Currency Management -

Do hedged international benchmarks make sense if Sterling is secularly weak ?

Neil Record

27 June 2000

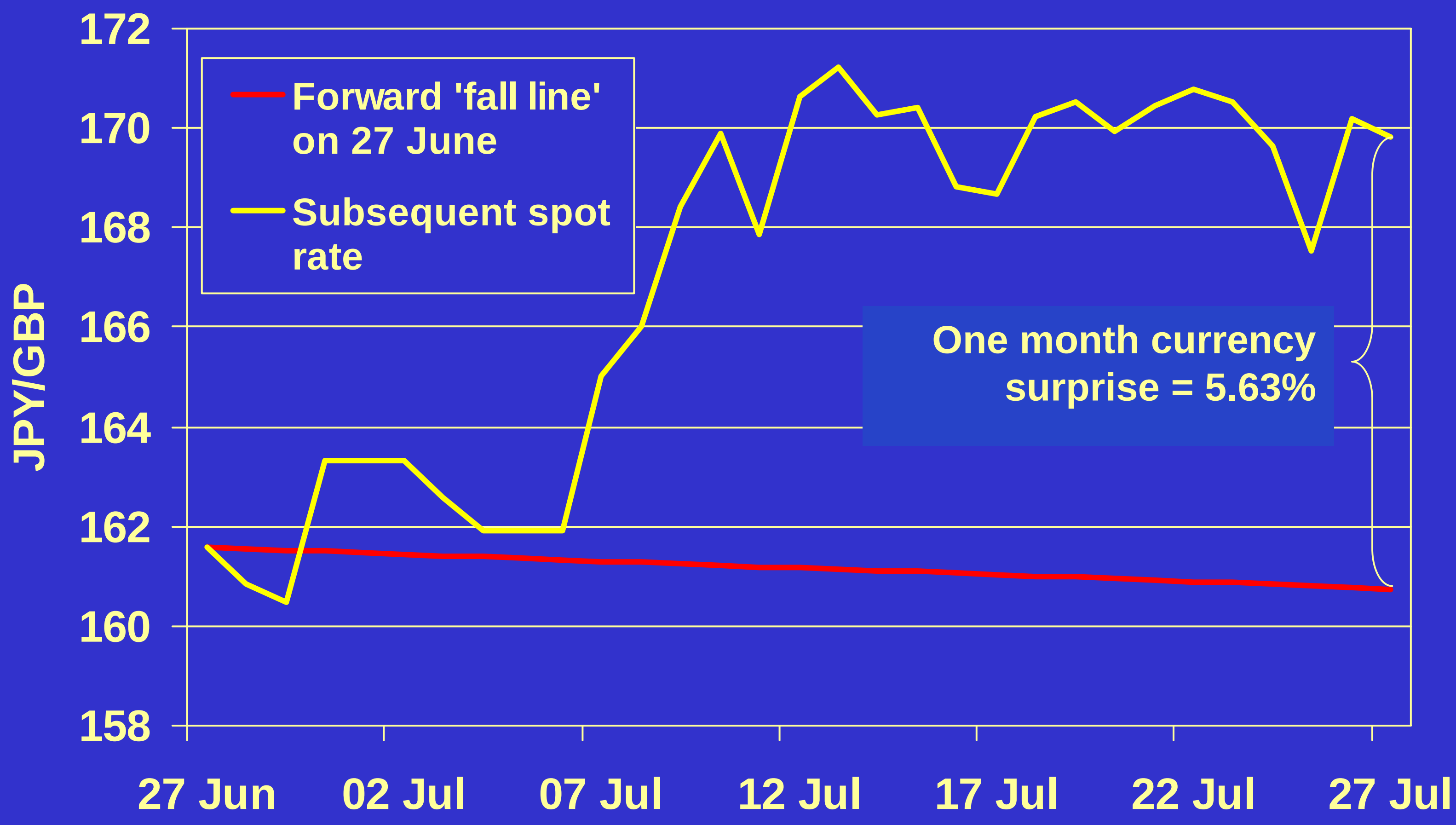
Defining currency risk

- Unhedged international assets bring two divisible risks:
  - The hedged asset
  - Currency surprise
- It can accept (or reject) either risk (and associated returns) independently
- It cannot 'split out' currency any other way
- AIMR's 1998 Benchmark paper has the best methodology description

Currency surprise

- Currency surprise is the difference between a forward rate and the subsequent spot at maturity
- It is a measure of the ‘unexpected’ spot movement
- Currency surprise differs from the spot movement by the amount of the currency interest rate differential
- Currency surprise is hedgeable

Currency surprise example



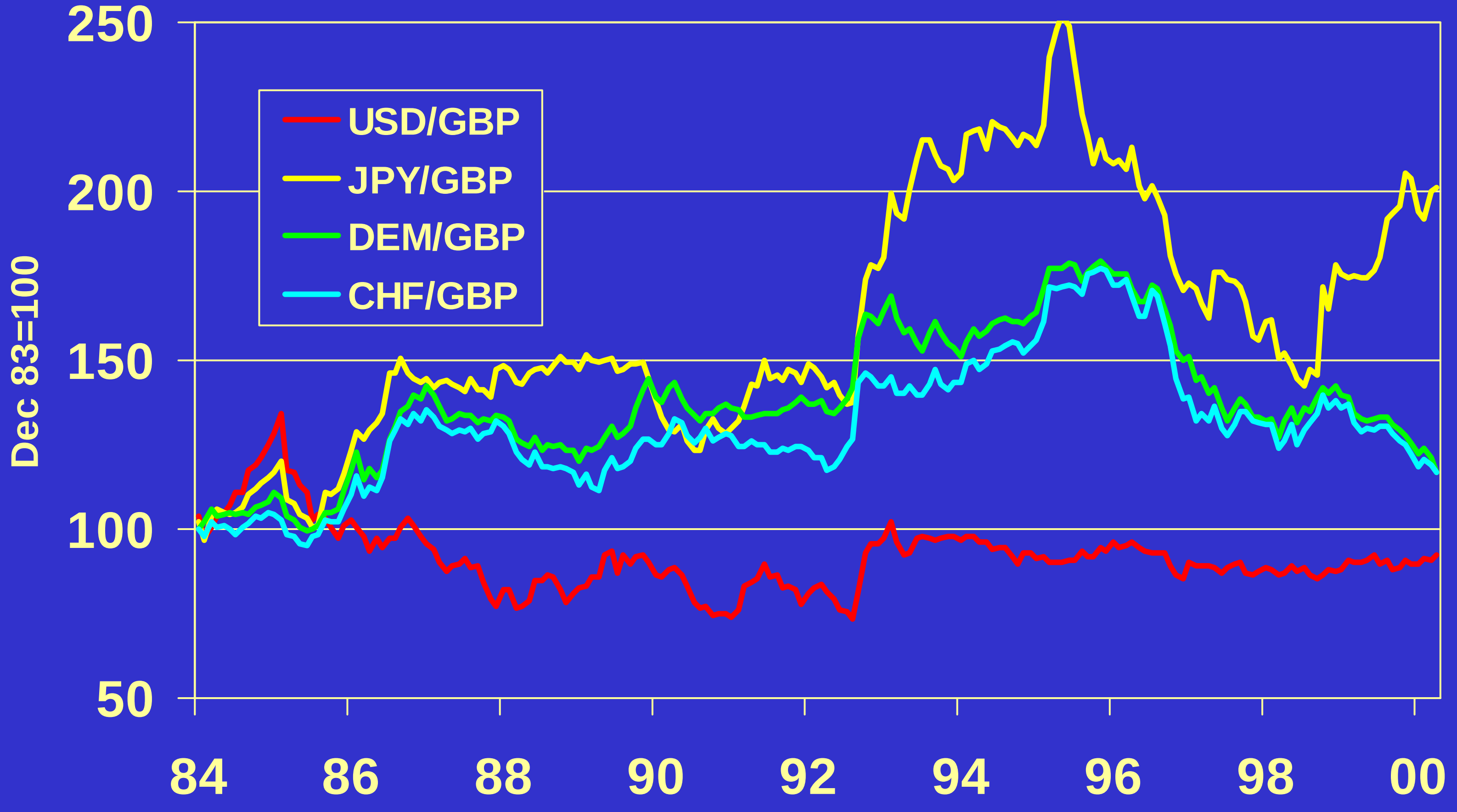
Currency surprise over time

- Currency surprise can be calculated as a series of percentage returns over time
- Expressed for the *denominator* of the rate:

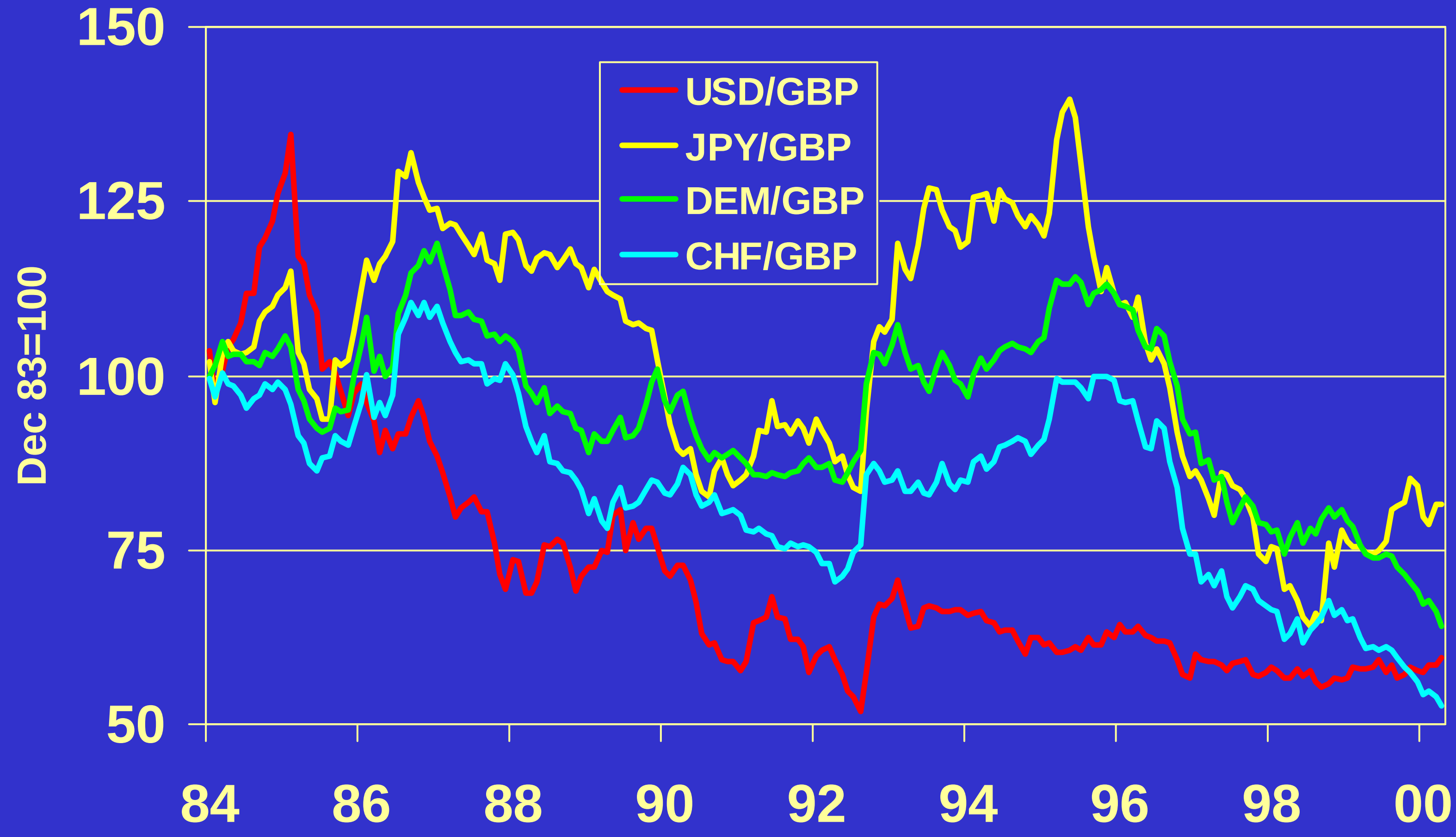
$$\textbf{Currency surprise \%} = \frac{\textbf{Spot rate (t) - Forward Rate (t-1)}}{\textbf{Spot rate (t-1)}}$$

- Monthly frequency (and forwards) is a common convention
- Geometrically linked surprises can be graphed

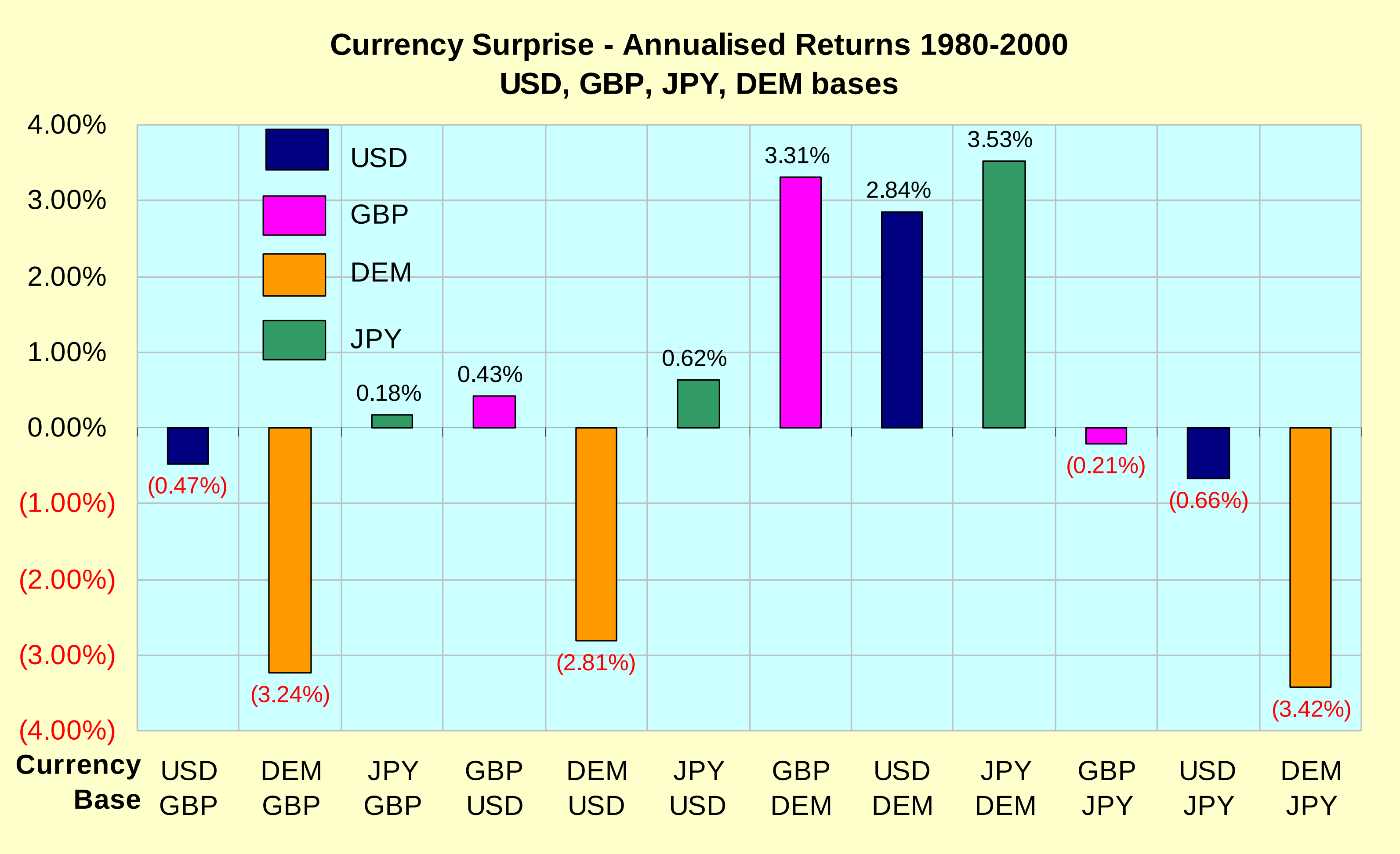
Spot foreign currencies



Foreign currencies' surprise



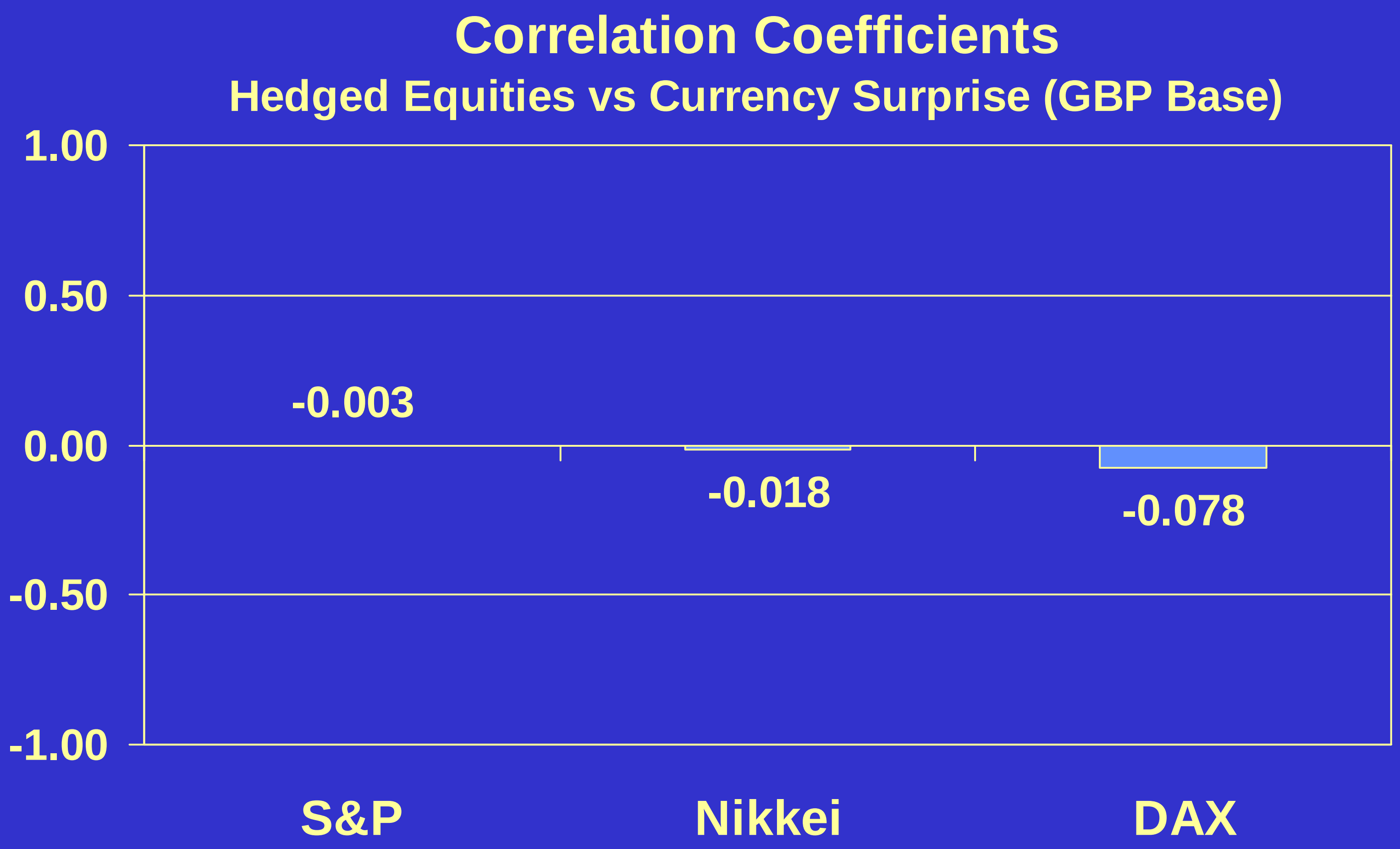
Global surprise is always zero sum



Diversification ?

- Is currency surprise negatively correlated with equity returns ?
- Do currency movements help reduce correlation between domestic and international equities ?
- Do the added ‘moving parts’ from currencies aid diversification ?

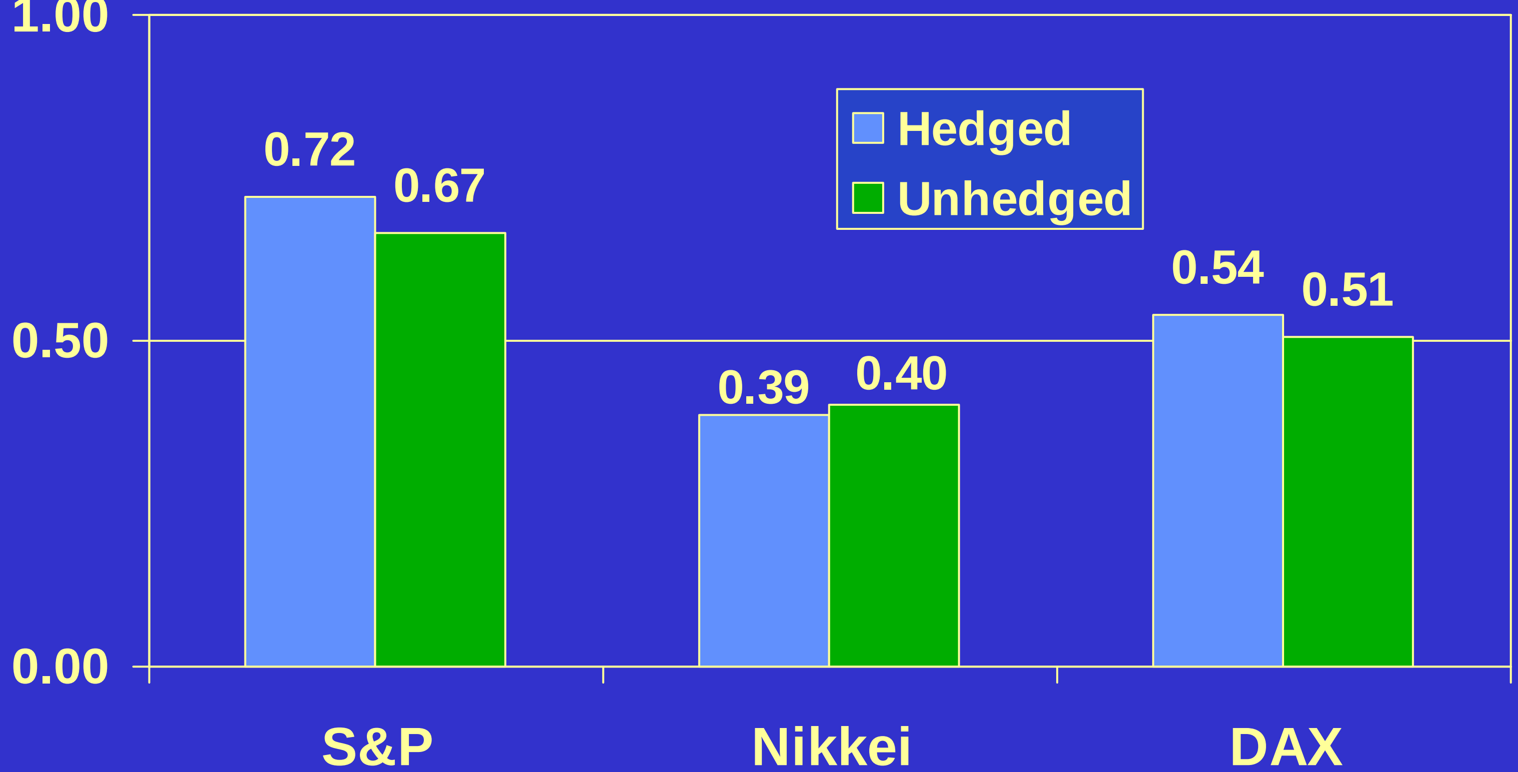
No correlation



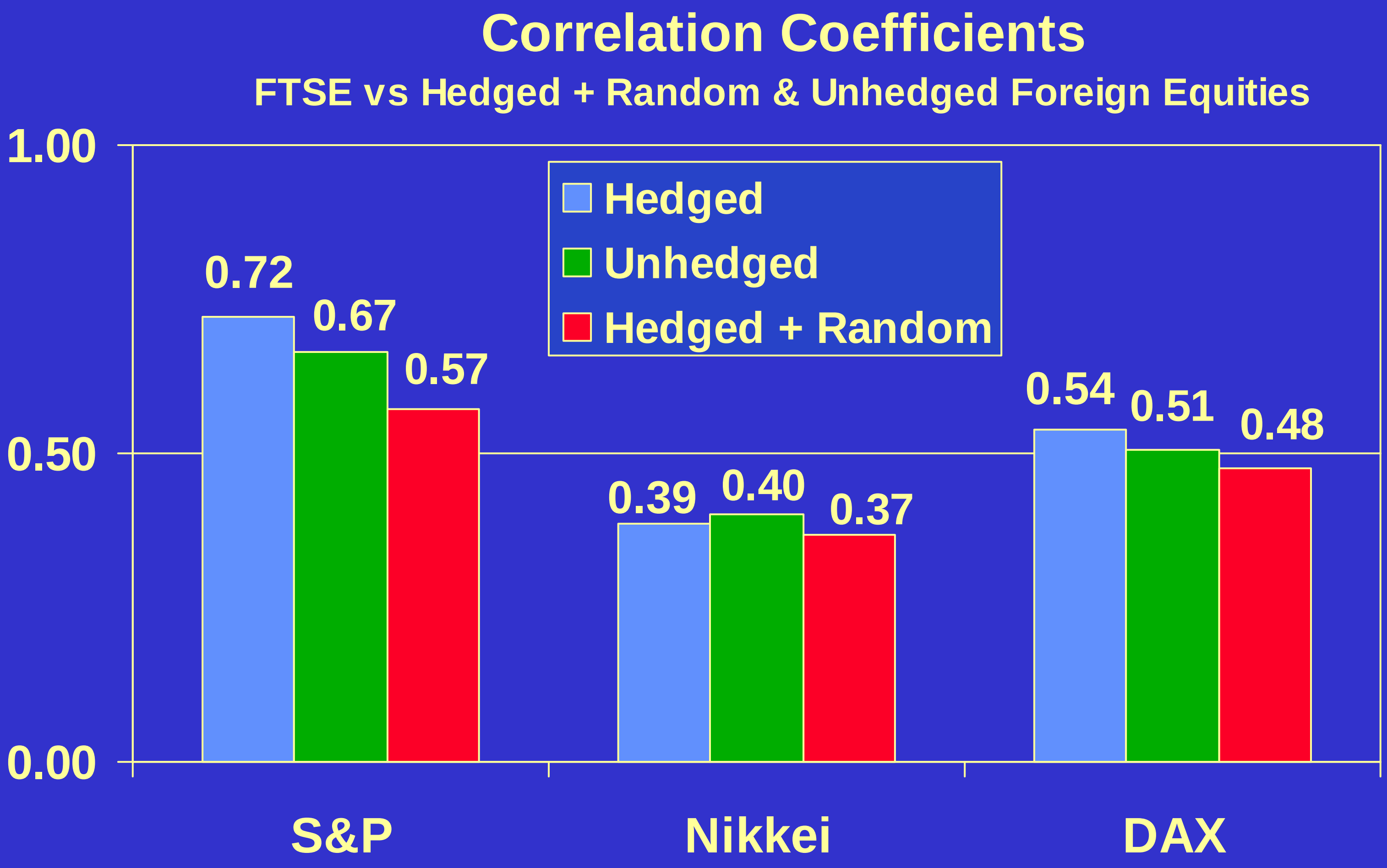
Domestic / overseas correlation

Correlation Coefficients

FTSE vs Hedged & Unhedged Foreign Equities

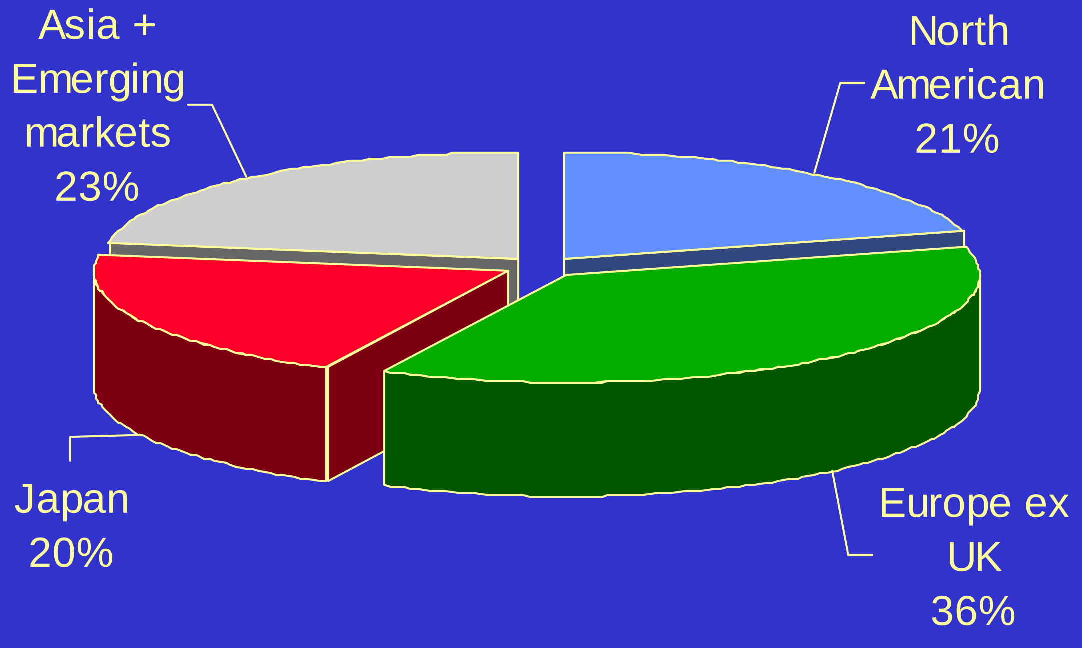


Adding a "gambling game"

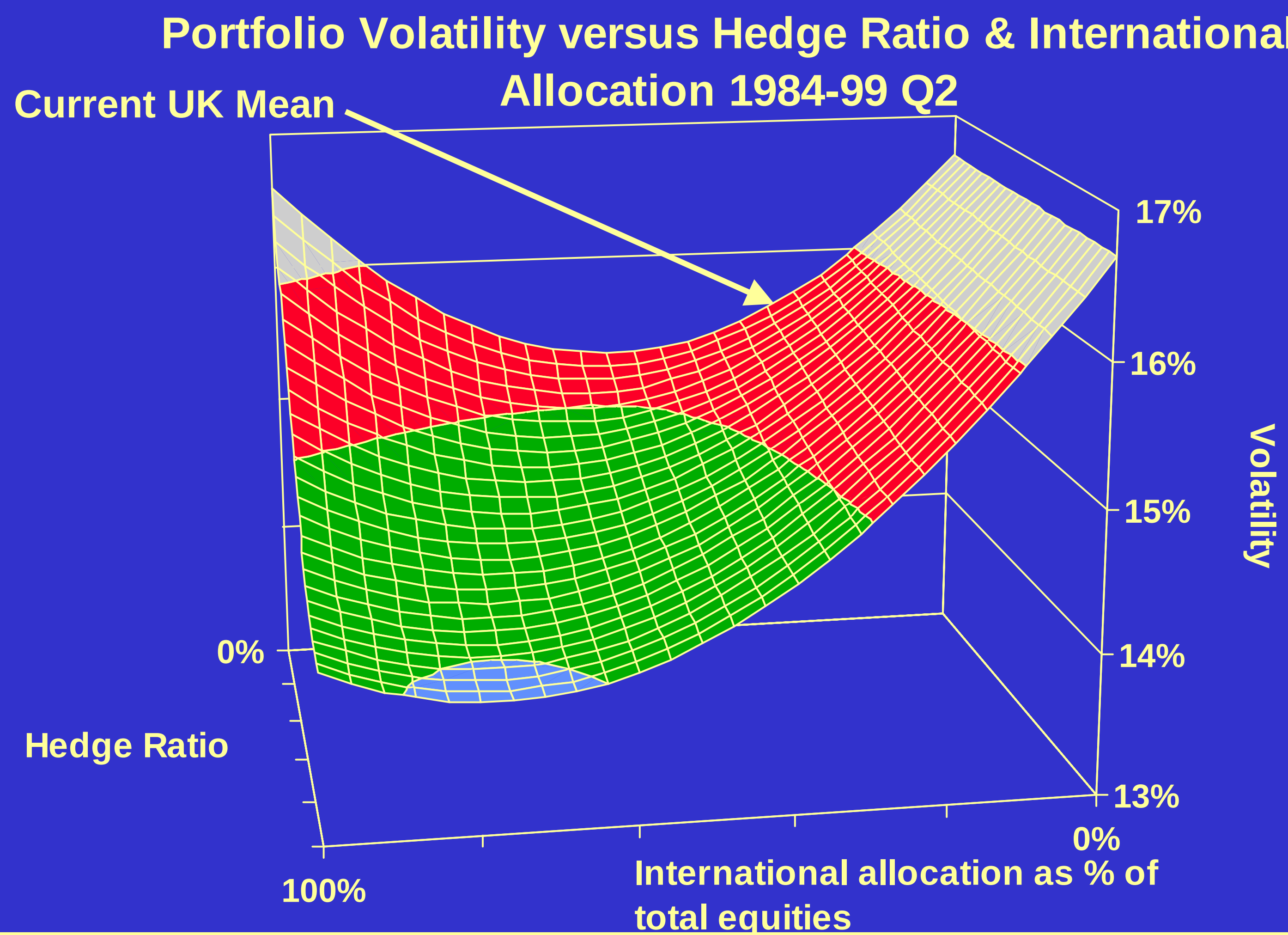


Impact at whole portfolio level

- WM50 average overseas equities 31/3/00 = 25.3%
- Of which regional weights:



The “Volatility Hammock”



Materiality ?

- Hedging gives 40 bps whole portfolio volatility reduction at current average international weights
- To replicate this without hedging would require 3% higher gilts allocation / 3% lower equities
- However, hedged overseas equities give much more diversification at higher weights
- Moving from 25% unhedged overseas weight to 75% hedged weight reduces overall volatility by 1.6% without reducing expected return

Strategic Currency Benchmark

- International assets provide two sources of return and volatility - *equities* and *currency surprise*
- International equities are diversifying
- Currency surprise is not diversifying - it has added noise and negative returns
- Future currency surprise has an expected return of zero
- This argues for not holding currency surprise - i.e. a hedged benchmark

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