LaSalle Investment Management

Real estate experience. Investment expertise.

CUREMhorizonte

Real estate risk measurement and pricing 24th June 2008

Are standard investment risk measures applicable to private real estate equity?

Robin Goodchild PhD FRICS

International Director & Head of European Strategy

Agenda

- Identifying the causes of volatility in asset and portfolio returns
- Can these causes be measured and managed?
- How to measure illiquidity risk, what's the price of illiquidity?
- How can the risks in different national markets be compared, including for emerging markets?

Solely focused on property across the globe

Jones Lang LaSalle Inc.

(JLW founded 1783, merger with LaSalle 1999)

- $2.7 billion in revenue for 2007
- Over 170 markets in 60 countries spanning 5 continents
- 17,800 professional employees
- New York Stock Exchange listed company (ticker: JLL)

LaSalle Investment Management

- $50.4bn AUM
- 764 employees in 26 offices in 15 countries
- Direct private real estate
  - Separate accounts
  - Commingled funds
  - Multi-manager accounts

LaSalle Investment Management Securities

- Public equity division founded in 1985
- $9.4bn AUM

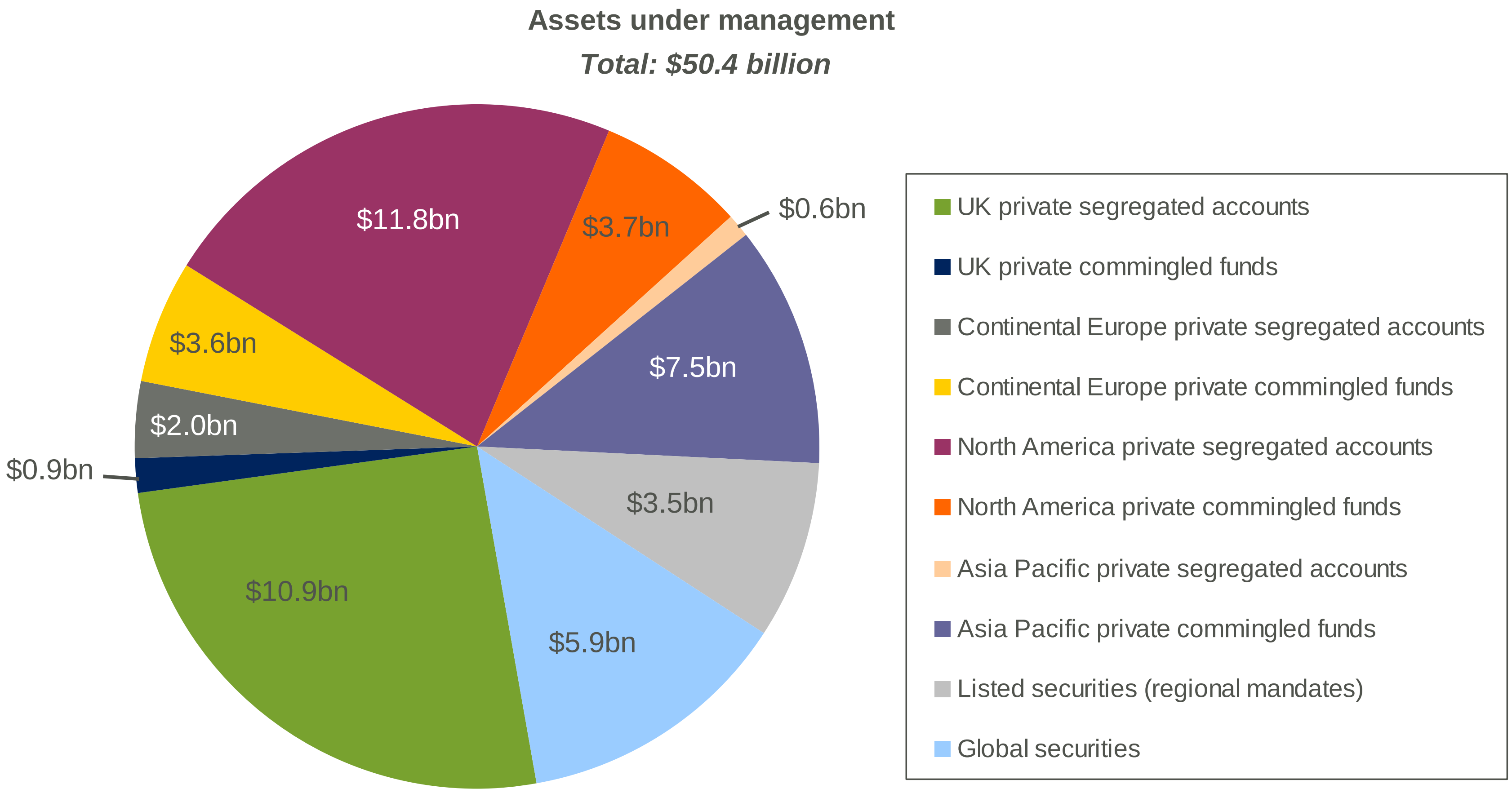
Jones Lang LaSalle

- Capital Markets
- Global Corporate Finance
- Tenant representation
- Land sales and acquisitions
- Valuation and appraisal
- Property management
- Agency leasing
- Facility services
- Retail services
- Project management

Jones Lang LaSalle Hotels

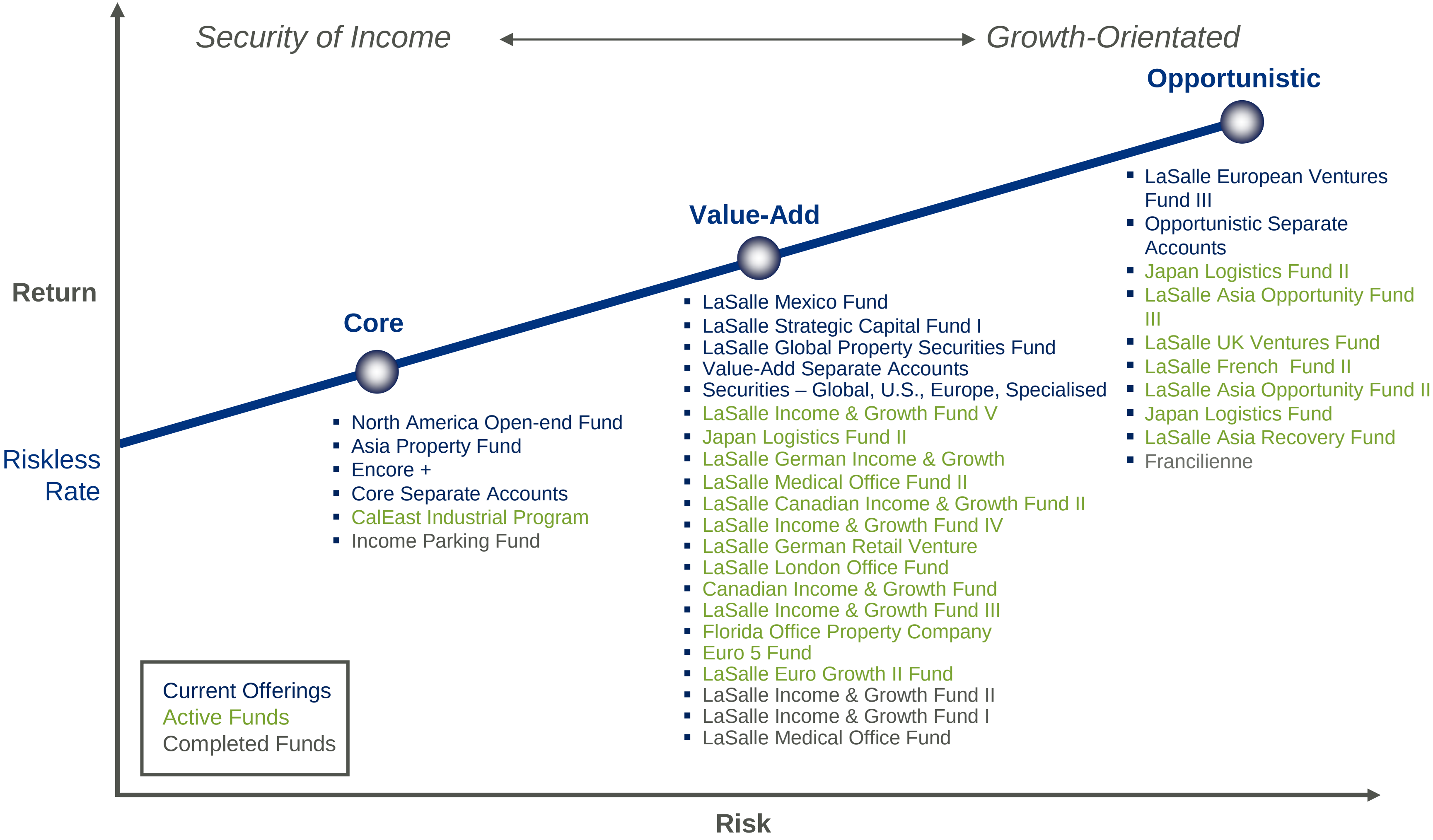
- A full service global hotel advisory company

LaSalle Investment Management – Global investments



Source: LaSalle Investment Management as at 31/12/07

Customised strategies for varied risk-return objectives



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Identifying the causes of volatility in asset and portfolio returns

Problems with risk as volatility

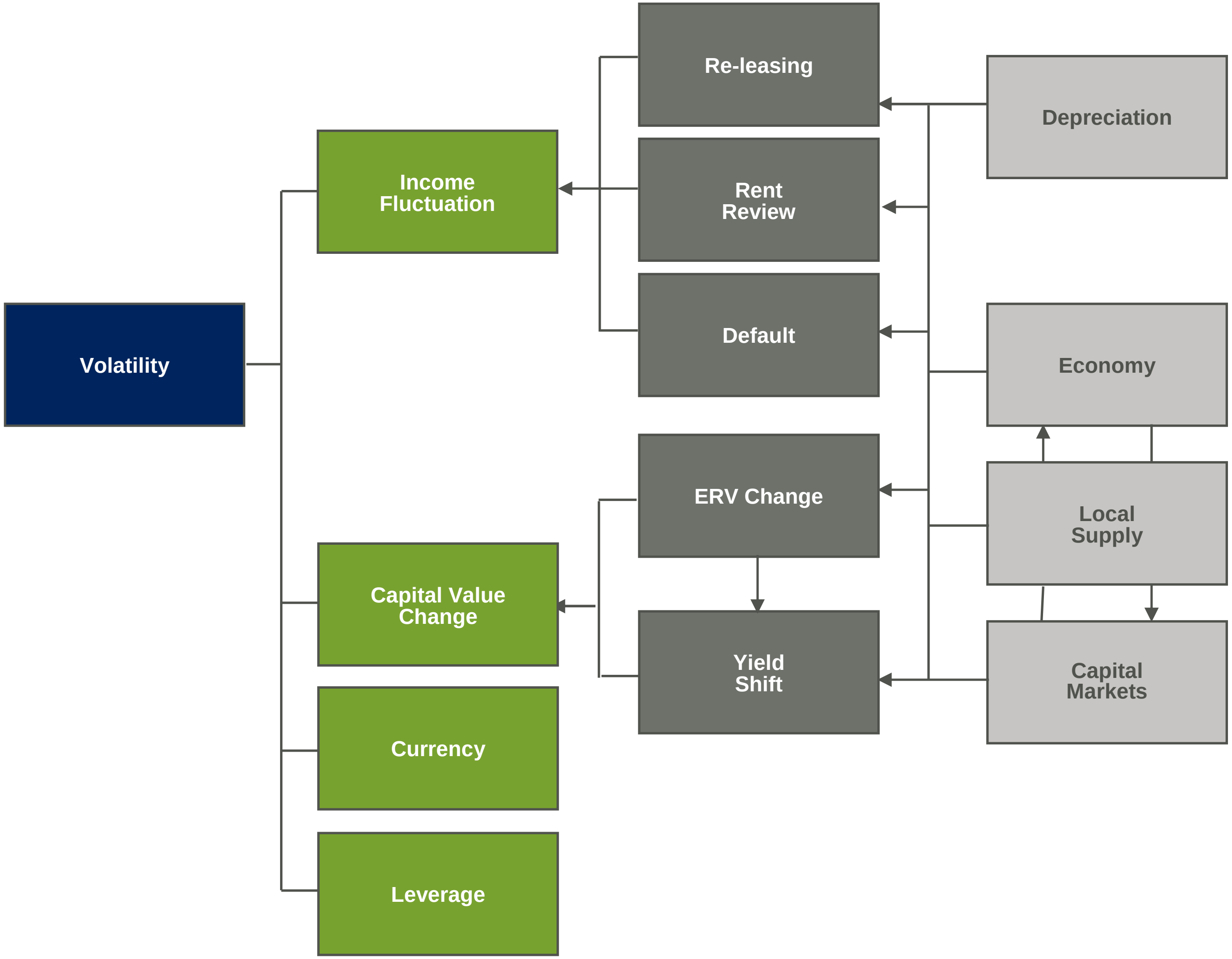
- No distinction between upside and downside
- Past volatilities and correlations are not stable
- IPD data exhibits considerable serial correlation - appraisal smoothing
- Returns exhibit non-normal dispersion "fat tails"
- Backward looking: rely on past valuation data
- Has no inherent diagnostic information: single figure result
- Emphasise relative volatility (tracking error), not absolute
- Cannot provide a basis for monitoring action
- Equates volatility with risk: what about uncertainty?

"CAPM based risk management probably mis/under estimates property risk and has little diagnostic content"

The LaSalle approach

- Replace volatility/standard deviation with some real estate relevant measures
- Build a range of measures rather than over reliance on just one figure
- Decompose risk into its fundamental sources

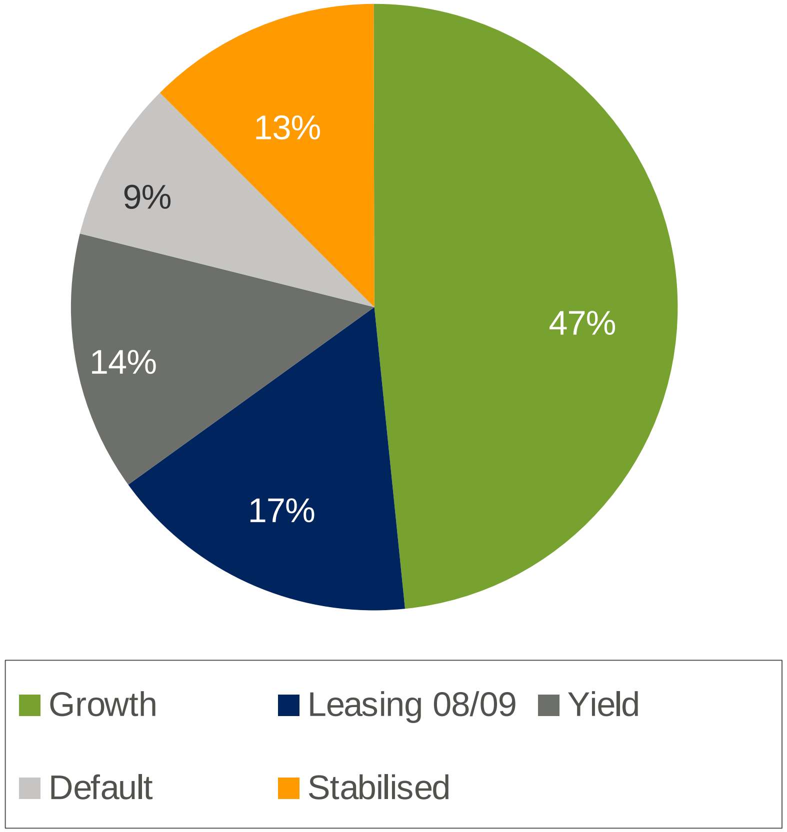
Decomposing volatility



Analysing the causes of risk

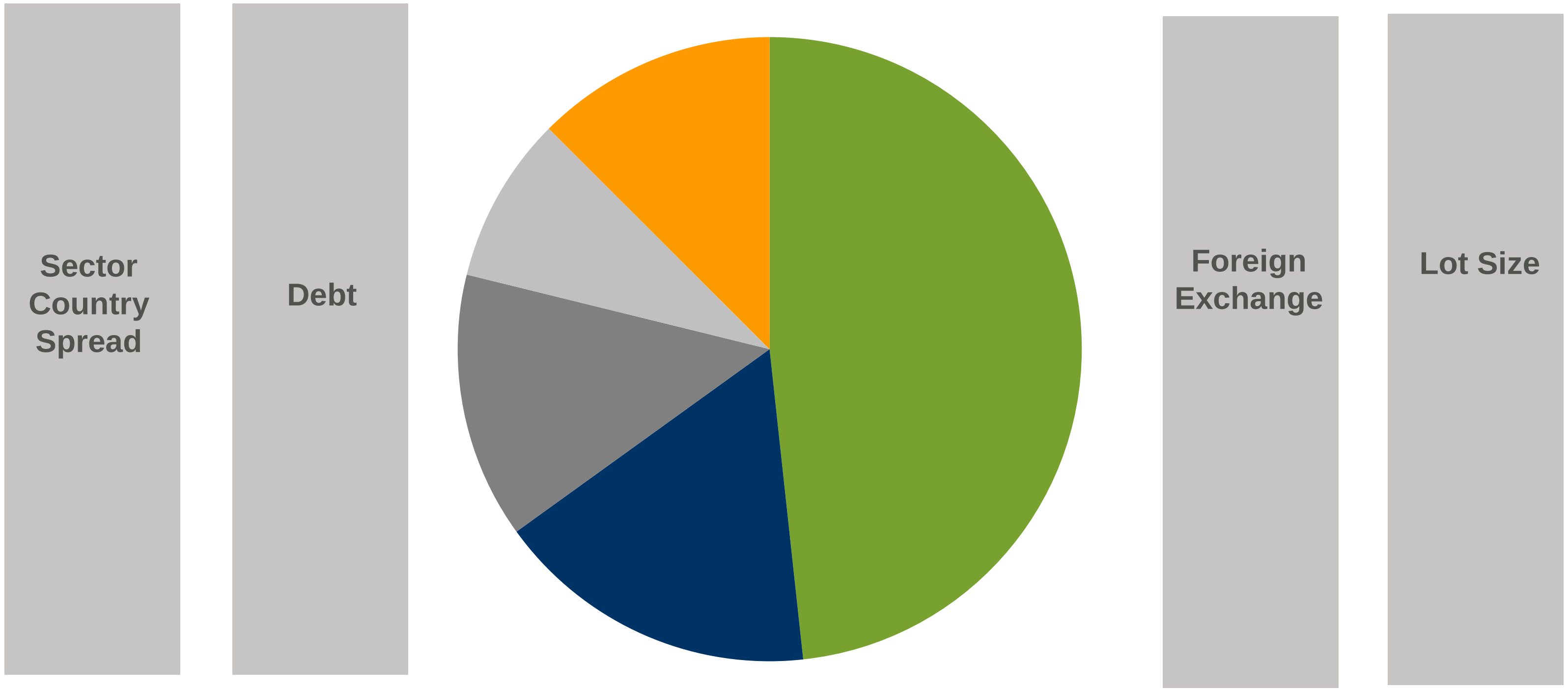
The Fundamentals

A Portfolio



Source: LaSalle Investment Management

Analysing the causes of risk II: the modulators



Source: LaSalle Investment Management

Development: a combination of different risks or a separate factor?

Components of development risk:

- Securing zoning/planning permission
- Assembling the site/land ownership rights
- Defining the density of development
- Construction: price and time over-run, defect liability
- Partner issues
- Financing
- Leasing

Most investors do not get involved in development projects until stage 4

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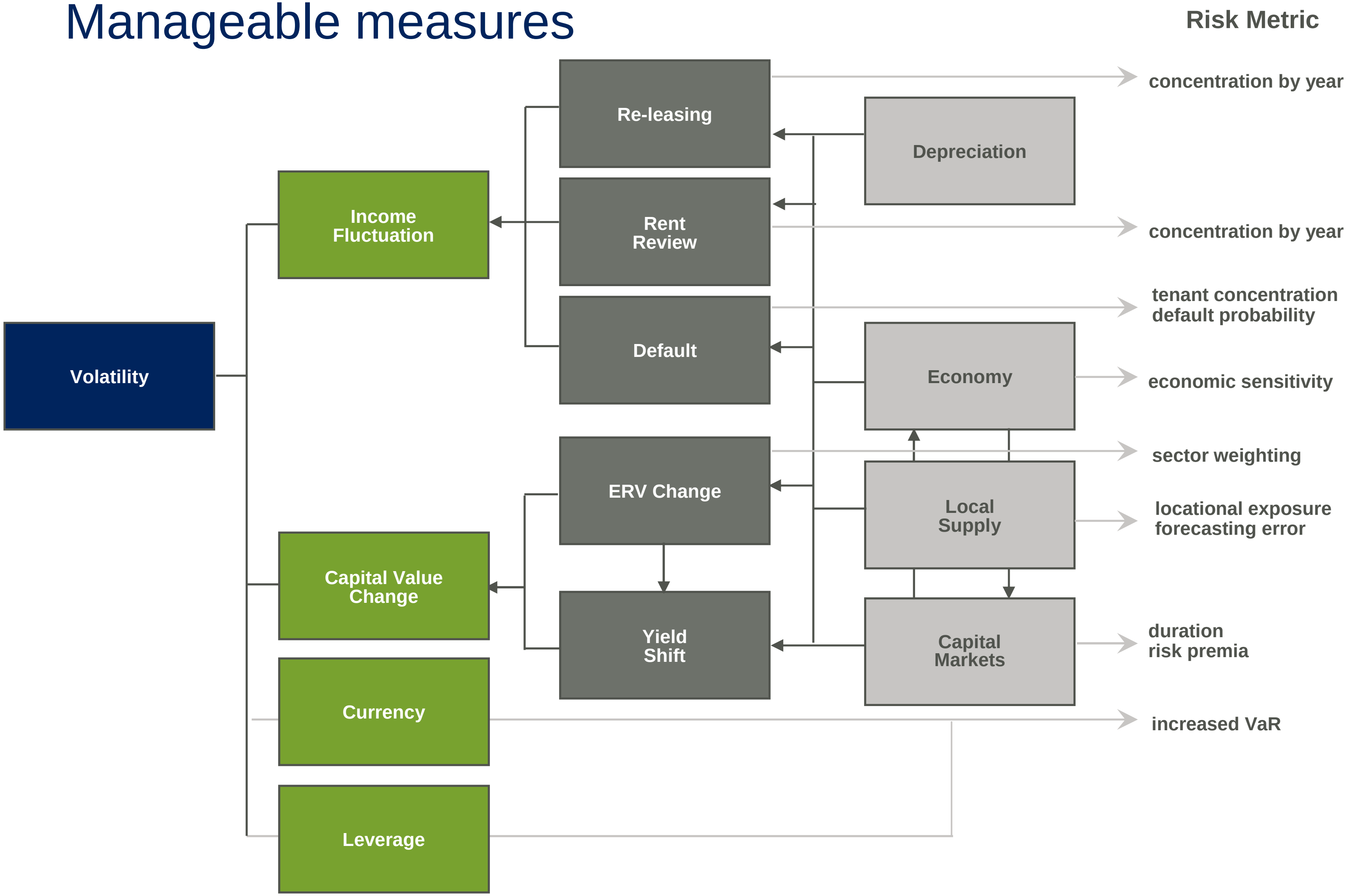
Can these causes be measured and managed?

Manageable measures



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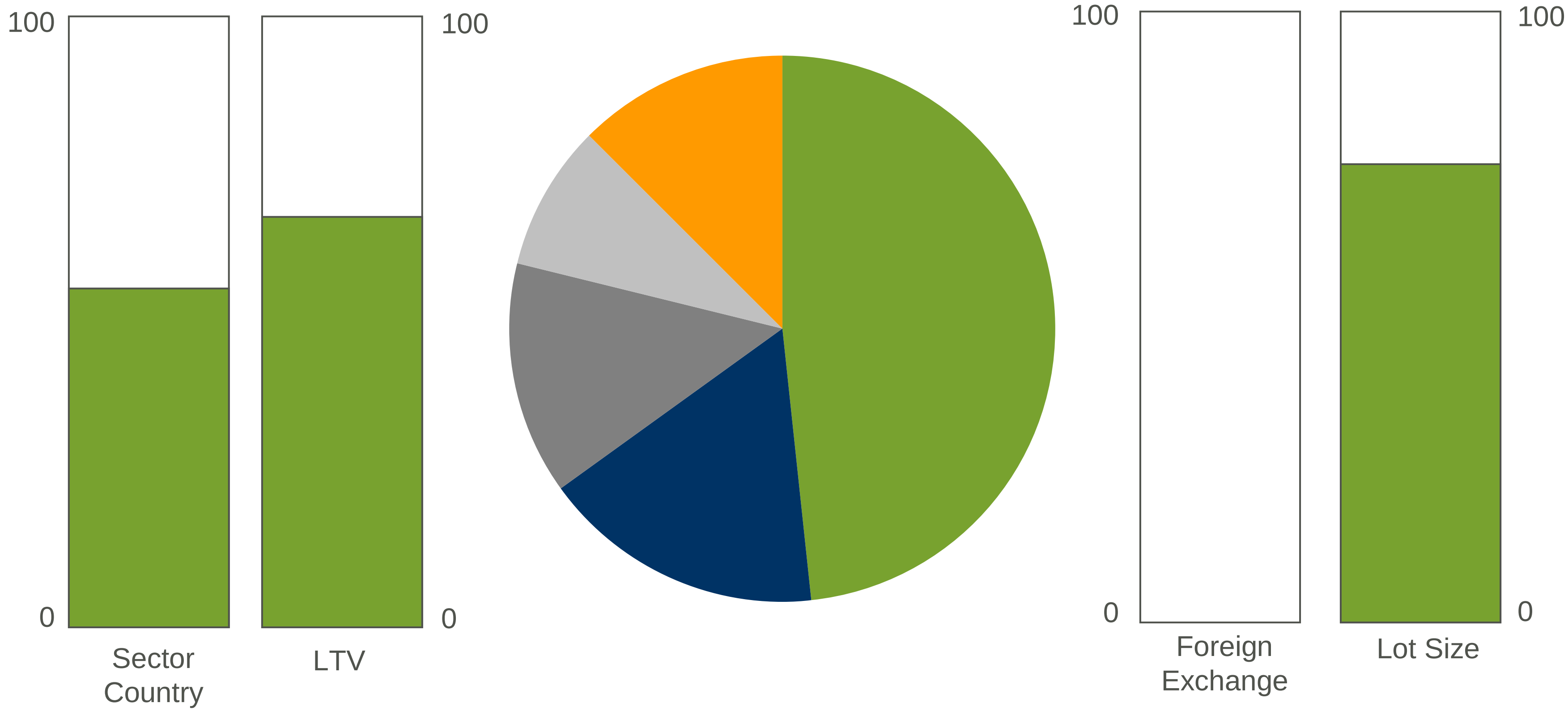
Measuring risk factors: absolute basis



Source: LaSalle Investment Management

Measuring risk in a fund: absolutely

Risk Profile:

Net Operating Income (NOI) Factors:	
Rental rate shifts	30%
Leasing risk	20%
Short term income rollover risk (within 1 year)	10%
Yield shifts	20%
None of the above (i.e. core)	0%
Development (see details below)*	20%
Total (should = 100%)	100%

*** Development:**

Planning/zoning risk	0%
Building permit risk	0%
Liability for cost over run	0%
Liability for time over run	5%
Defect liability	0%
Leasing risks	15%
Total (should tie to % noted above)	20%

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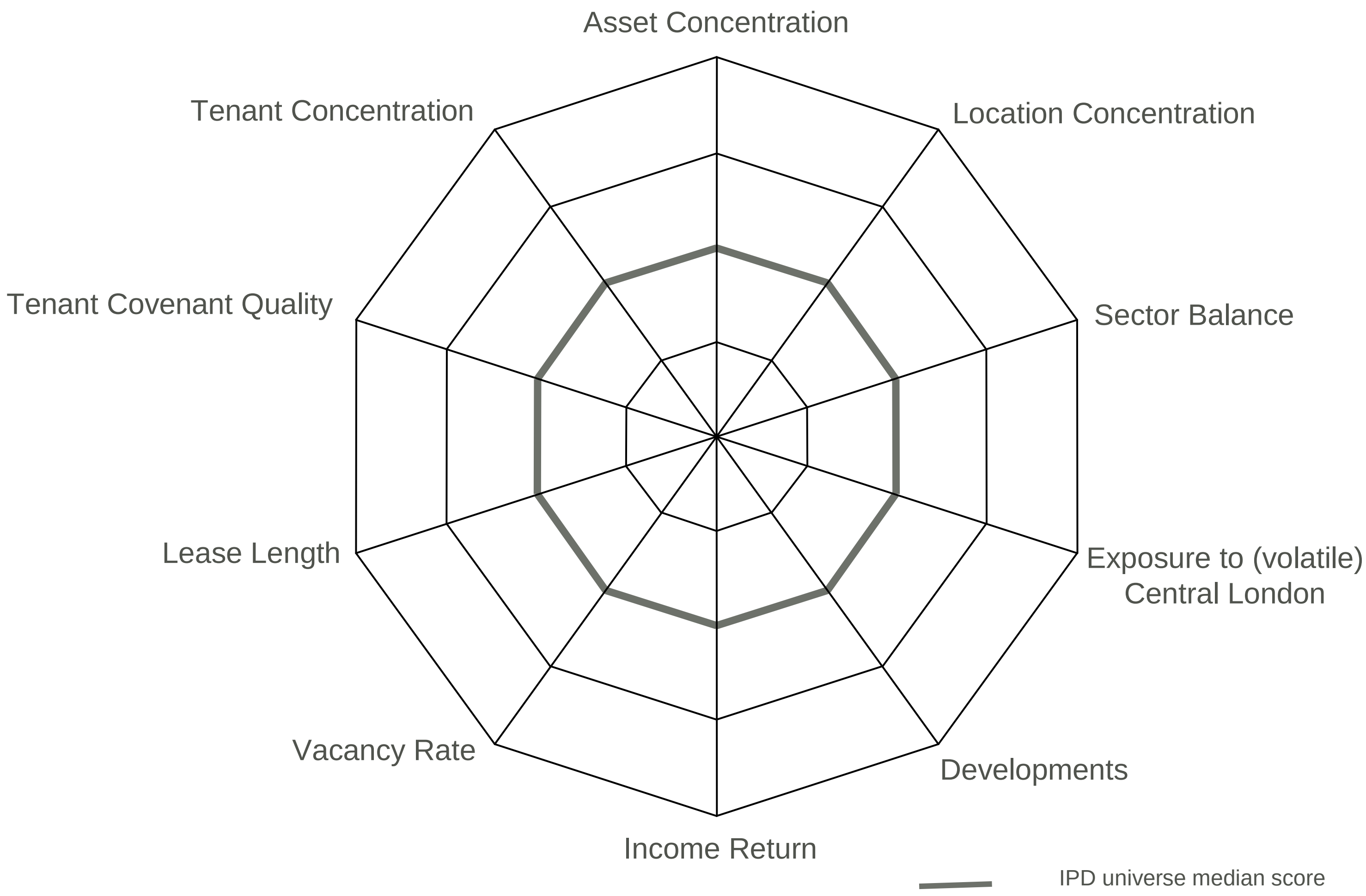
Measuring risk in a fund: relatively

The Blundell Risk Web



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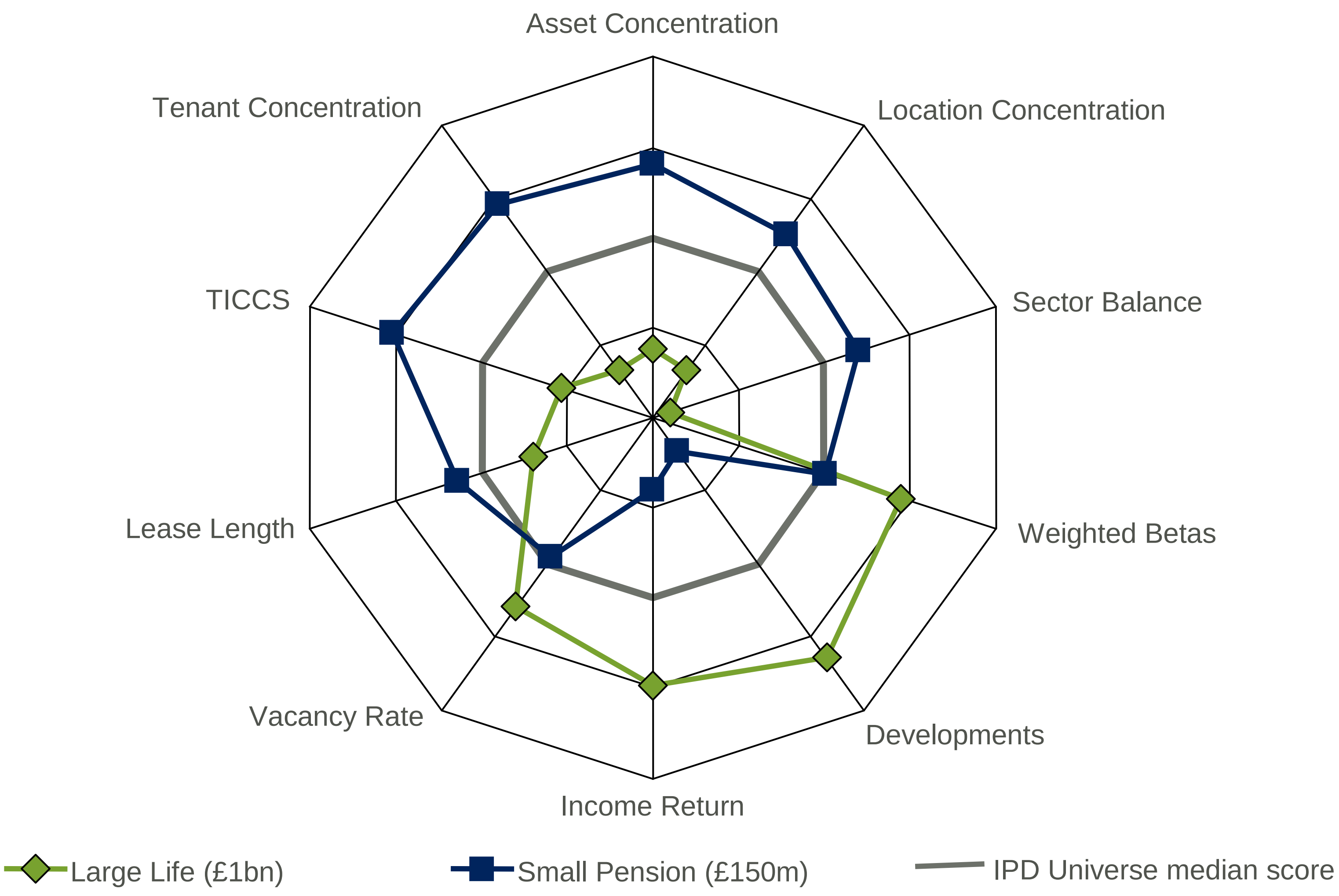
Typical Blundell profile by type of institutional fund



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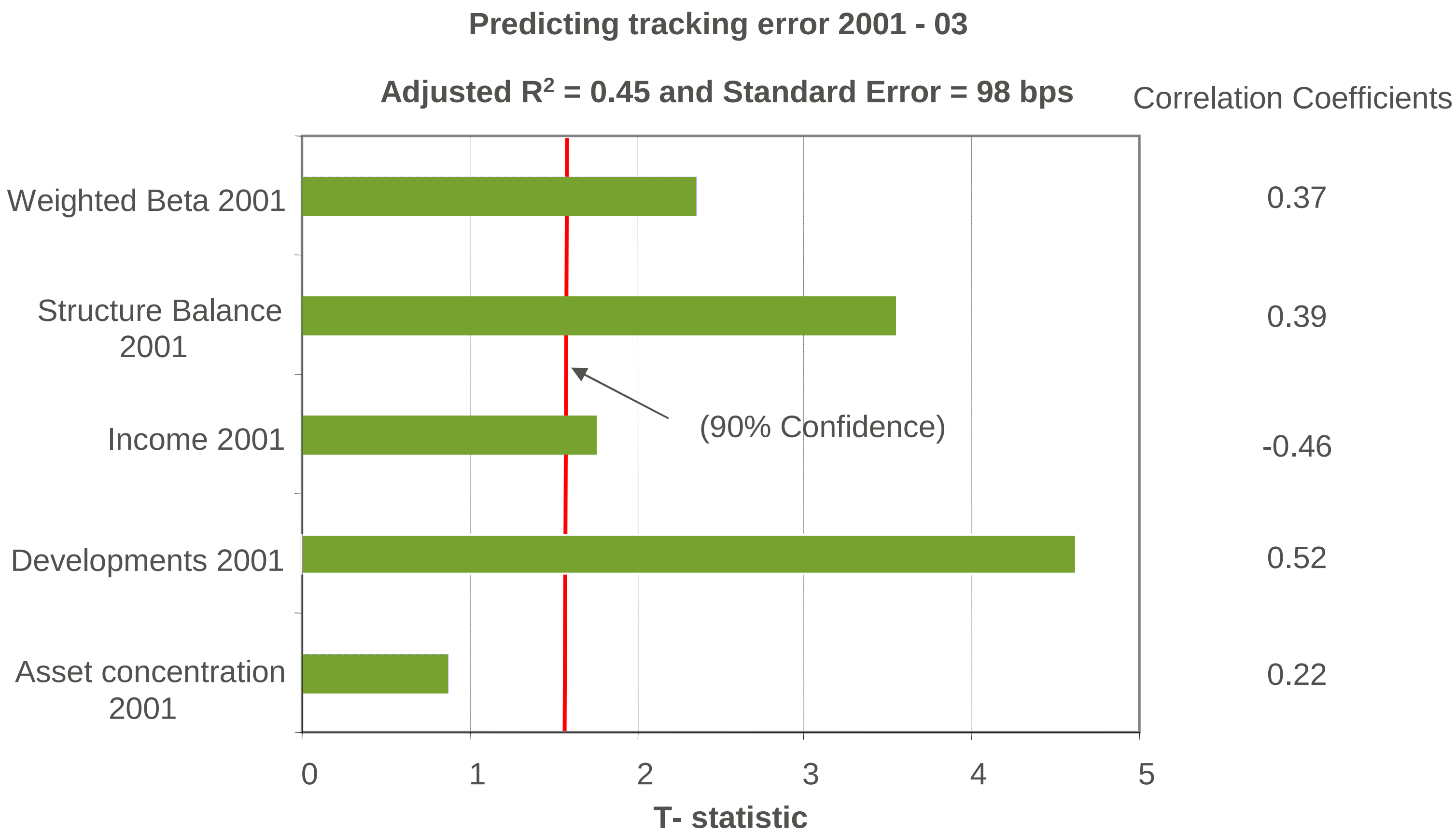
Which risk factors matter most?



"Weighted Beta" was factored by % exposure to London

Source: Blundell et al. (2005)

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How to measure illiquidity risk, what’s the price of illiquidity?

Measuring illiquidity

Transaction speed

- Volume of deals
- Efficiency of sale process
  - Legal and market

Price certainty

- Market transparency

In practice, most investors seek 2 – 3% over bonds for real estate and illiquidity is key component requiring extra return

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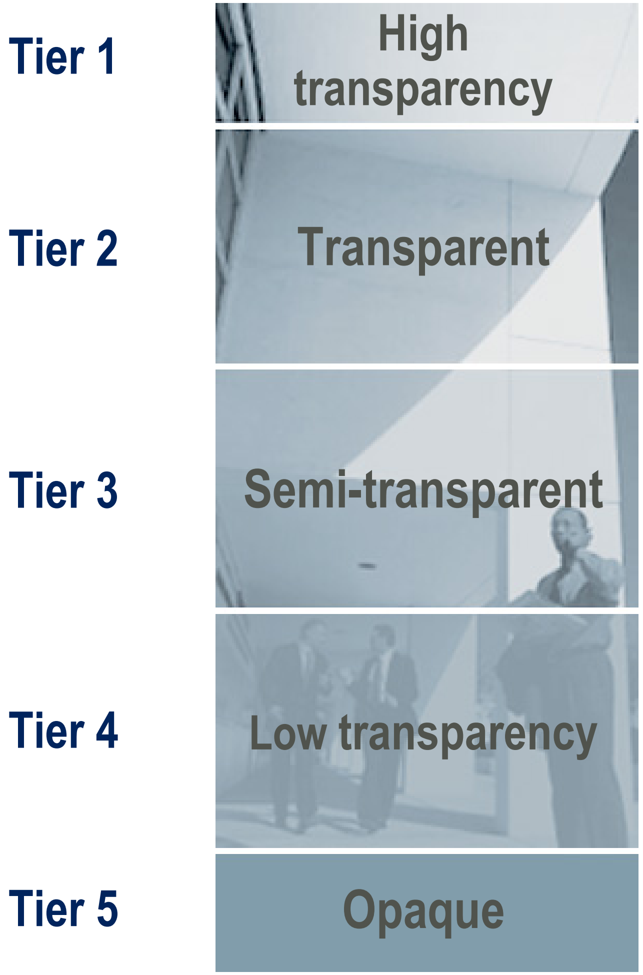
How can the risks in different national markets be compared, including for emerging markets?

Methodology

The survey includes 33 questions designed to measure real estate transparency as objectively as possible. The Real Estate Transparency Index 2008 covers 82 markets, which were rated against 5 transparency tiers.

The questions address five categories of transparency:

1) Investment Performance Indices (7)
2) Availability of Market Fundamentals Data (5)
3) Listed Vehicles Financials (3)
4) Regulatory and Legal Factors (11)
5) Professional Standards and Transaction Process (7)



Key findings of 2008 study

Compared to 2006:

- 27 out of 56 countries improved their transparency scores
- 8 countries moved up a full tier, none moved back
- 26 new markets were added to the Index
- New questions added to address occupier perspective

- Dubai saw the largest transparency improvement globally
- Venezuela is the only country whose transparency level declined
- 28 countries saw little to no movement in transparency scores compared to 2006.
- Of the 5 sub-indices, the availability of market fundamentals and listed vehicles are the two least transparent sub-indices

The ten most transparent countries, 2008

2008 Composite Rank	Country	2008 Composite Score	2008 Composite Tier
1	Canada	1.17	1
2=	Australia	1.20	1
2=	United States	1.20	1
4	New Zealand	1.21	1
5	United Kingdom	1.31	1
6	Netherlands	1.33	1
7	France	1.34	1
8	Sweden	1.43	1
9	Belgium	1.48	1
10	Ireland	1.52	2

Source: Jones Lang LaSalle, LaSalle Investment Management

Risk ranking national markets: characteristics

Developed

- Sovereign bond
- Liquidity
- Typical lease length
- Stability/volatility of income stream

Focus on income producing assets

Emerging

- Sovereign bond
- Real estate transparency
- Political stability
- Expected GDP growth

Focus on development

Conclusions

- Causes of volatility in asset and portfolio returns can be identified
  - fundamentals and modulators

- And measured (both absolutely and relatively) so they can be managed

- Measuring illiquidity risk is complex but the number is more important:

- Risks in different national markets be compared through analysing a variety of factors, particularly market transparency

But standard finance risk measures aren't much use for private real estate

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