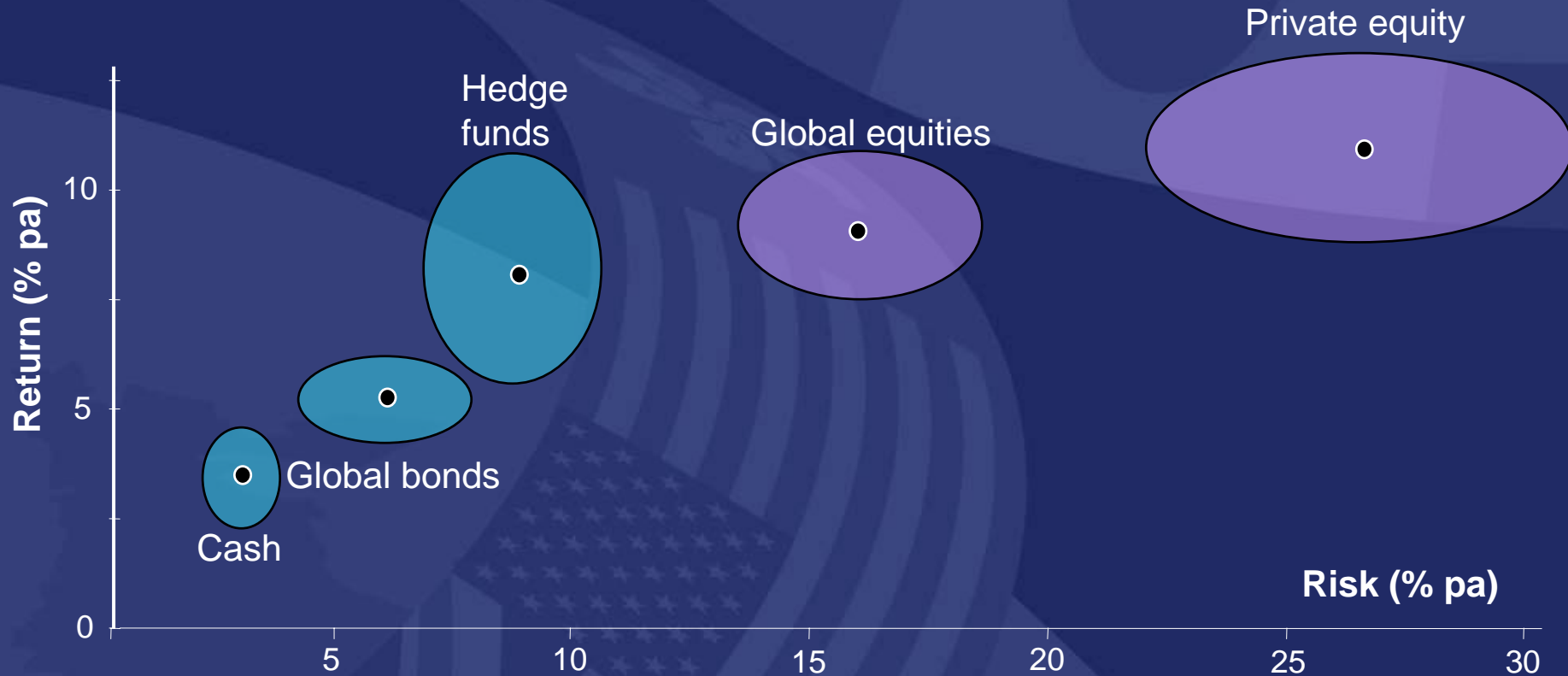
Arithmetic  
mean (%pa)

- Global long bonds 5\*
- Global equities ?
- - North America ?
  - Europe ?
  - Japan ?
- Alternatives ?
  - Private equity ?
  - Hedge funds ?

*Complete the assumptions*

# The WW asset model and assumptions

## Ten year figures



Source: Watson Wyatt Asset Model. Notes available on request

*..1.history...2.current valuations.. 3.forward looking..*

## 2. Possible global changes in policy

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### 1. Lengthen bond duration

align the duration of bonds to be closer to the liabilities of each local plan

### 2. Reduce home bias

increase the foreign equity content, reduce the domestic equity content to make allocations closer to world cap

### 3. Adjust strategic mix of foreign equities

move to more optimal structure of regional allocations: US, Europe, Japan, Other Pacific Basin, Emerging Mkts

### 4. Make initial allocation to private equity

make small initial allocation to private equity through fund of funds

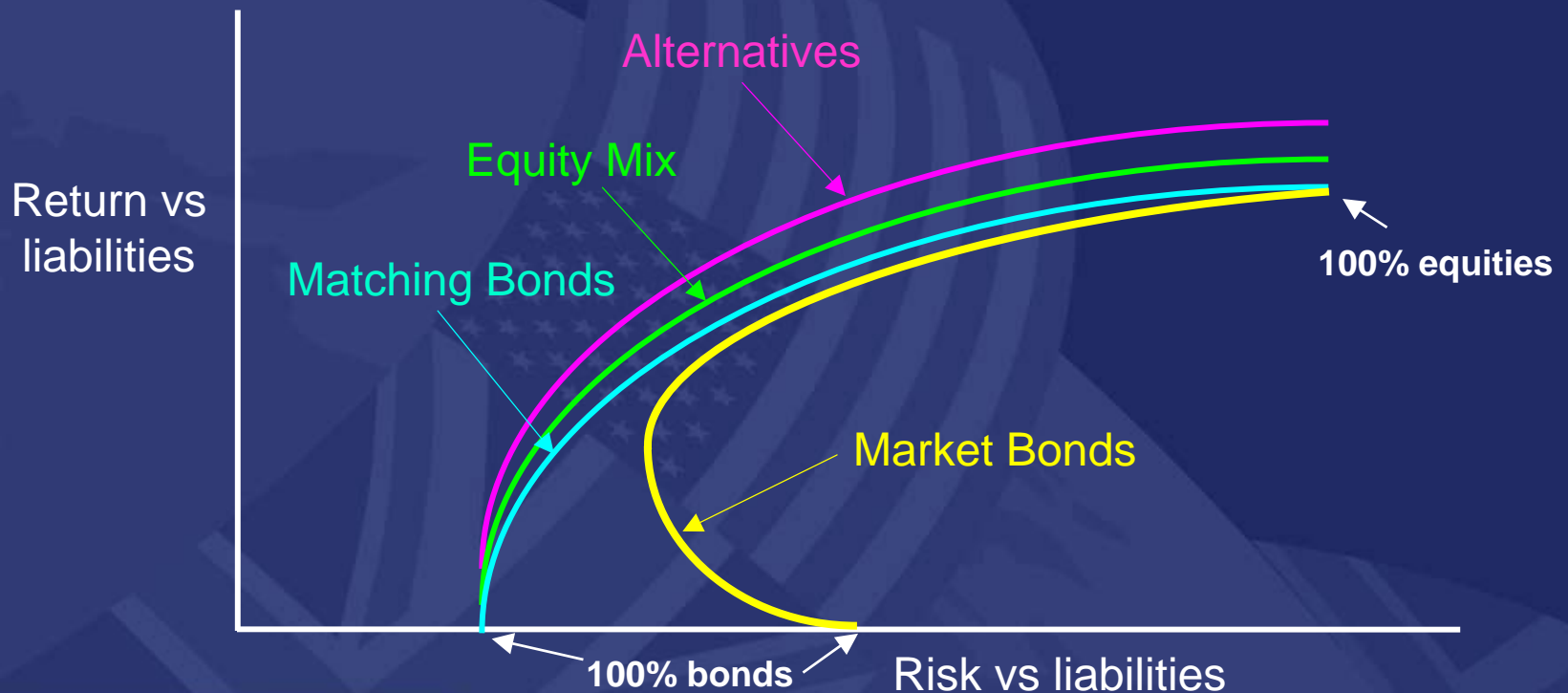
### 5. Make initial allocation to hedge funds

make small initial allocation to fund of hedge funds in broadly based strategies

*contribution to the total risk budget?*

# Best practice asset allocation

- Manage the bonds to match liabilities
- Increase the global mix
- Increase the alternatives exposure



## Part 3: ALM business challenges

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- How can consulting firms achieve professional and commercial success in ALMs?

