

Introduction

Why would tenants abroad want this real estate?

Need and scarcity of RE products and better RE products

Will they keep paying these prices abroad?

Declining need and better competitors

What do tenants of my international investments want?

Highest asset quality for the lowest prices

How do I know if I am investing in quality real estate?

This research shows you how.



Contents

- *Introduction*

1. **Problem analysis**

2. **Theory**

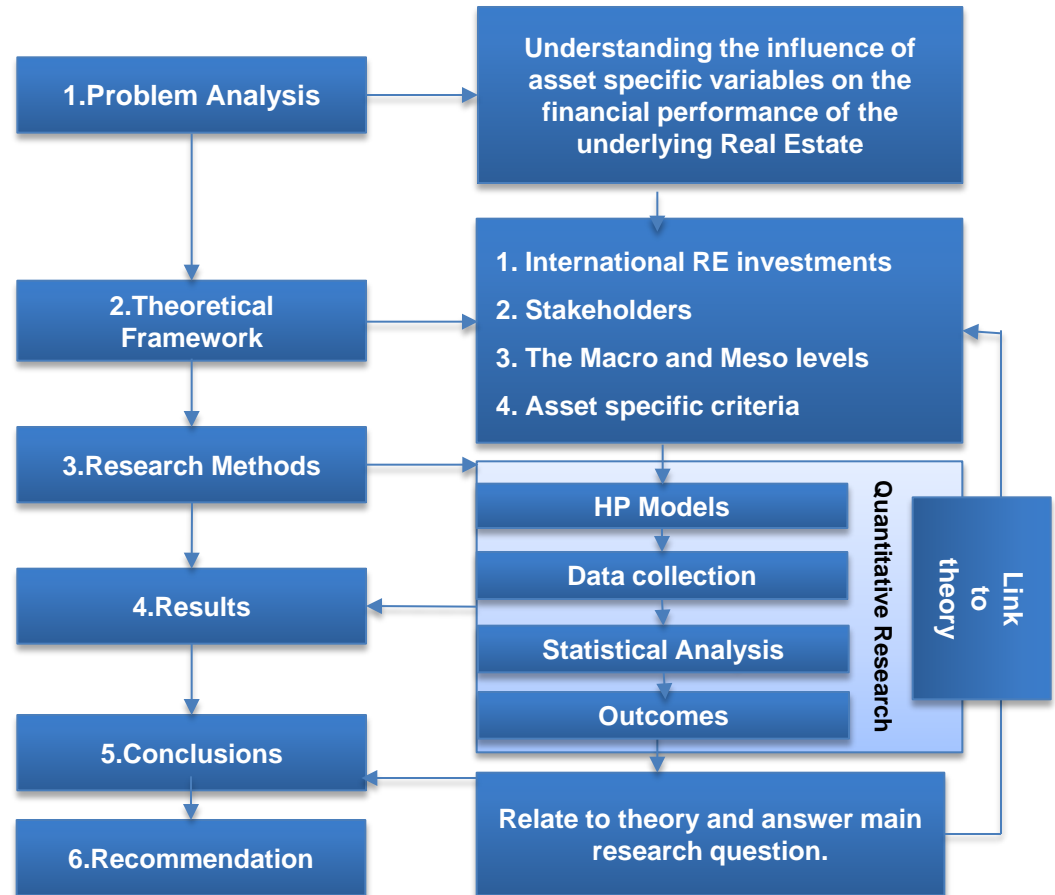
3. **Research**

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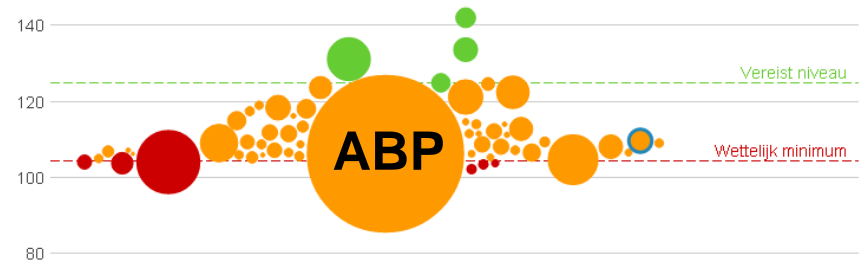
6. **Recommendation**

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Nederlandse pensioenfondsen denken
dat je miljarden kunt beleggen
in vastgoed zonder kennis van stenen

-Property NL March 2014-



“When it comes to analyzing the performance of non-listed real estate funds the available literature remains limited”.
- (Acosta 2012)-

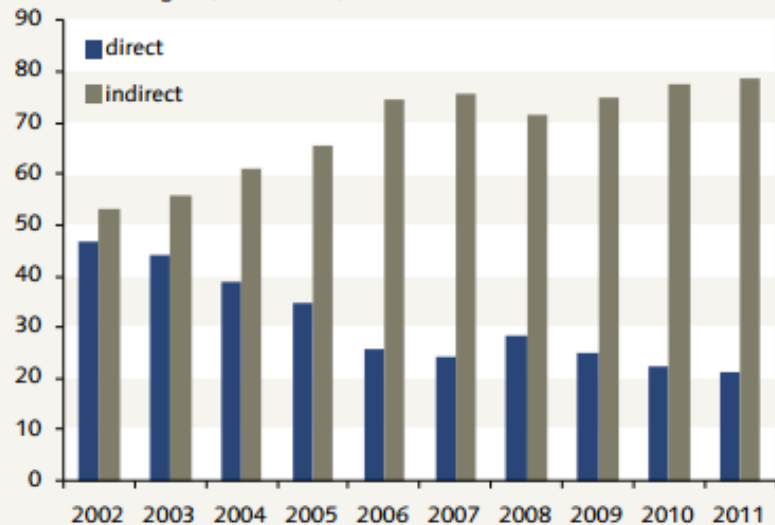
“IPD and INREV Research shows that approximately 80% of investors do NOT use property specific factors in their investment analyses”.
- (IP Real Estate 2014)-



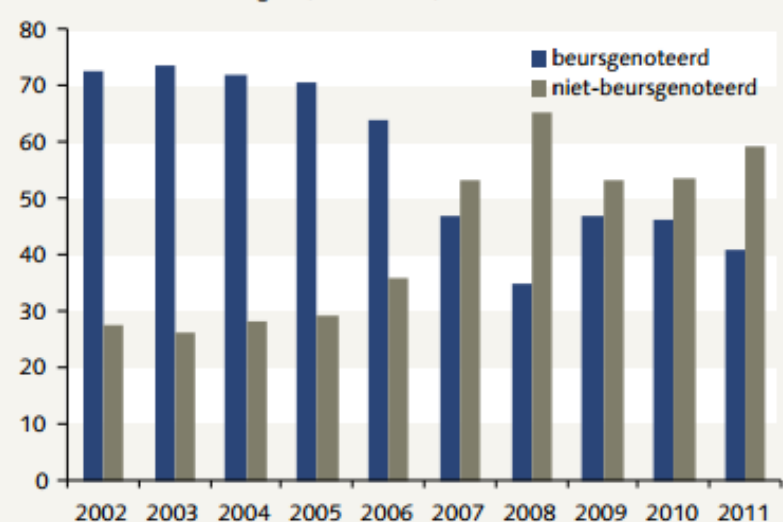
“The growth in RE investments is predominantly caused by the larger number of indirect investments.

Within these indirect investments the amount of international investments has strongly increased.” - (FGH Bank 2013)-

Balanswaarde vastgoed, 2002-2011, in %



Balanswaarde indirect vastgoed, 2002-2011, in %



Problem solving

- Improvement of international investment methodology
- Determining which asset specific criteria are influential on performance
- Translating these asset specific criteria into an investment tool

Main research question to be answered

“How can asset specific analysis improve International Real Estate fund investment analysis?”



Sub research questions

1. How do the different forms of international private fund investments affect investor criteria?
2. How do the relationships between stakeholders affect investor criteria?
3. How do macro and meso economic aspects influence commercial real estate performance?
4. Which asset specific criteria can be used for underlying asset analysis of international private real estate portfolios?



Hypothesis

Adding ASC analysis to the fund investment proces will provide more insights into the financial performance aspects of private funds

Objectives

Determining which ASC are of influence on financial performance of commercial real estate

Adding ASC analysis into the investment proces by means of a investment tool.

Int. Private Indirect Real Estate Investment Fund

Can be analysed by

Adding Asset Specific indicators to fund analysis

Macro level Return indicators

- Gross Domestic Product
- Employment growth
- Spending/consumer power
- Inflation

Fund level indicators

- Fund Structure
- Fund Style
- Trackrecord
- Management fees

Meso level Risk indicators

- Local competition
- Import/export
- Regional employment
- Regional developments

Asset specific indicators

- Locational Aspects
- Building Aspects
- Sustainability Aspects

Translates into

Real estate Investment fund profile

Macro
profile and data

Meso
profile and data

Fund
profile and data

Asset specific
profile and data

Has to be measured with

Real Estate Investor Criteria

Macro
Criteria

Meso
Criteria

Fund
Criteria

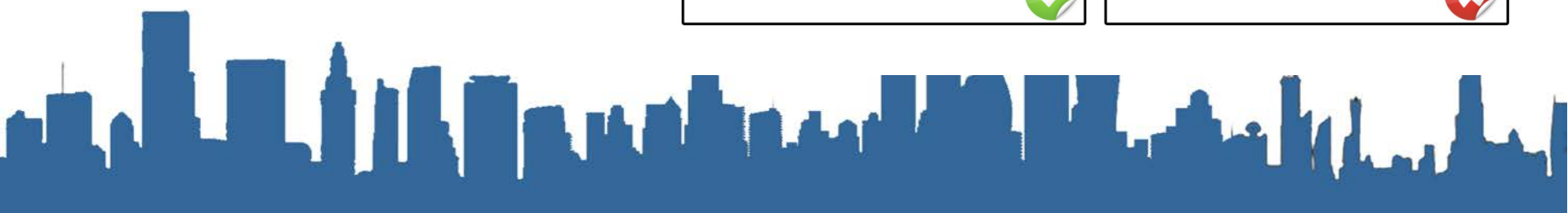
Asset specific
Criteria

In line with criteria

Not in line

Invest in Real Estate Fund

Decline Real Estate Fund

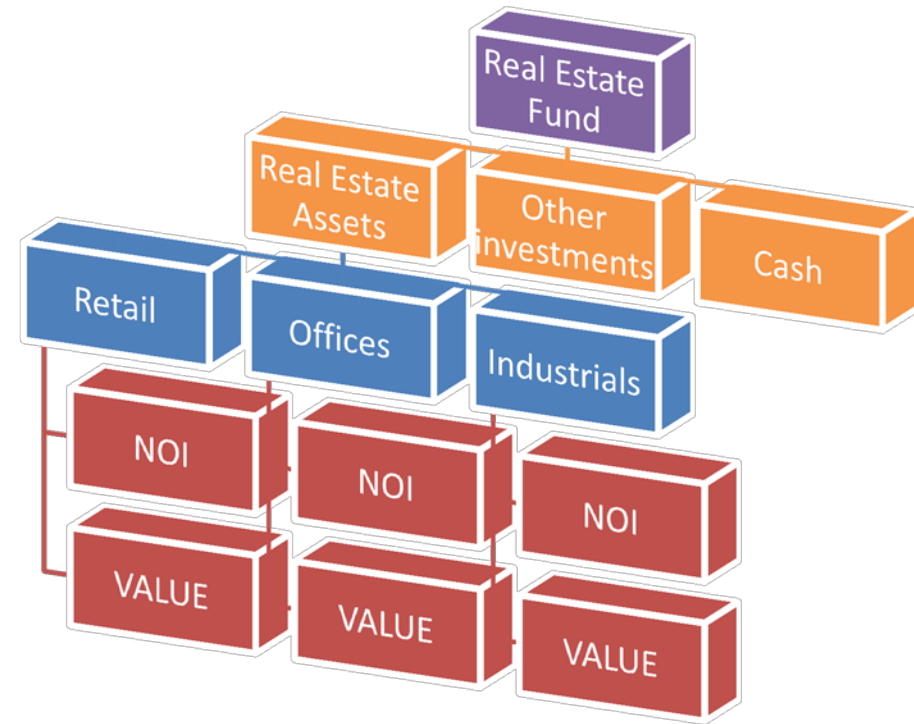


1. International real estate investments

One of the main goals of this research is decreasing the risk of international private fund investments

It became clear that NOI and EV are underlying asset based performance figures which are of great influence on the fund and asset returns

Describing these types of risks has shown that most of the relevant risks for international private real estate fund investments are **micro level based risks**



The NOI and EV will therefore be used as financial performance measure.



2. Stakeholders

1. Investors
2. Funds
3. Tenants

Main conclusions:

- Conflict of interest between stakeholders
- Fee structure influences the returns
- Quality and structure of management is of influence on the NOI and EV

This should be controlled for in the regression models. This is done by adding a fund category variable for each asset.

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A REAL ESTATE INVESTMENT MANAGEMENT FIRM



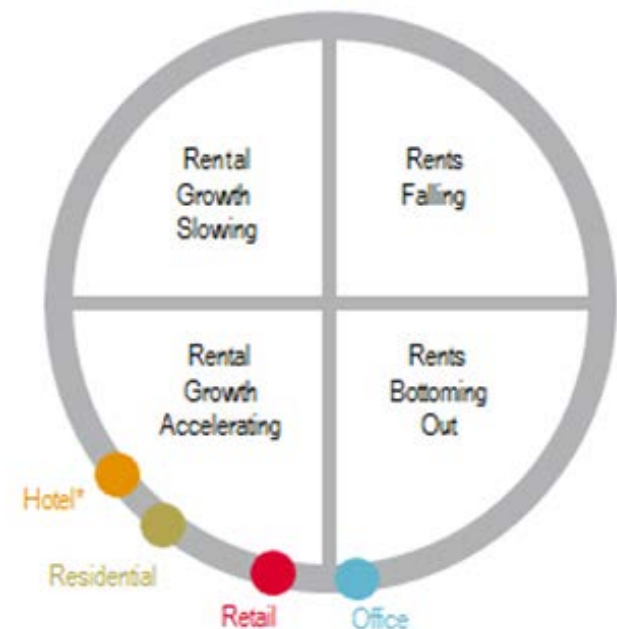
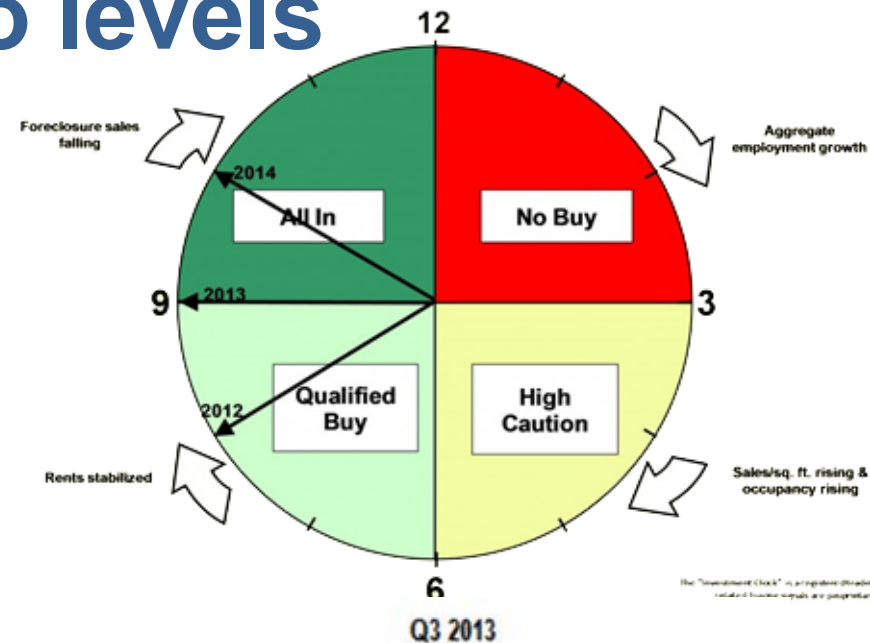
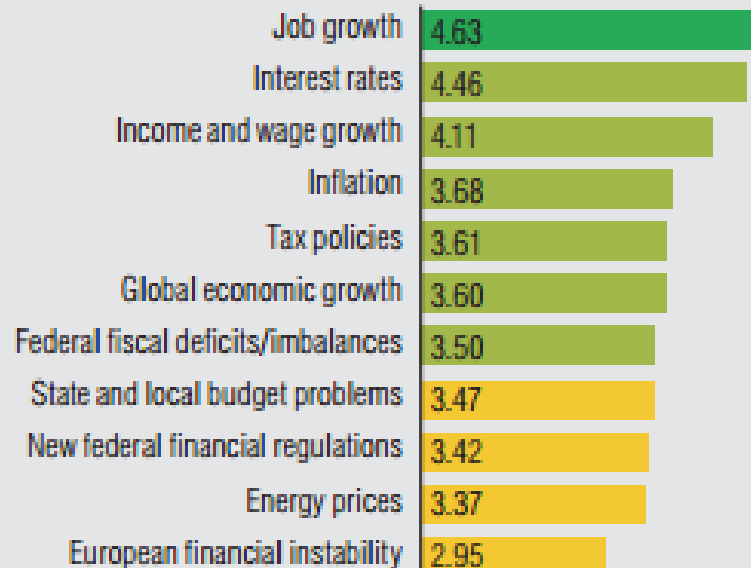
3. The Macro and Meso levels

- **Macro is all about timing.**
- **Transaction year is therefore used as variable in the research**

2014 Issues of Importance for Real Estate

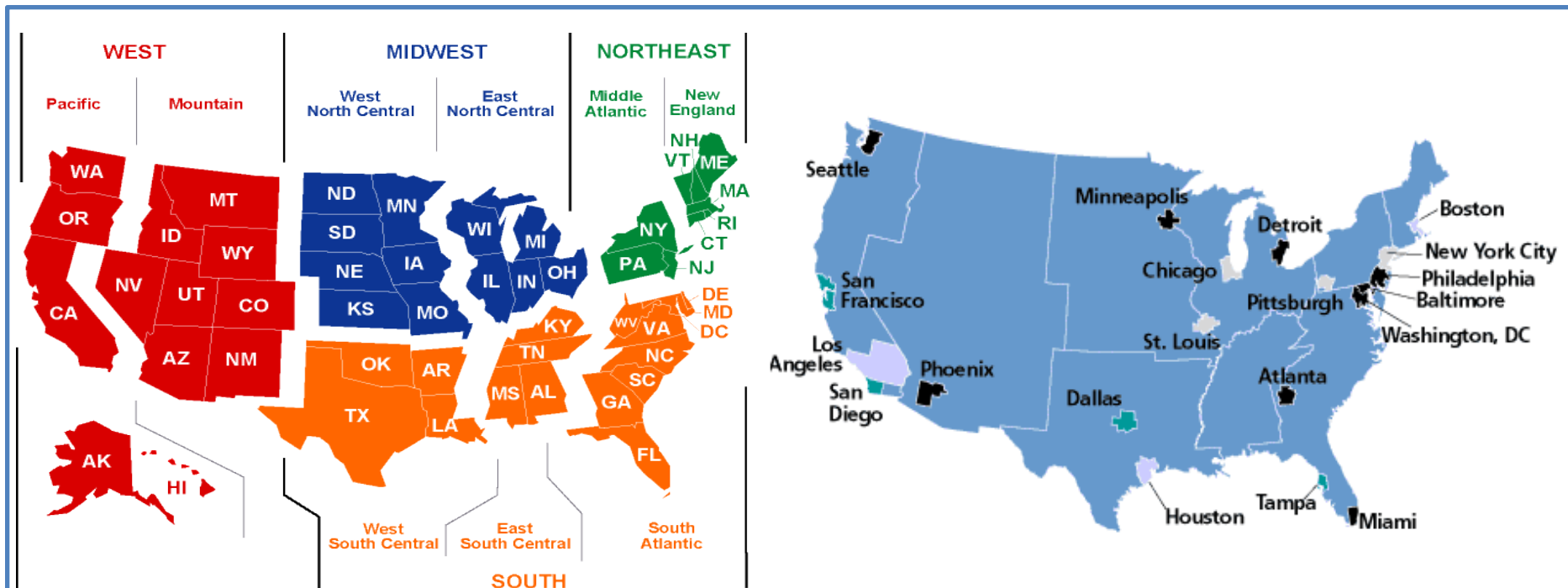


Economic/financial issues



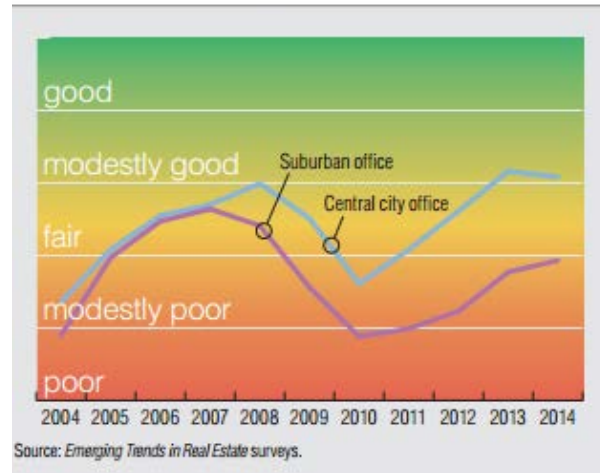
3. The Macro and Meso levels

- Meso is about regions and gateways
- Geographical region and gatewaycity are used as variables in the research

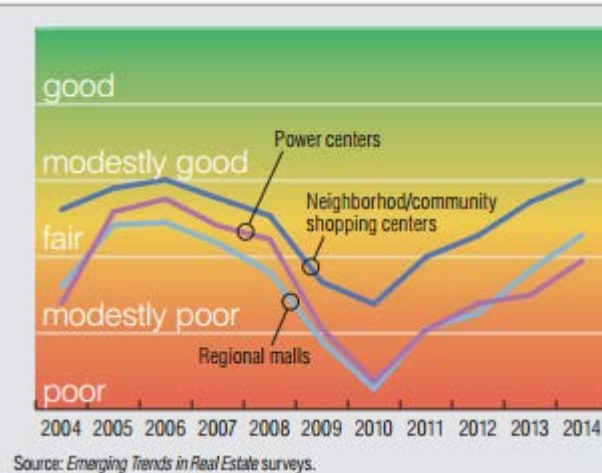


4.Asset specific criteria, the Micro level

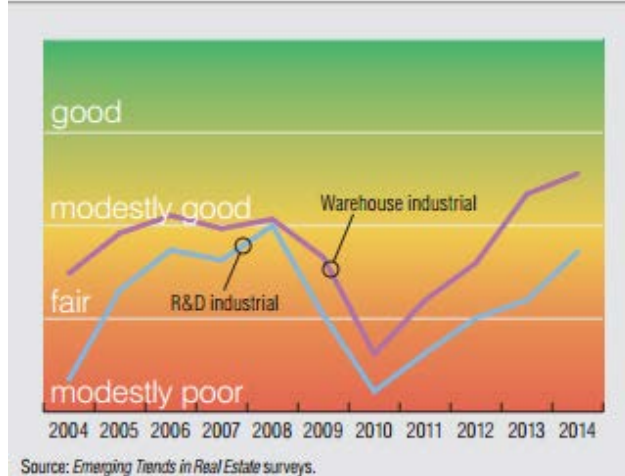
Office Investment Prospect Trends



Retail Investment Prospect Trends



Industrial/Distribution Investment Prospect Trends



Hedonic pricing studies

HEITMAN
A REAL ESTATE INVESTMENT MANAGEMENT FIRM

Morgan Stanley

CORNERSTONE

ddr

LASALLE
INVESTMENT MANAGEMENT

Principal
*Real Estate
Investors*

UBS

TIAA
CREF

PROLOGIS

Retail Assets

6.4 billion \$ in assets
120 buildings
63 million av. Asset value



Dependent variables

Net operating incomes
Estimated Values

Office Assets

9 billion \$ in assets
80 buildings
114 million av. Asset value



Dependent variables

Net operating incomes
Estimated Values

Industrial Assets

8 billion \$ in assets
230 buildings
35 million av. Asset value



Dependent variables

Net operating incomes
Estimated Values

4 years 2010-2013

All 8 regions in the US

The Problem

Theory

Research

Findings

Conclusions

Office Property 1

Los Angeles, CBD, A

Year: 1986, (No ren)

Energy Star: Yes

No LEED

24 Stories



\$20 NOI psqf
\$449 EV psqf

Office Property 2

Washington , CBD, A

Year: 2009

Energy Star: Yes

LEED Platinum

11 stories



\$37 NOI psqf
\$936 EV psqf

Retail Property 1

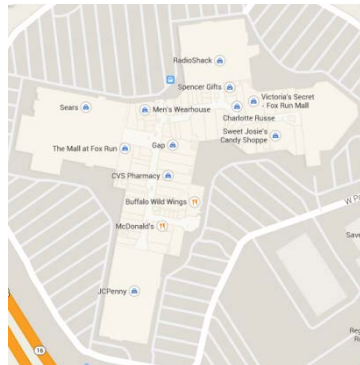
Newingtn, A Reg Mall

Year: 1983, 2013

WalkScore: 66

TransitScore: -

1 story



\$20 NOI psqf
\$449 EV psqf

Retail Property 2

Miami, A Super Mall

Year: 1962, 2013

WalkScore: 65

TransScore : 79

2 Stories



\$130 NOI psqf
\$645 EV psqf

Macro criteria	Measurement technique
Year	Transaction year

Meso criteria	Measurement technique
Region	Region Category
Gateway City	Binary YES/NO

Micro - Location criteria	Measurement technique
Distance to CBD	Distance in miles / Google walk score
Distance to transportation Nodes	Google Walk/Transit Score
Accesibility	Google walk / Transit score
Walkability	Google Walk Score
Amenities	Google Walk Score
Gateway City	Specific city
Alternative transport	Airpot, Rail, Port Categories

Micro - Building criteria	Measurement technique
Last Update Age	Year
Building type	Type Category
Ceiling height	Feet
Number of stories	Amount
Size / Total Floor Area	Amount
Building amenities	Not measured
Parking ratio	Amount/Size
Sustainability labels & certifications	LEED, Energy Star
Tenant Density	Tenants/sqfLFA
Number of floors	NumberFloors
Ceiling height	CeilingHeight

Other criteria	Measurement technique
Fund	Fund Category

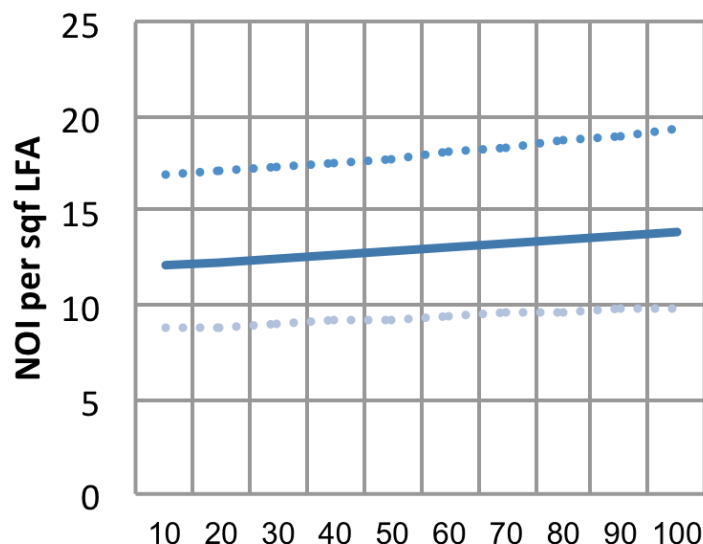
<https://www.youtube.com/watch?v=s4wVHNj5ppE>



Retail Assets

Variable	Y-10	Y-11	Y-12	R-ENC	R-ME	R-SE	GC	GW	Age	Type B	Type C	Size	TD
Change							No	+1	+1			+1%	+0.0001
NOI	-11%	-11%	-7%	-68%	-64%	-99%	-27%	0,7%	-	113%	-	-0,3%	-
EV	-16%	-11%	-6%	-51%	-	-61%	-25%	0,6%	-1,2%	98%	39%	-0,2%	1,6%

Walk score effect on NOI per sqf LFA



#	NOI Variables	Scale	EV Variables	Scale
1	Type Mall	ASC	Type mall	ASC
2	Region SE	Meso	Region SE	Meso
3	Region ENC	Meso	Region ENC	Meso
4	Region ME	Meso	Type NCcenter	ASC
5	Gateway No	Meso	ZTenantDensity	ASC
6	ZLnLFA	ASC	Year 2010	Macro
7	ZGoogleWalk	ASC	ZLnLFA	ASC
8	Year 2011	Macro	Year 2011	Macro
9	Year 2010	Macro	ZGoogleWalk	ASC
10	Year 2012	Macro	ZLastUpdateAge	ASC
11	-	-	Year 2012	Macro



Macro: Year

Meso: Region and Gateway City,

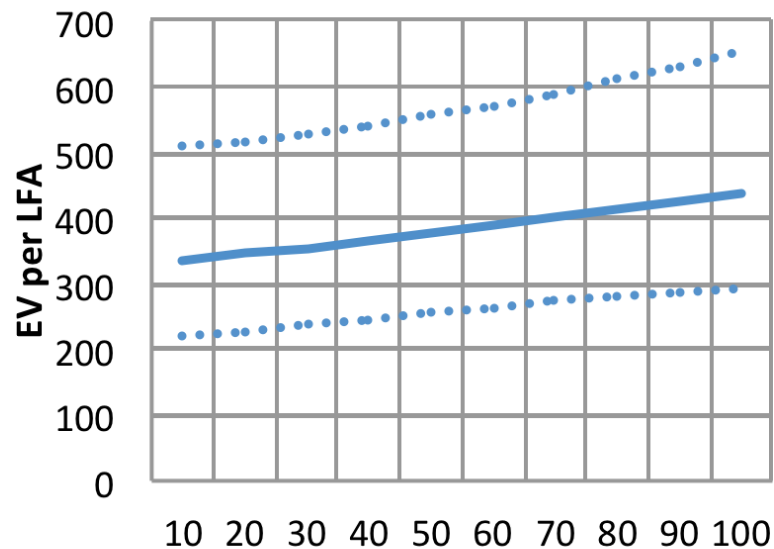
Micro / Asset specific: Google Walk Score, Retail Type, Size, Tenant Density and Age



Office Assets

Variable	Y10	Y11	Y12	R-ENC	R-Mtn	R-NE	GW	Age	Type	Class	Size	Fund	Fund	LEED
Change							+1	+1	CBD	A	+1%	CS	MSP	No
NOI	-	-	-	83%	-	103%	-	1,9%	16%	-	-,29%	-53%	-	-
EV	27%	12%	6%	-	-63%	-	0,7%	-	-	65%	-	-	103%	-22%

Walk score effect on EV per sqf LFA



#	NOI Variables	Scale	EV Variables	Scale
1	Region NE	Meso	Fund	Fund
2	Region ENC	Meso	Class A	ASC
3	Type CBD	ASC	Region Mtn	Meso
4	Fund	Fund	Year 2010	Macro
5	ZLN_LFA	ASC	LEED	ASC
6	ZLastUpdateAge	ASC	ZGooglewalk	ASC
7	-	-	Year 2011	Macro
8	-	-	Year 2012	Macro

Macro: Year,

Meso: Region,

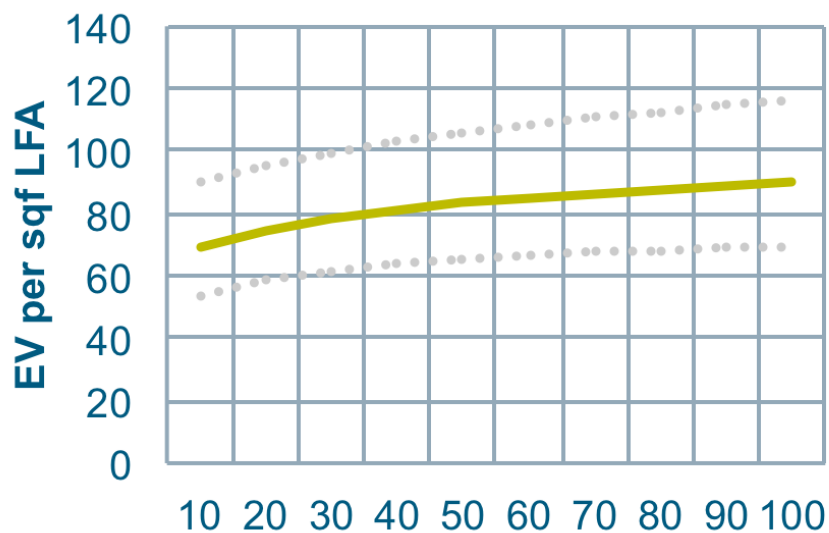
Micro / Asset specific: Google Walk, Size, Office Type, Office Class, LEED , Age Fund



Industrial Assets

Variable	Y-10	Y-11	Y-12	Reg-Pac	Reg-NE	GT	Airport	Size	GC
Change						+1%	No	+1%	No
NOI	-36%	-	-	83%	146%	-	-47%	-0,22%	-47%
EV	21%	16%	7%	-	-	0,14%	-22%	-	-

Transit score effect on EV per sqf LFA



#	NOI Variables	Scale	EV Variables	Scale
1	Region NE	Meso	Airport	ASC
2	Region Pacific	Meso	Year 2010	Macro
3	Gateway city	Meso	Transit score	ASC
4	Airport	ASC	Year 2011	Macro
5	Year	Macro	Year 2012	Macro
6	Size	ASC		

Macro: Year,
Meso: Region and Gateway City,
Micro / Asset specific, GoogleTransit,
 Airport property, Size, Age

“How can asset specific analysis improve International Real Estate fund investment analysis?”

- Better understanding of the determinants of financial performances of the underlying commercial assets in private real estate funds. → *decreases knowledge risk*
- Comparison of funds on the basis of the influential ASC provided by the research outcomes → *added selection criteria*

The analyzed asset specific criteria have proven to be of influence for the NOI's and EV's

The investment tool improves the risk-return ratio.

This confirms the hypothesis: Analyzing indirect real estate investments with added underlying asset specific criteria will give better insight into profits of a proposed investment.



Limitations

- Limited amount of data.
 - Sample size per sector
 - Observations per variable
 - Latent variables
 - Missing and omitted variables
- Fails to include many different types of real estate (Hotels, personal storage or residential real estate)
- Focuses on one single international country fund causing the model to be most useful for US fund investments
- Multicollinearity limits the research

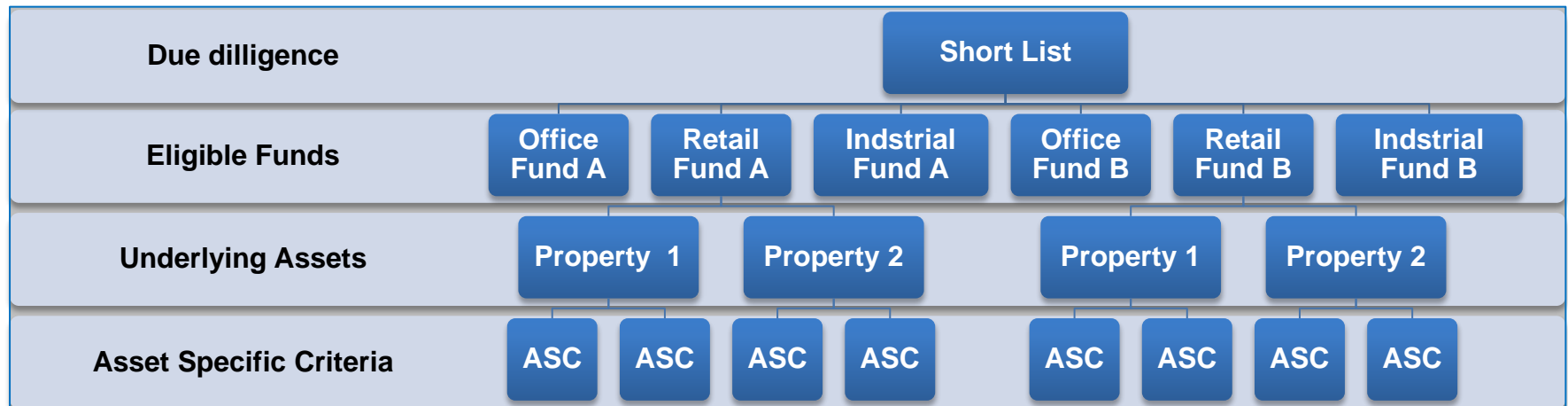
Recommendation

- The purpose of this tool is to give investment professionals who are generally a few scale levels away from the assets a relative quick method of examining the underlying assets of a private real estate fund.
- This gives them an idea of the NOI and EV influencing qualities of the assets. This can protect an investor from buying into a fund with bad assets or aid an investor in choosing the fund with better asset specific criteria.

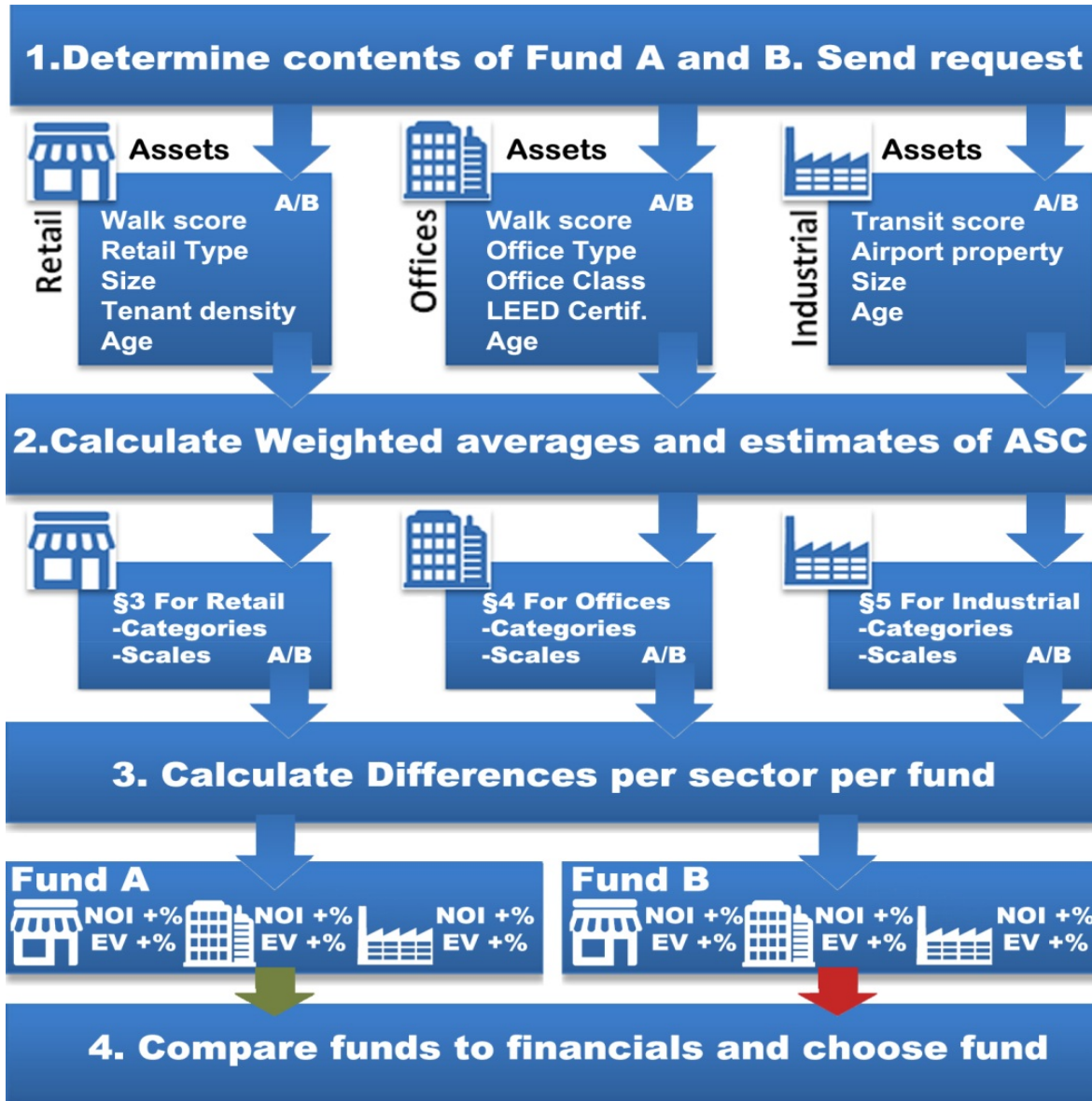


Recommendation

- The private fund investment process consists out of multiple steps.
- In the due diligence phase performs an analysis of the proposed funds in the shortlist on the basis of their investment criteria.
- These criteria include macro, meso, policy criteria, liquidity criteria etc.
- The ultimately chosen fund is the optimal mix of these criteria.
- The addition of the asset specific criteria (ASC) analysis should therefore be placed in this step so that it can be taken into account when comparing funds.



Recommendation



Variable	Sig for
Year	NOI / EV
Region	NOI / EV
Gateway city	NOI / EV
Google Walk	NOI / EV
Type	NOI / EV
Size	NOI / EV
Age	EV
Tenant Density	EV



Variable	Sig for
Year	EV
Region	NOI / EV
Fund	NOI / EV
Google Walk	EV
Type	NOI
Class	NOI / EV
LEED	EV
Size	NOI
Age	NOI

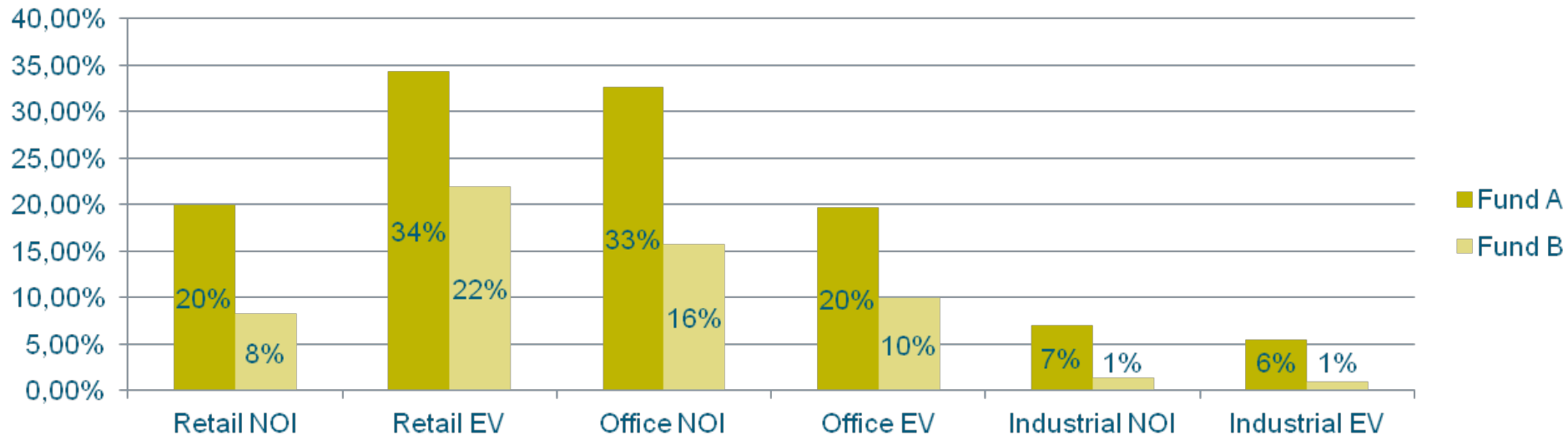


Variable	Sig for
Year	EV
Region	NOI
Google Transit	EV
Airport	NOI / EV
Size	NOI
Gateway City	NOI



Recommendation

Example fund comparison outcomes:



The outcomes indicate that fund A is the fund with higher EV and NOI increasing aspects in all three sectors.

Recommendation

This tool can amongst fund comparison be used for:

- **Identifying underpriced or overpriced funds.**

Tool assessed NOI's and EV's higher or lower as actual NOI's and EV's. Profit or loss possibilities

- **Comparing sectors**

Assessing which sector is spread over better locations, variables used for different sectors such as Google walk can be used. Different estimates per sector

- **Comparing NOI's to EV's**

Certain funds might reflect the influence of their ASC in their NOI's but not in their EV's or vice versa.

Lagging valuations or contract rent adjustments.



Questions?

