

# **In the Long Run: Economic Environment, Investor Behaviour and the Challenges of Research**

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# Background

- **Some Sort of Road Map**
  - *The Macro-Economic Environment*
  - *Investor Behaviour and Rationality*
  - *Yields, Interest Rates and Growth in Long-Term Perspective*
  - *Some Implications for Real Estate Research*
- **Age and the Passage of Time**
  - *Path Dependency – Real Estate in Space and Time*
  - *Framing: Behaviour and Experience*
  - *Myopia and Time Perspective*
- **Death by PowerPoint ...**

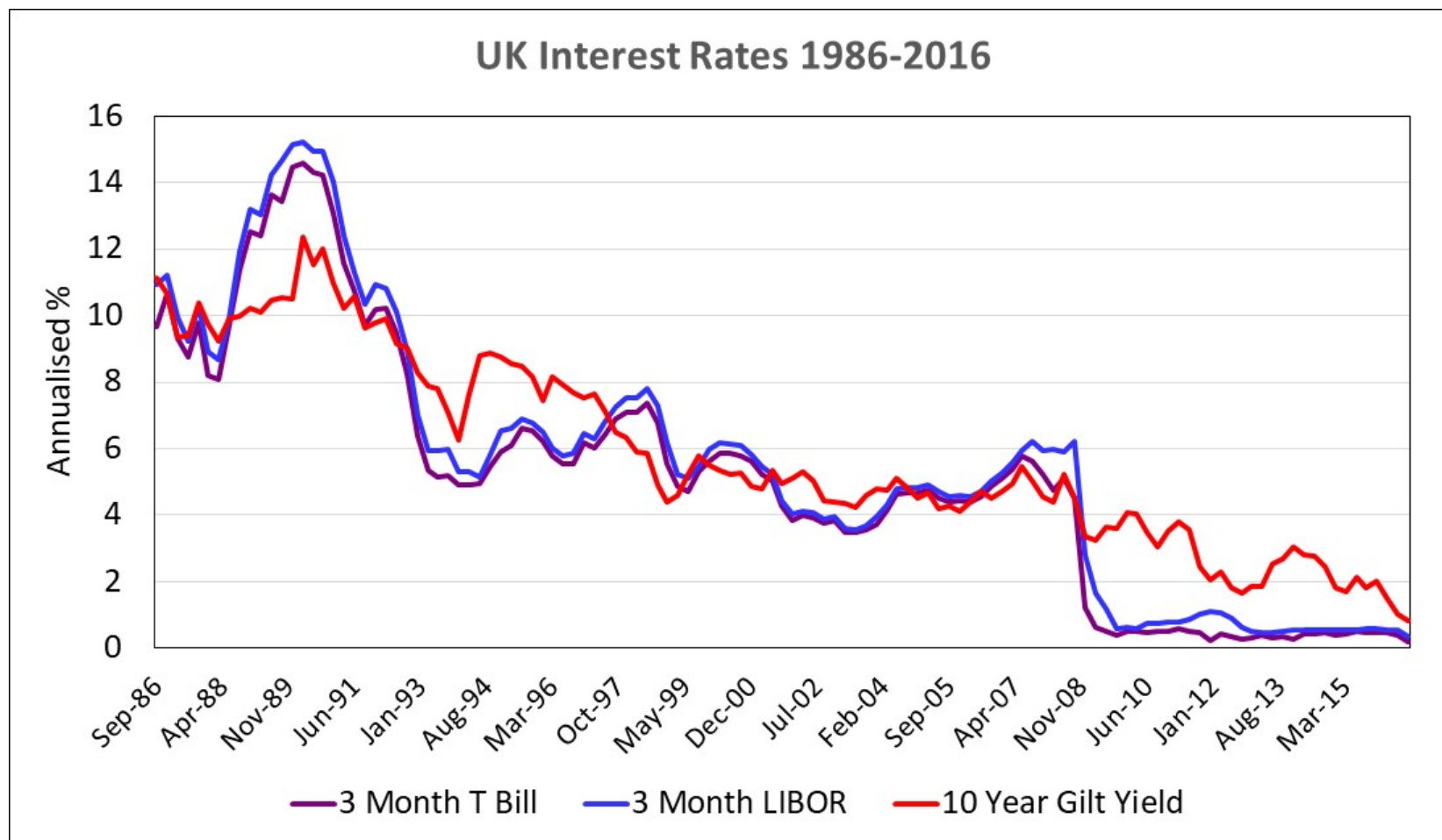
# **We All Live in Revolutionary Times ...**

- **London-based Banks Make Series of Loans in International Real Estate and Infrastructure Projects**
- **The Projects Are Highly Leveraged but Cashflow Risky**
- **To Fund Loans Series of Securities Issued in Leading Financial Markets in World Economy**
- **These Securities Used as Collateral in Further Lending and Project Funding with Product Innovation**
- **A Number of Projects Fail and Default: News Spreads Very Rapidly Due to Information Technology**
- **Security Values Fall Sharply With Contagion Effects as Assets Sales Had Large Haircuts, Leading to Failures Elsewhere Across Continents**
- **Created Coincident Global Financial Market and Liquidity Crises**
- **Resolved by Coordinated Central Bank & Government Intervention, Increasing Public Debt**

# The 1890 Barings Crisis ...



# The Context: Ultra-Low Interest Rates



## Context 2: IPF Research on Hurdle Rates

- **Investigation of UK/European Investor Behaviour in Context of Low Interest Rates**
- **Examined Market Practices and Processes**
- **Broad Findings**
  - *Investor processes inconsistent with financial theory*
  - *Hurdle rates and target yields informally set*
  - *Relatively unsophisticated models and individual overrides*
  - *Limited culture of learning and back-testing*
  - *Rational variation – the nature of real estate and vehicles*
  - *Stickiness and inertia*



# Yields, Cap Rates and the Macro-Context

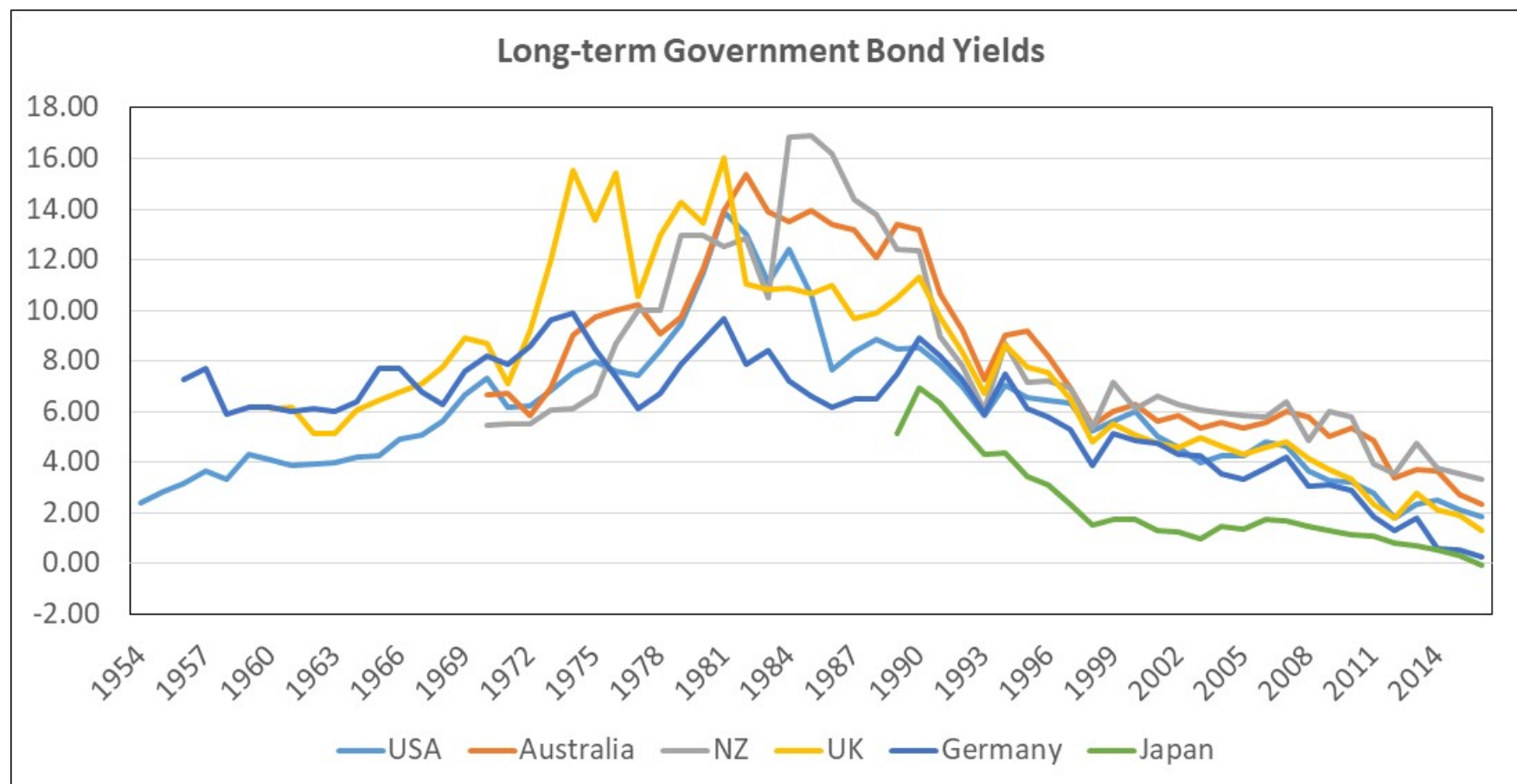
- **Standard Yield Decomposition Models in Context**
  - *Return = RFR + Risk Premium*
  - *Return = Real RFR + Expected Inflation + Risk Premium*
  - *Yield  $k = RRFR + E(f) + RP - G + \delta$*
  - *Nominal Growth =  $G_r + E(f)$*
  - *So  $k = RRFR + RP - G_r + \delta$*
- **In Current Context**
  - *Rapid fall in bond yields to lower zero bound*
  - *Flight to safety – implication for risk premia*
  - *Liquidity trap and “secular stagnation”*
  - *Yet asset prices rise sharply Post-GFC?*

# Yields, Return Prospects and Style Drift

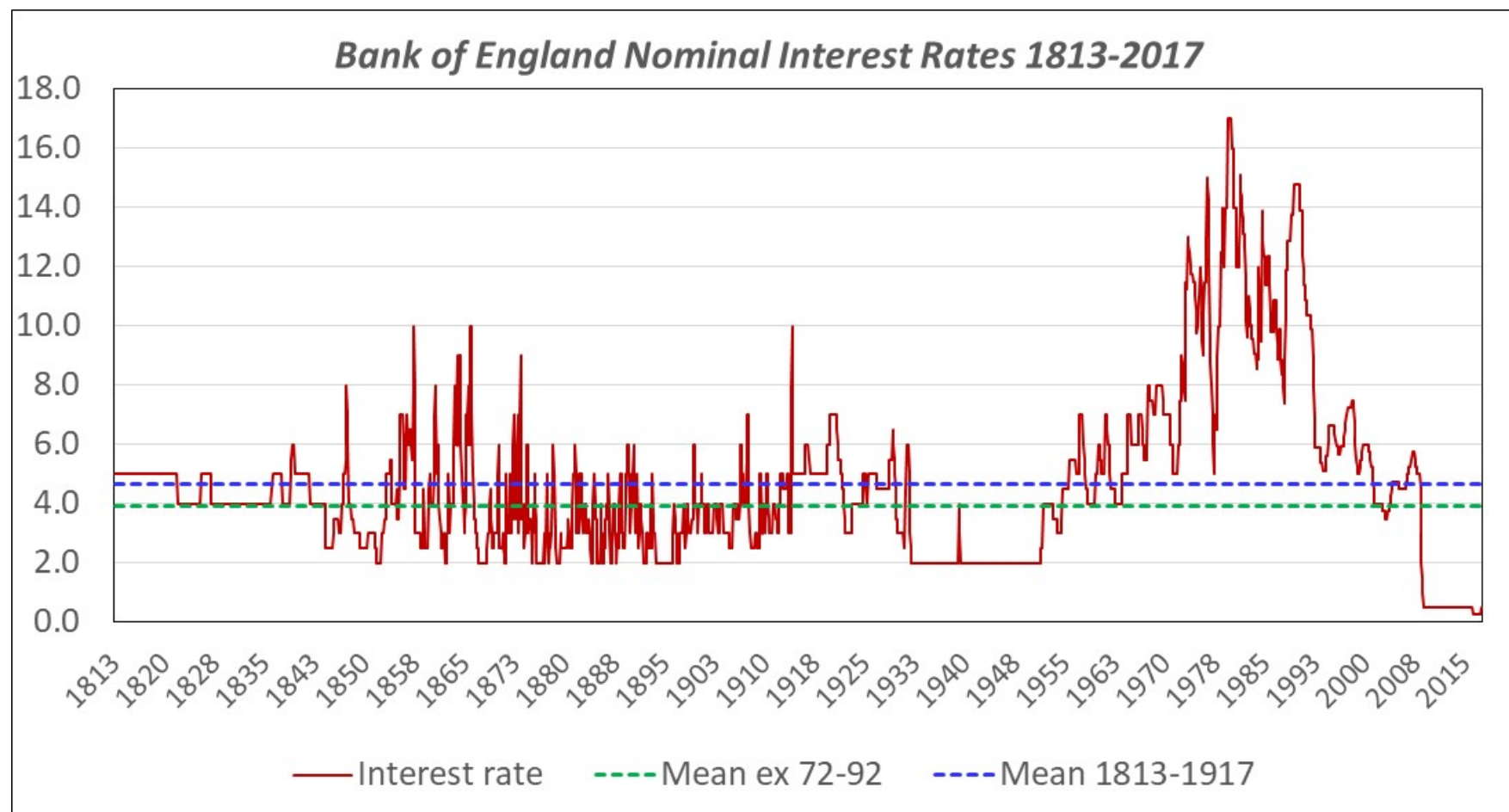
- **Interest Rates, Growth and Economic Performance**
  - *“The Choices are Purgatory or Hell”*
- **But What Do Investors Expect From Real Estate?**
  - *In-house expectations, targets and WACC*
  - *Fund managers, client demand and competitor behaviour*
- **Return, Risk and Style Drift**
  - *Moving up the risk curve: financial engineering*
  - *Moving up the risk curve: product engineering*
  - *Moving up the risk curve: “alternative investment sectors”*
- **Risk-Return Expectations and Belief Systems**
  - *What drives return, risk premium and growth expectations?*
  - *How important is myopia?*



# Long Bonds, Volatility and Inflation

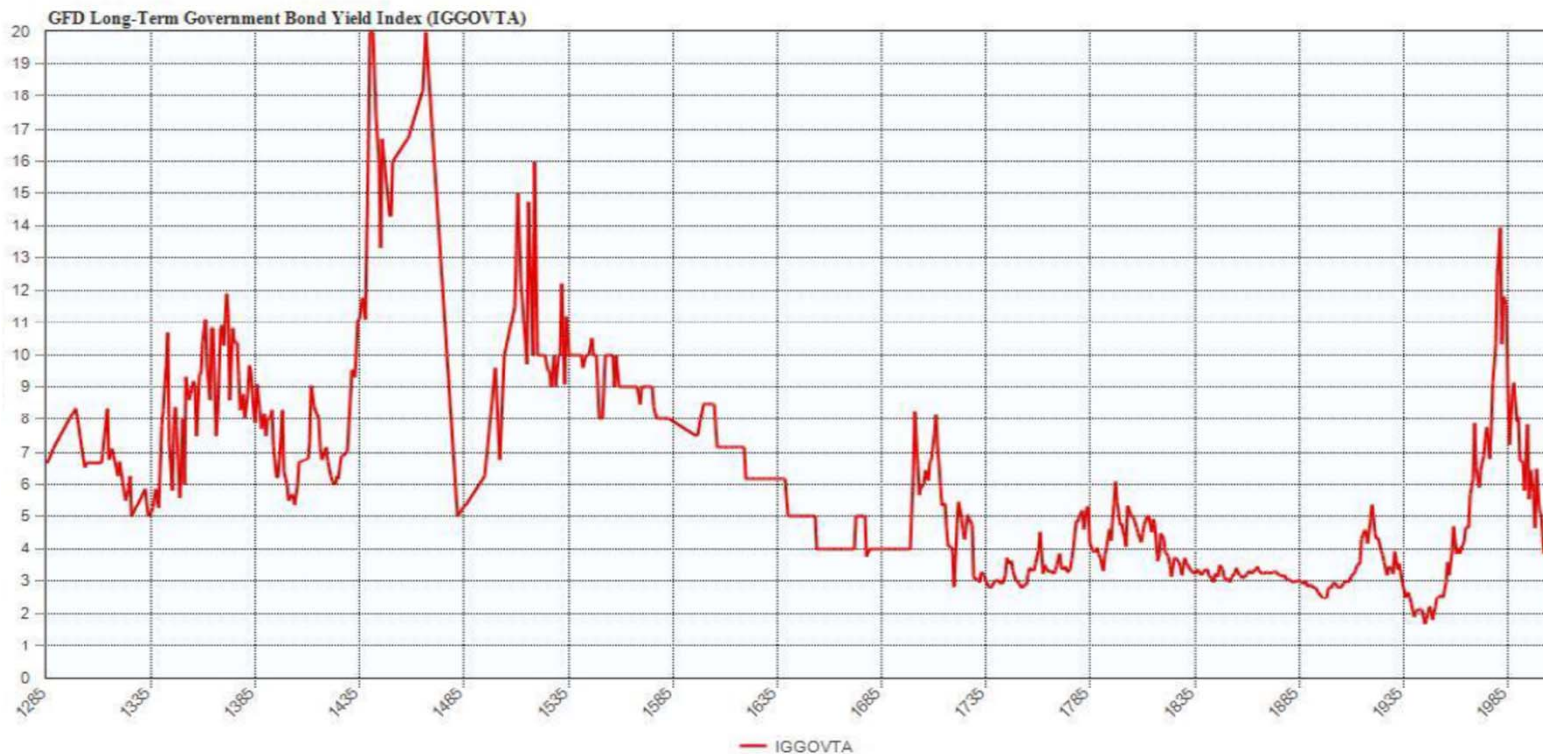


# What's the Long Run Interest Rate?



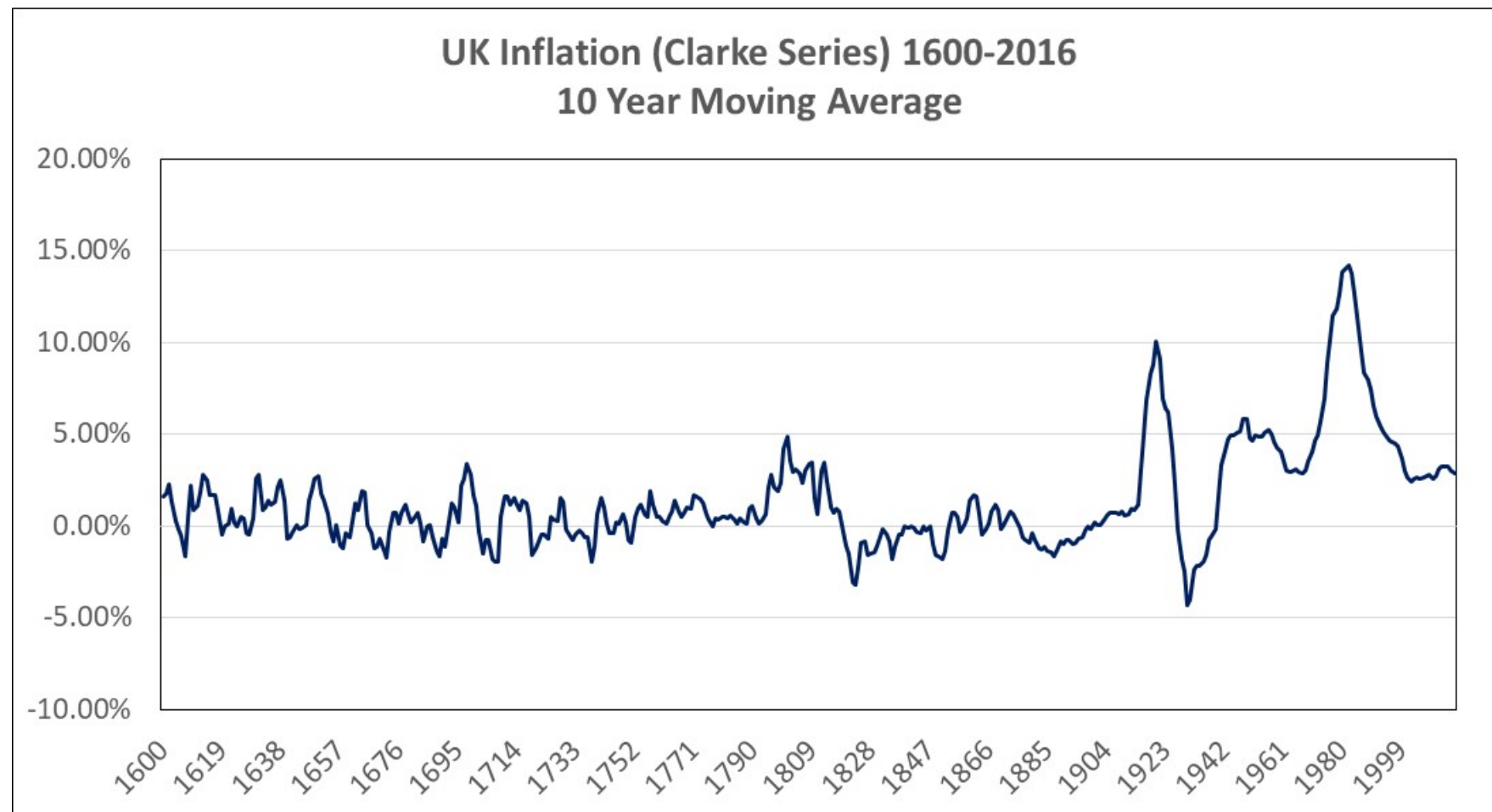
# Governments, Default Risk and Uncertainty

## Long Bonds 1285-2010



- From 1580s, Bond Yields Fall and Stabilise Until 1970s

# Inflation in the Long-Run, UK 1600-2016

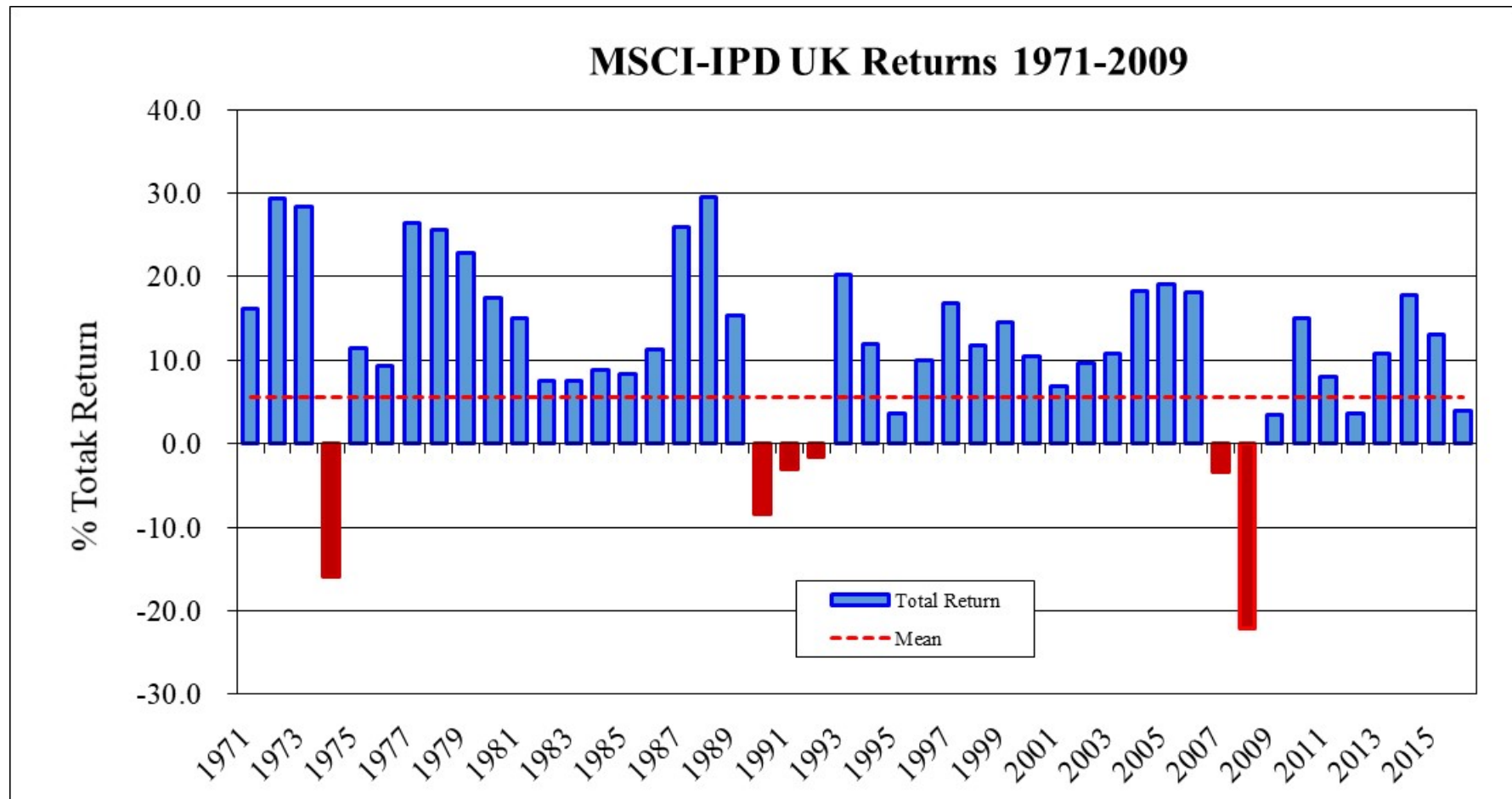


# History, Myopia and Investor Decisions

- **Who Makes the Decisions and Decides What Processes and Techniques Determine Them?**
- **Evidence from IPF Hurdle Rate Project**
  - *We explored why advanced techniques not used*
  - *In part “uniqueness of property” and “data inadequacies”*
  - *In part, decision makers didn’t have skills / rejected models*
  - *Function of education, age and market history*
- **Parallel Finance Work on Background of CEOs**
  - *e.g. Schoar, Rau, Oyer, Malmendier on job history and risk*
- **Does This Help Explain Reaction and Behaviour?**



# Property Crashes We Have Loved and Lost





# Real Estate Values Capture Economic Growth

- **Little Evidence That *Prices*\* Rise Much Above Inflation**
  - *Eitrheim & Erlandsen (2003): Norwegian real house price growth 1819-2003 1.35% p.a., 1819-1980 <1% p.a.*
  - *Devaney (2010) sample of London office rents 1867-1959 show real rise of 0.1% p.a.*
  - *Wheaton et al. (2009) Manhattan commercial properties 1899-1999 show real falls in prices*
  - *Raff et al. (2013) Beijing house prices unchanged in real terms 1684-1880 (using rice prices ...)*
  - *Shiller US house prices rise 0.2% p.a. 1890-2014*
  - *Eichholtz/Lindenthal Amsterdam series, 0.11% real growth 1650-2012*

*\* For completeness, need to think about total return. Knoll's historic work suggests that housing outperforms equities as an investment, although may misestimate by ignoring necessary capital inputs.*

# Amsterdam 1650-2012

*0.11% per annum real growth*

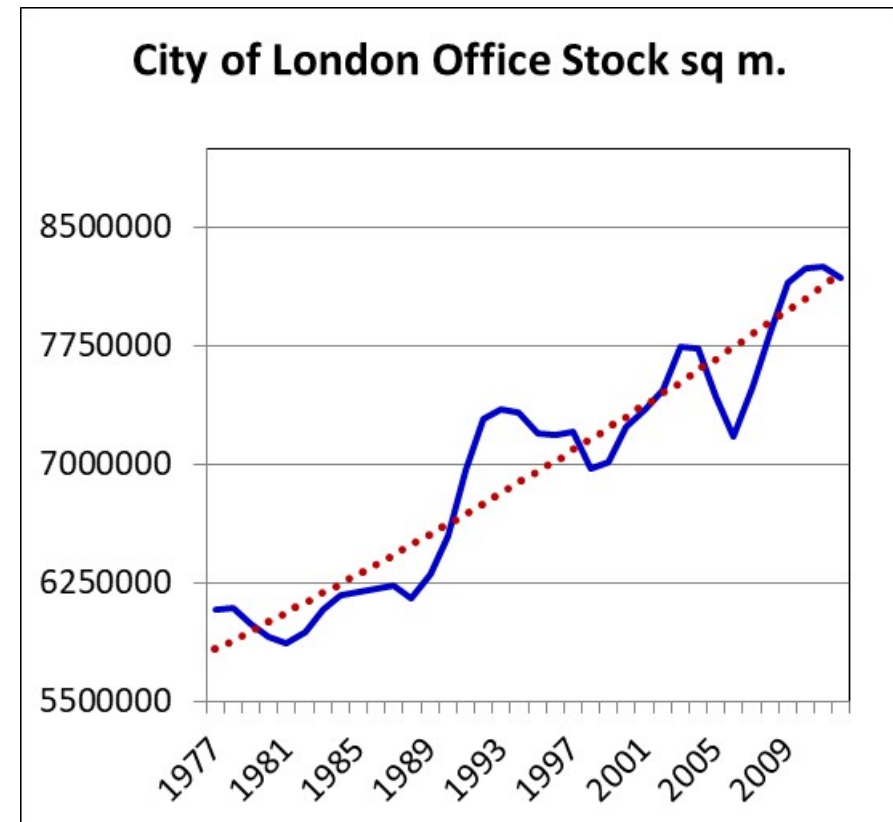
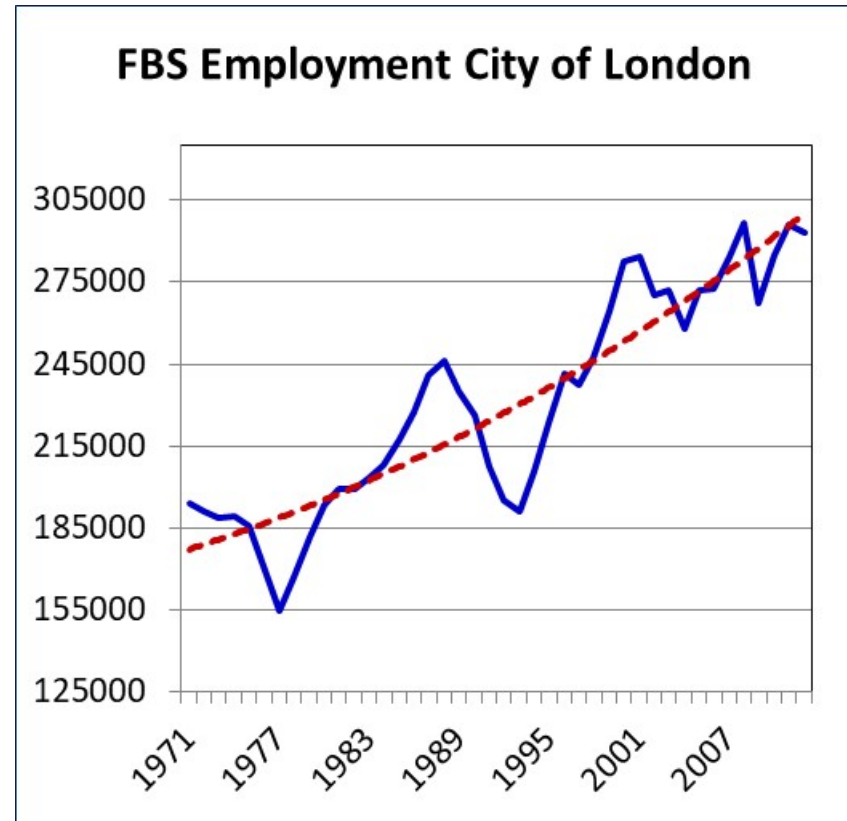


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- **Most Show Periods of Growth and Reversal**
- **Supply Adjusts ... But Slowly**

# City of London Office Market

*Both employment and stock grow ~1% p.a.*



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- **Supply Adjusts ... But Slowly**
- **So Where Does the Growth Appear?**



# Same Space, More Building ...





# Same Space, More Building ...



# Back to the Land

- **Cities Grow Outwards ... and Upwards**
- **Late 20<sup>th</sup> Century Growth Reflects Outward Constraints**
- **But Urban Economics Models Point to Higher Land Values Not Higher \$/m<sup>2</sup>. It's about Density**
- **Developed Economies: Benefits for Long-Term Investors Capturing the Redevelopment Option**
- **Emerging Economies: Additional Risk Premia Effects**
  
- **So Why Is “Real Estate Captures Growth” So Widely Believed? Is It Inflation Illusion?**

# Investor Decision-Making and Space

*Colin's inevitable reference to Towers of Capital*

- **Global Real Estate Investment Recovered From GFC?**
- **Remains Heavily Concentrated in Handful of Cities**
- **Investment Performance Questionable**
  - *Typically such cities have worse risk-adjusted returns, cycles*
  - *Typically such cities have lower rental and capital growth*
  - *Contagion and correlation effects reduce diversification benefits*
- **Rational / Plausible / Testable Explanations**
  - *Liquidity across the cycle*
  - *Scale, scale economies and capital deployment*
  - *Transparency(?), safe havens (??)*
- **Irrational / Institutional / Contestable Explanations**
  - *Networks of advisors and*
  - *Prestige and place as motivations*
  - *Misperceiving growth, value and return*

# Some Implications for Research

- **History Matters**
  - *Don't Let Myopia Distort Your Views*
  - *Path Dependency Matters*
  - *We Need to Build Very-Long Run Perspectives and Data*
- **Behaviour and Beliefs Matter**
  - *Actions of Investors, Managers Confound Finance 101*
  - *To Understand That Need to Understand Drivers of Beliefs*
  - *We Need to Look at that Formally, Empirically*
- **Land Matters**
  - *We Need to Revisit Land Value Issues*
  - *We Need to Think About Urban Growth and Value Translation*
- **Geography Matters**
  - *Spatial Fixity is Real Estate's Distinct Feature*
  - *But the Economics is Relational*