

# **Factors Influencing the Propensity of Real Estate Investors in the U.K. to Employ Property Derivatives: A Survey**

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# **1. Introduction**

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3.1 Discovered Influencing Factors

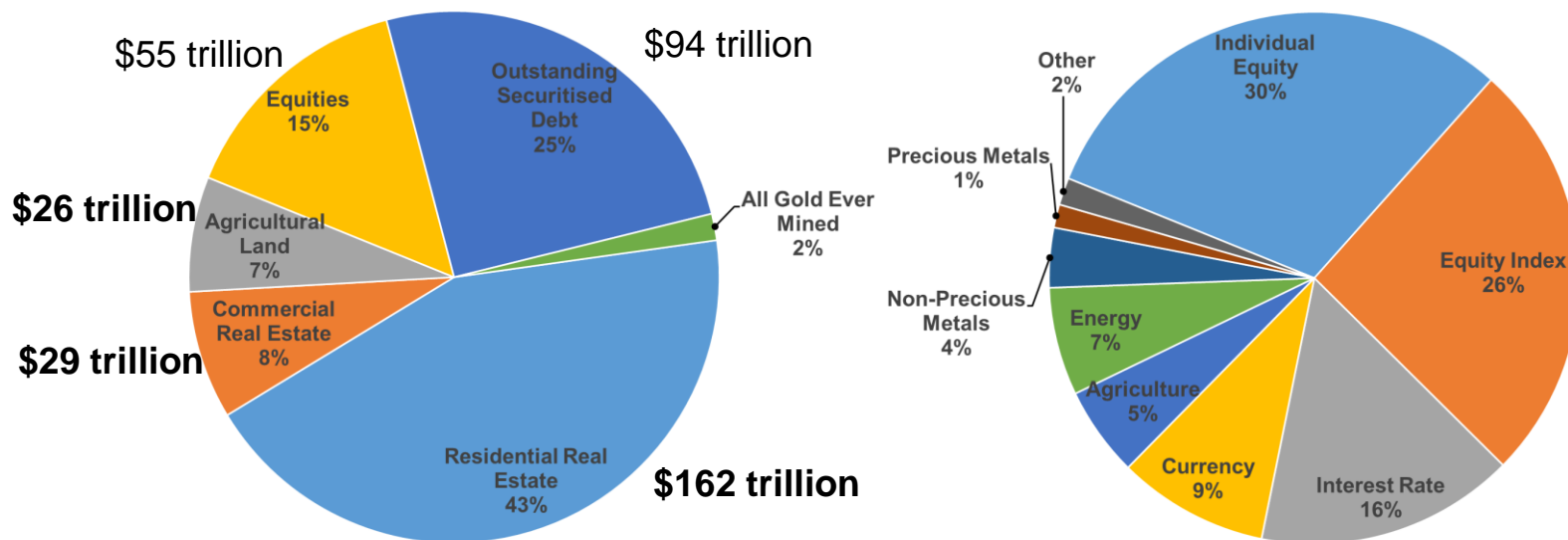
3.2 Endogenous and Exogenous Factors

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# 1. Introduction

# 1.1 Background

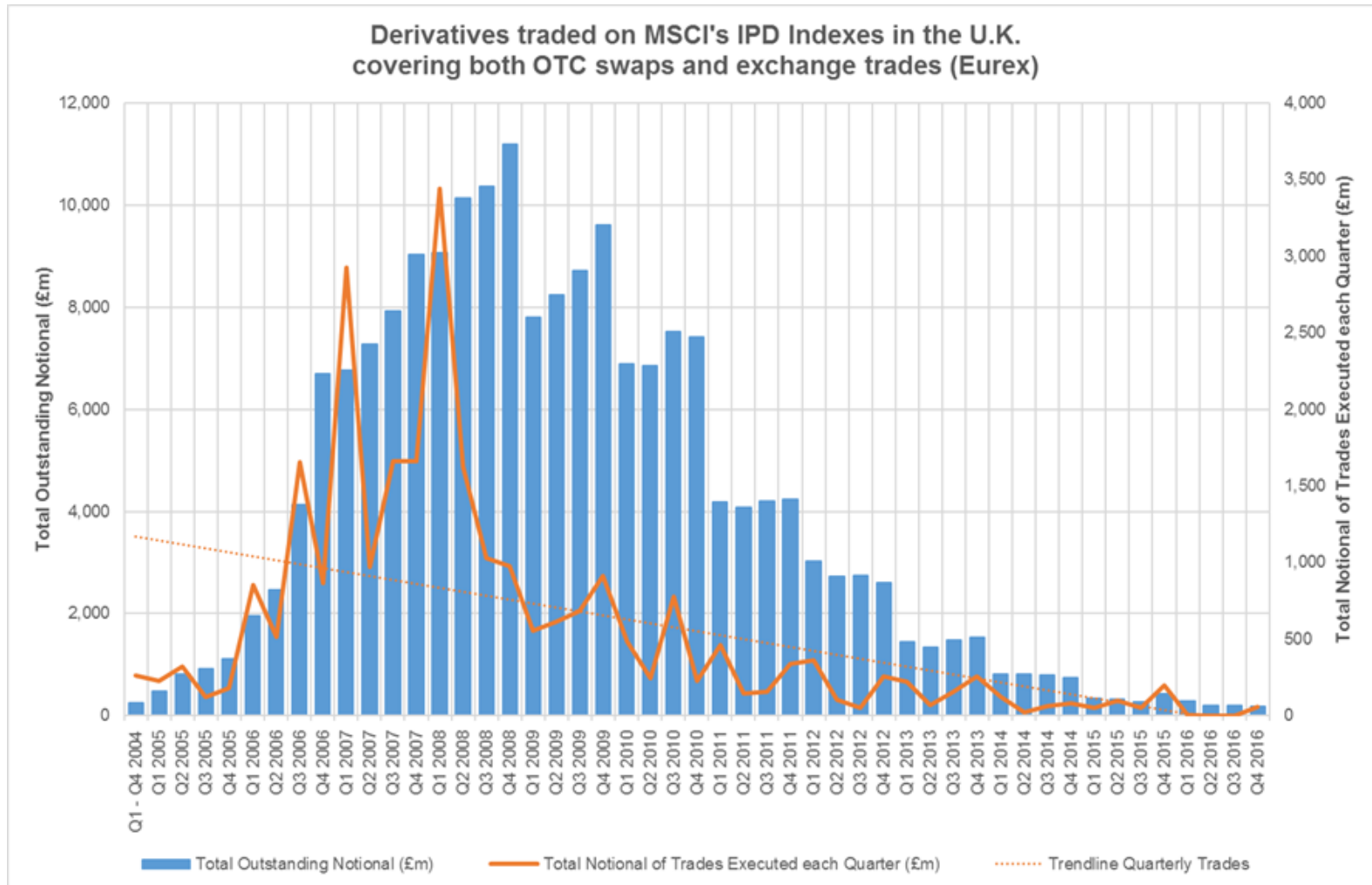
- Typically, the trading volume of futures is correlated with the size of the underlying market and its volatility (Corkish, Holland and Vila, 1997)
- Real estate is the largest asset class in the world (\$217 trillion)



Left chart: Global real estate market compared to equities and bonds (Source: Barnes, 2016); Right chart: Total volume of futures and options traded and/or cleared at 78 exchanges worldwide (Source: FIA, 2014)

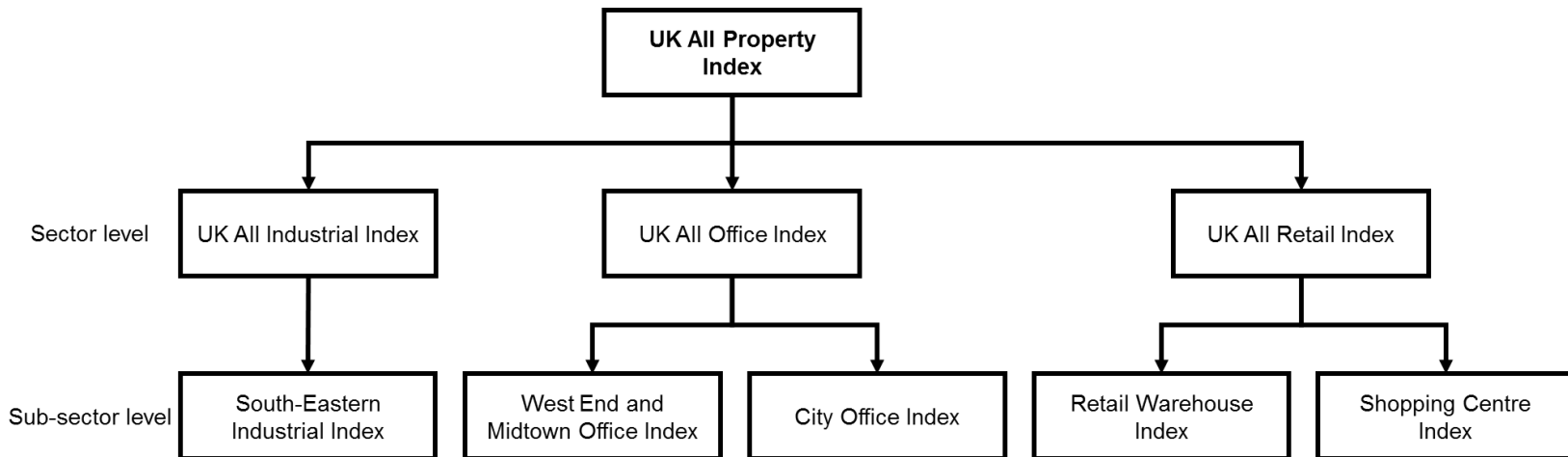
# 1.1 Background (cont'd)

Declining trading volume since 2008



# 1.2 Commercial Property Derivatives in the U.K.

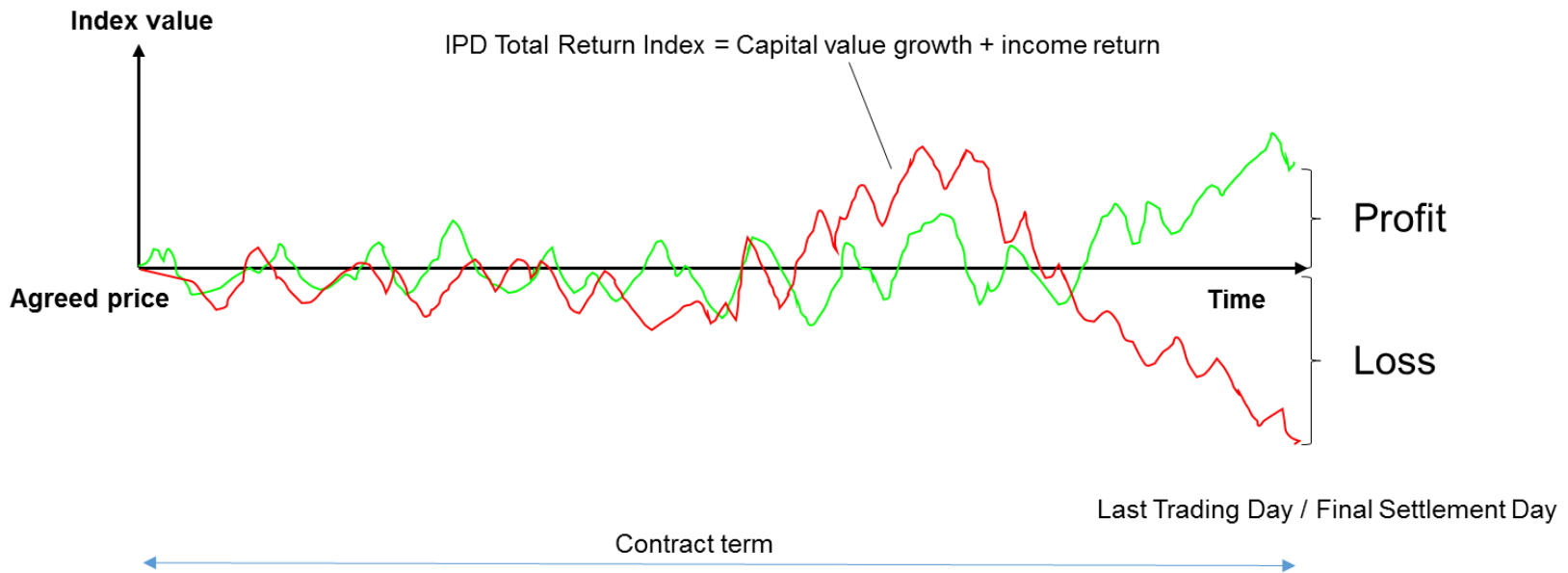
Currently available on Eurex:



Product name	Expiry	Diff. to prev. day last	Last price	Date	Time	Traded contracts	Open interest (adj.)	Open interest date
IPD® UK Quarterly All Property Index Futures Calendar Year Returns	FEB 2018	+0.00%	107.00	10/09/2017	18:44:36	0	1,266	04/10/2017
IPD® UK Quarterly All Property Index Futures Calendar Year Returns	FEB 2019	+0.00%	105.50	10/09/2017	18:44:36	0	0	11/04/2016
IPD® UK Quarterly All Property Index Futures Calendar Year Returns	FEB 2020	+0.00%	105.50	10/09/2017	18:44:36	0	0	11/04/2016
IPD® UK Quarterly All Property Index Futures Calendar Year Returns	FEB 2021	+0.00%	105.50	10/09/2017	18:44:36	0	0	02/08/2016
IPD® UK Quarterly All Property Index Futures Calendar Year Returns	FEB 2022	+0.00%	105.50	10/09/2017	18:44:36	0	0	02/08/2017
<b>Total</b>						<b>0</b>	<b>1,266</b>	

# 1.3 Commercial Property Index Future

Principle of a long position in property futures contract:

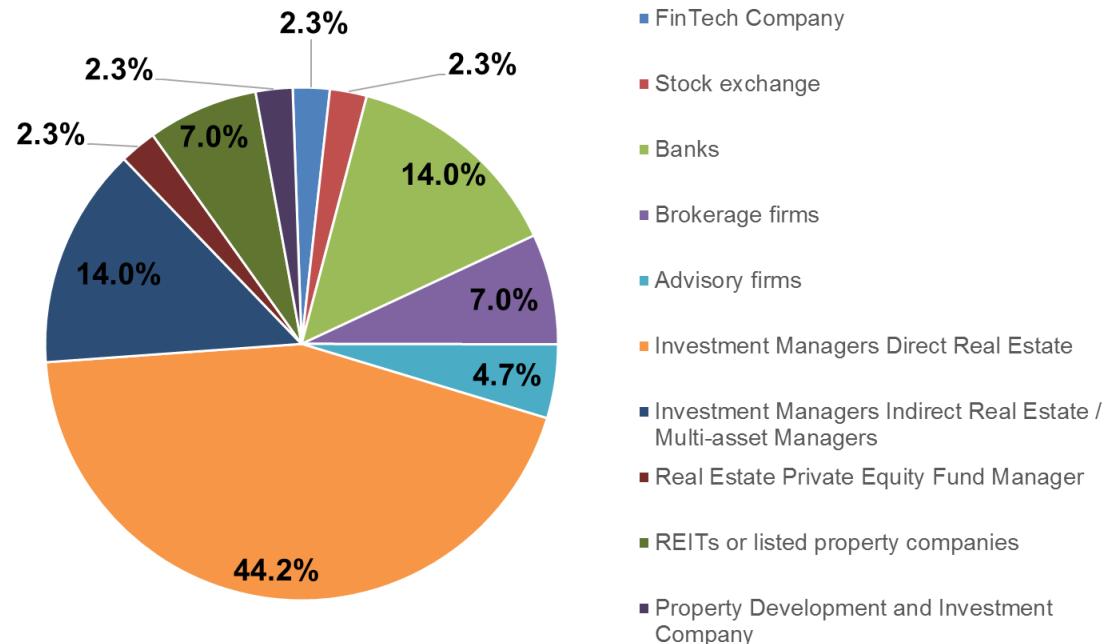


## **2. Data Collection and Analysis**



## 2.1 Data Collection and Analysis

- A set of data was collected from 43 in-depth interviews with U.K. professionals in the field
- Data collection took place between June 2016 and March 2017
- Interviews lasted between 30 minutes and two hours

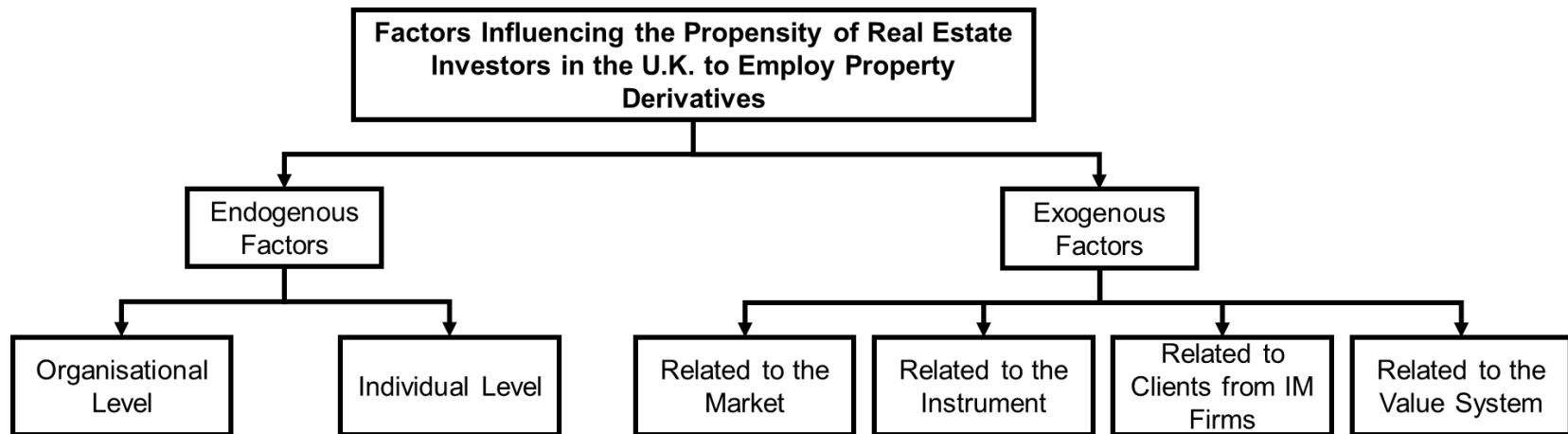


# **3. Findings and Discussion**

## 3.1 Discovered Influencing Factors

- Analysis of the collected research data yielded a total of **29 categories**
- The first differentiation that was discernible in the interview data concerns both the internal (**endogenous**) organizational conditions of the interviewees and the external operational (**exogenous**) conditions of their organisations
- Therefore, at the highest level of **conceptualisation**, the influencing factors can be divided into **endogenous and exogenous factors**.

## 3.2 Endogenous and Exogenous Factors



# 3.3 Overview of Discovered and Tested Influencing Factors

Origin of Factors	Sub-Level	Influencing Factor	Emerged from Data or Tested	Assessment of the Explanatory Power
Endogenous	Organisational Level	Motivations for Using Property Derivatives and Corresponding Return Expectations	Emerged	High
		Decision-Making Process to Employ Property Derivatives	Emerged	High
		Administrative and Operational Requirements	Tested	Low
		Hedging Strategies	Emerged	High
	Individual Level	Understanding of the Market and Instruments – Need for Education	Tested	Contributing factor
		Psychological Barriers	Emerged/Defined	Contributing factor
		Perception of Investment Managers of Property Derivatives	Emerged	Low
		Awareness of Current Instruments and Ways of Market Access	Emerged	Contributing factor
		Disproportion Between Effort and Impact	Emerged	Low
		Demonstrating Practical Competence	Emerged	Low
Exogenous	Factors Related to the Market	Structural Change in the Property Derivatives Market Evolution	Emerged	High
		Banks' Withdrawal from the Market	Emerged	Contributing factor
		Notion of Illiquidity	Emerged	High
		Pricing of Property Derivatives	Tested	High
		Importance of other Market Actors	Emerged	Low
		Homogeneity of Market Views	Tested	High

# 3.3 Overview of Discovered and Tested Influencing Factors (cont'd)

	Factors Related to the Instrument	Importance of Real Estate Indices for the Use of Property Derivatives	Tested	High
		Risk-Return-Profile	Emerged	Contributing factor
		Negative Connotations Associated with Derivatives	Emerged	Low
		Ambiguities Concerning the Taxation of Property Derivatives	Tested	Low
		Availability of Products	Emerged	Low
		Conflicting Investment Horizons	Emerged	Low
		Induced Accounting Volatilities	Tested	Low
		Introducing Additional Risk	Emerged	Contributing factor
	Factors Related to the Clients of Property Investment Management Firms	Investor Expectations of Real Estate as an Asset Class	Emerged	High
		Investor Expectations of Investment Managers	Emerged	High
		Restrictions by Fund's Mandate, Fund Prospectus or Investment Management Agreement	Tested	Low
	Factors Related to the Value System	Remit of Property Investment Managers	Emerged	High
		Metric of Measuring Investment Performance	Emerged	High

### 3.3.1 Motivations for Using Property Derivatives and Corresponding Return Expectations

1. **Creating index exposure** (i.e. investors wish to go long the index as a proxy for bricks and mortar investments/liquidity management) for liquidity management – Return expectations: **total returns** similar to physical investment
2. **Hedging** (i.e. the basic idea is to use the derivative instrument to offset the adverse impact of the price movement in the underlying real estate market) – Return expectations: **Capital returns** or total returns
3. **Switching sector allocations** (e.g. office and retail)
4. Taking advantage of **relative value pricing** (i.e. between direct, indirect and synthetic real estate)

### 3.3.1 Motivations for Using Property Derivatives (cont'd)

5. **Switching asset allocations** (e.g. equities or bonds)
6. **Accessing certain sectors** that cannot be accessed in form of physical real estate (e.g. shopping centre)



## 3.3.2 Decision-Making Process to Employ Property Derivatives

Three issues frequently recur in a number of interviews with regards to the decision-making process:

1. Sufficient liquidity levels in the market
2. Obtaining internal approvals from investment committees and/or risk committees
3. Right pricing level of the derivative instrument

**BUT:** The decision-making process for employing property derivatives is **not** a frequently recurrent **established process**. Some of the organizations monitor the property derivatives market in order to keep abreast of its development, and others have decided on a more **informal basis** not to use the derivative instruments.

## 3.3.2 Decision-Making Process to Employ Property Derivatives (cont'd)

Conditions	Controlled	
	Internally (within the organisation)	Externally (outside the organisation)
Obtaining the internal approval from investment committee	X	
Fund must have cash available		X
Fund is looking to hedge out some exposure	X <sup>104</sup>	
Fund mandate allows investment in property derivatives		X
Market forecast needs to be in the right direction		X <sup>105</sup>
Attractive pricing of the property derivative (i.e. property index future)		X
Sufficient liquidity in the market/market depth		X
Can the position be held to term?		X <sup>106</sup>

104 ... Depending on the type of fund.

105 ... Depending on market conditions which are not controlled by the organization.

106 ... Depending on the mandate, investment management agreement or fund prospectus.

### 3.3.3 Hedging Strategies

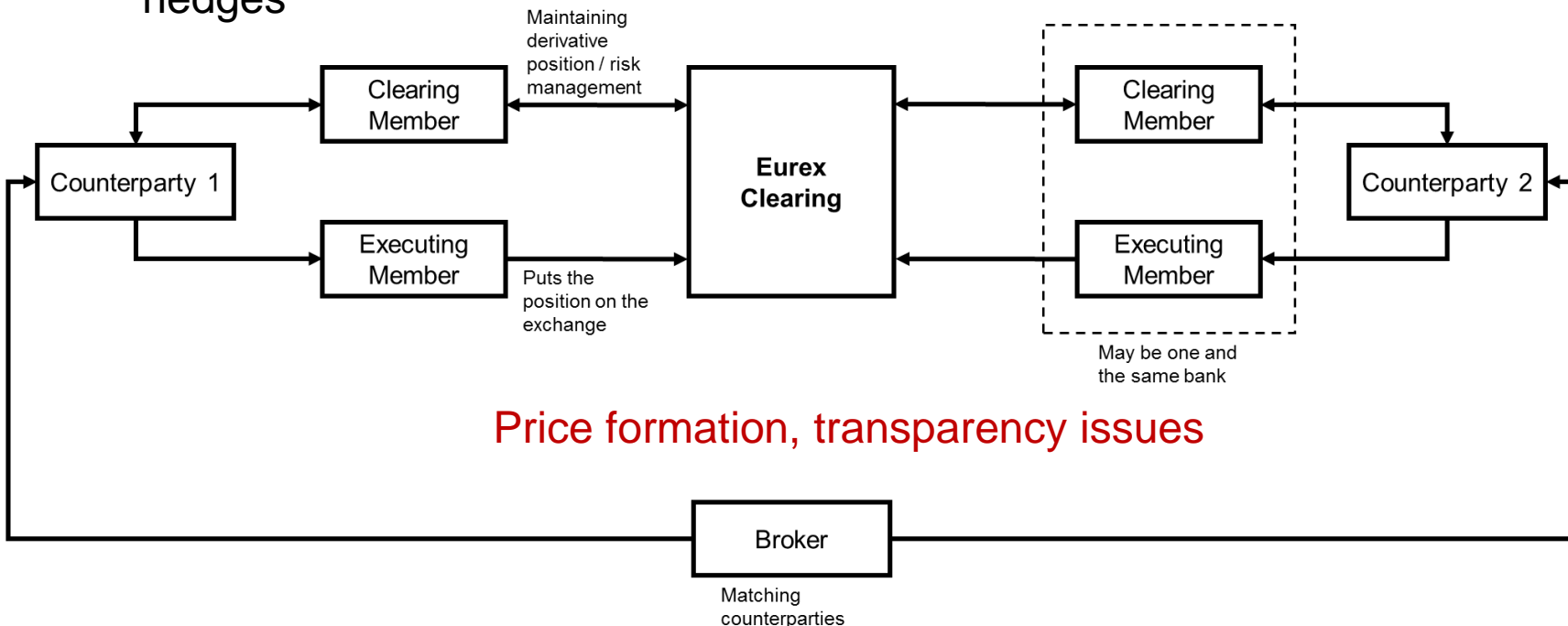
Three reasons have been identified that explain why investment managers believe that there is **no need to hedge** real estate market risk.

1. Perceived **low volatility** associated with bricks and mortar investments. In addition, the **income** component is perceived as being quite **stable** and the capital component becomes important only when the asset is sold
2. Possibility to invest through the **cycle** without the need to sell properties
3. Argument that the hedging decision rests with the **asset allocator**, that is, with the investor in the fund or REIT.

# 3.3.4 Structural Change in Property Derivatives Market Evolution

## Important points to consider:

- Before GFC, there was a ring of banks active in the market, now: end user market
- Transformation from an OTC market to an exchange-traded market (actually a hybrid market), push towards exchange by European Market Infrastructure Regulation (EMIR)
- Basel II + III + ... : Additional regulatory capital, no capital relief on hedges



## 3.3.5 Banks' Withdrawal from the Property Derivatives Market

Main reasons for banks' withdrawal from the property derivatives market:

1. **Demand** from end users dropped starting with the onset of the GFC in 2007
2. Banks were trying to **reduce** their operational **risks** and **save costs** – this meant the closure of unprofitable property derivative desks
3. Increase in **regulatory capital** requirements for derivative positions which requires larger spreads to cover capital consumptions – with larger spreads, pricing becomes less attractive for end users

### 3.3.6 Notion of Market Illiquidity

When the market enables investors to **execute** trades of a certain **volume** on a **timely basis** and close to what they consider the **fair value** of their positions.

Interview no.	Comment
7	Monthly or at least quarterly trade volume of 100 million pounds
9	250-300-million-pound trade volume per year
12	Clip sizes of 250-300 million pounds
12	Being able to trade 3-5% of the fund size which is 2.5 billion pounds, i.e. 125 million pounds
14	Clip size of 100 million pounds (REIT)
17	One billion pounds trading volume per day
21	Clip size of 15-20 million pounds
32	One billion over a certain period in a sub-sector trade (e.g. shopping centres)

## 3.3.7 Pricing of Property Derivatives – A central issue

### Pricing is made difficult because of:

- Underlying index
- Lack of market transparency
- 2 schools of thought how to price the instruments
- No easy way of mark-to-market

Parameter	First school of thought	Second school of thought
Components of the future price	Year-to-date performance plus expected performance of the total return index until contract maturity.	Spot price which requires an adjustment for the 3-month temporal lag in the total return index plus carry plus liquidity premium or discount for holding the derivative position.
Consideration of inherent illiquidity of the underlying real estate assets/liquidity in futures	No consideration.	The value of liquidity to the buyer and the seller is asymmetric depending on the condition of the market, i.e. whether there is a bear or bull market. In a bear market, the market values liquidity to exit a position held and in a bull market it values the liquidity to enter a trade that provides exposure to the real estate market.
Treatment of transaction costs	Do not impact the price of the future contract.	Do not impact the price of the future contract. Since a trade is considered a round trip, i.e. buying and selling real estate exposure, the benefits of transaction costs is identical for both the buyer and the seller.
Reward for taking property market risk	Difference between agreed price and index value at maturity.	Property market total return.

### 3.3.8 Other Factors Influencing the Propensity to Trade in Property Derivatives

#### **Investor Expectations of Real Estate as an Asset Class:**

- Long-term and stable income return of commercial real estate, i.e. income performance, potential upside performance, simplicity, and because of its tangibility

#### **Investor Expectations of Property Investment Managers:**

- Investment managers are not expected to manage systematic real estate market risk by using property derivatives, i.e. they are supposed to provide full, unhedged exposure to the asset class

#### **Remit of Property Investment Managers**

- Deploying capital received by investors (refurbishment, repositioning)

#### **Metric of Measuring Investment Performance**

- Relative (index outperformance) or total (IRR)



### 3.3.8 Other Factors Influencing the Propensity to Trade in Property Derivatives (cont'd)

- Furthermore, especially institutional investors are **long-term investors** who **do not think short-term** when it comes to assessing capital values. They are aware of the cyclical nature of real estate which is often one part of a wider asset allocation strategy.
- Therefore, it can be argued that property **investment managers do not have an incentive** to use property derivatives because their task is to provide **full exposure** to the real estate asset class, or a certain sector of it, and to manage that investment.
- **Moreover, there is no benefit** in reducing the exposure because that is something the investor would do at an asset allocation level. What investors usually want from an investment manager is a prudently managed property portfolio that provides returns in line with the mandate and **commensurate** with the real estate market risk taken.

# Q&A

# Thank you!

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