Three Decades of Global Institutional Investment in Real Estate

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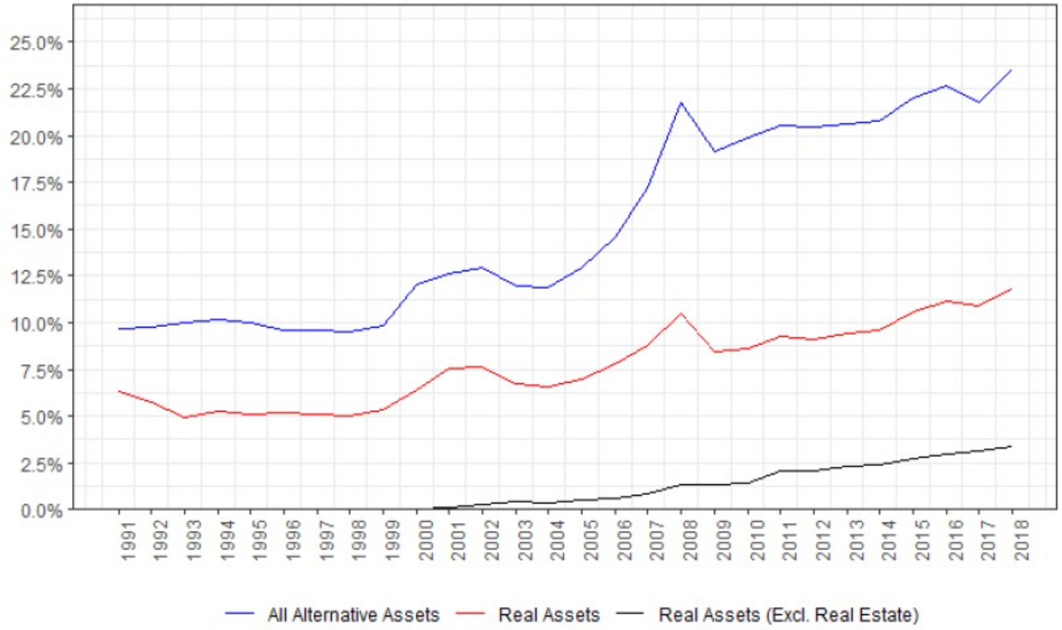
MAASTRICHT CENTER FOR REAL ESTATE

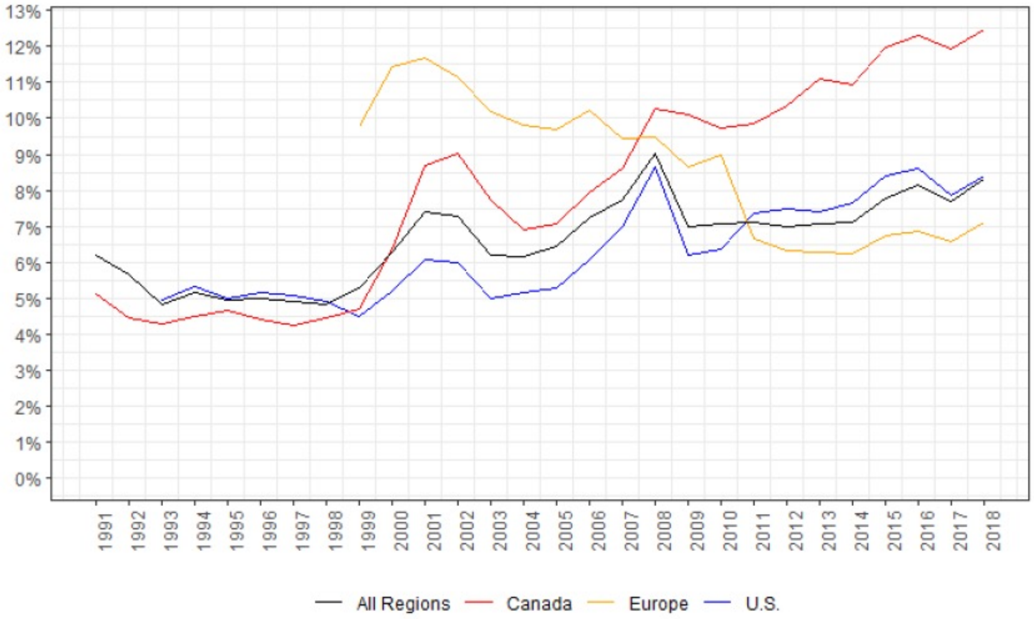
The private asset revolution

“Alternative” assets make up almost 25% of pension fund assets



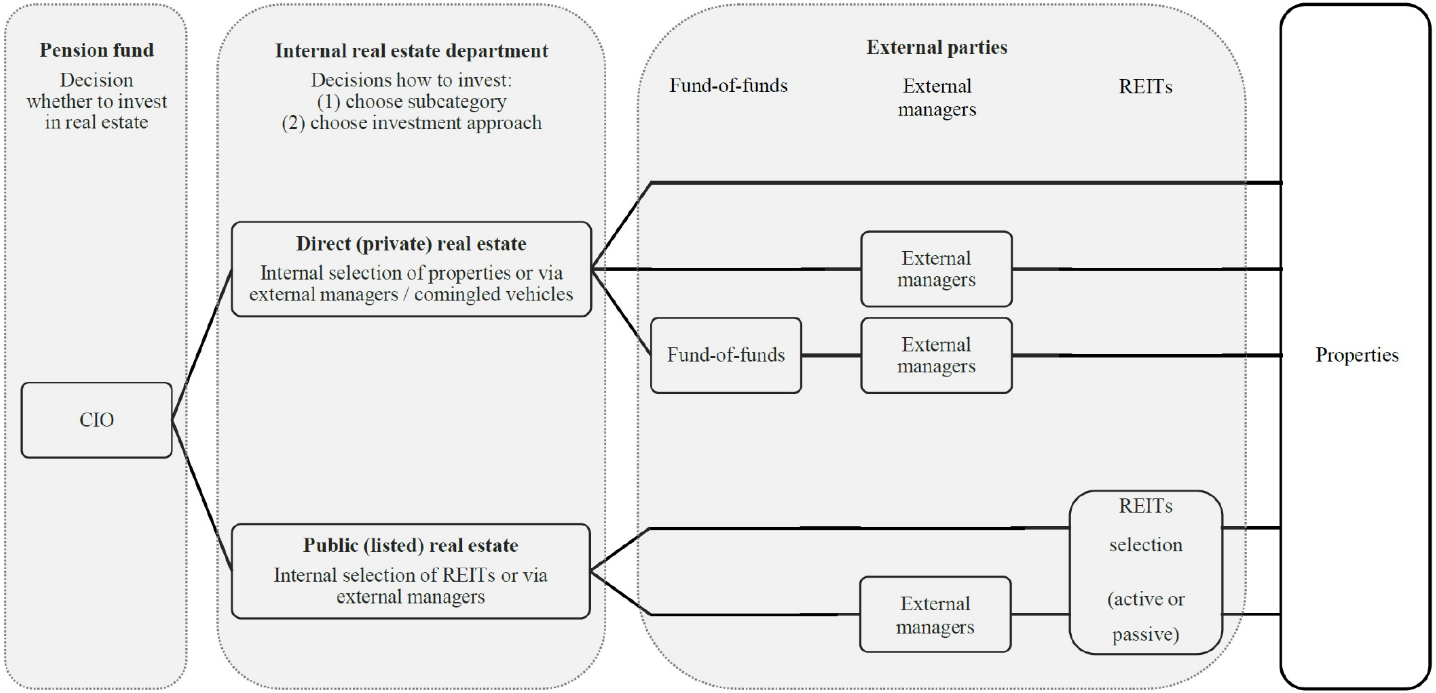
Real estate allocations across regions

Up from 6% to 8%, in Europe more pension funds invest, but less



The consequences of pension fund choices when investing in real estate

(How do pension funds invest in real estate?)



Andonov, Eichholtz and Kok (2012)

The consequences of pension fund choices when investing in real estate

1. How do pension funds invest in real estate?
   - Style: private real estate or public (listed) real estate?
   - Approach: internal selection of properties and REITs, or through external managers and fund-of-funds?

2. What does that bring?
   - What are the investment costs of pension fund allocations to real estate?
   - What is the performance of pension fund investments in real estate?

Key takeaways

1. Over the past three decades, real estate has cemented its position as the third-largest asset class in pension fund portfolios. Current pension fund allocation to real estate is 8.7%, on average.

2. Private is popular, with a 90/10 split between private real estate and public real estate (REITs).

3. Pension funds deploy a wide range of real estate allocation strategies, with intermediation (fund-of-funds, LPs) growing in popularity over the past decades.

4. Real estate has provided stable returns over the past decades, with gross returns similar to stocks, and net returns in between bonds and stocks. Private equity shines, other alternatives not so.

5. Intermediation is costly, extended chains lead to neither luck nor skill.

6. Pension plans should more strongly consider REITs.

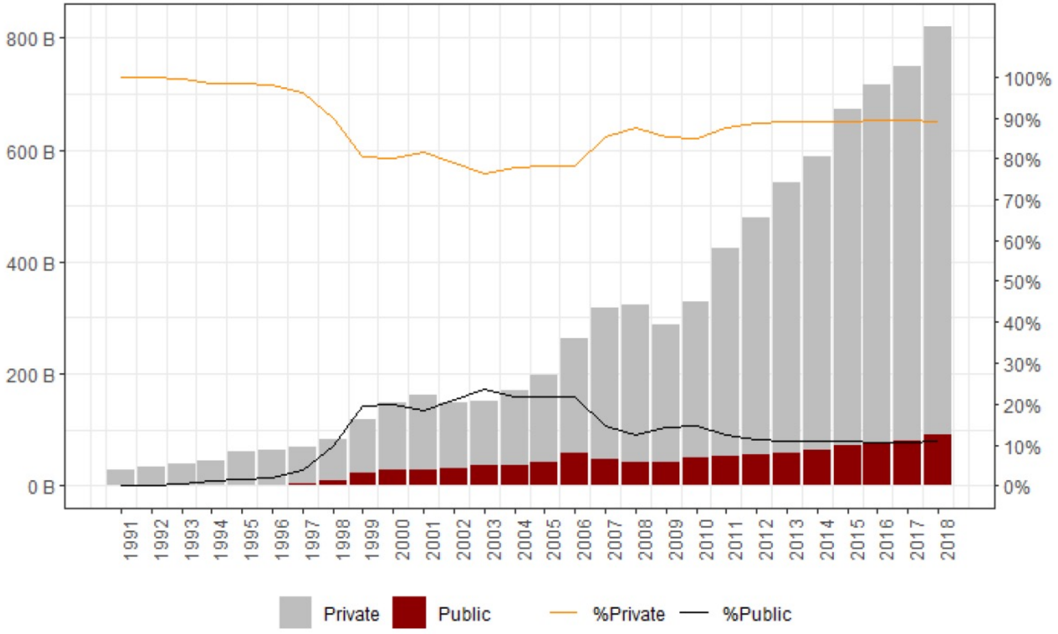
The CEM database

1,131 pension funds over a 29 year period

	# Funds	# Observations	Size in USD billion	Real Estate Holdings in USD billion
U.S.	611	4,772	24.87	1.24
Canada	260	2,594	19.68	1.53
Europe	227	1,116	46.05	1.61
Rest of World	33	187	130.27	2.81
Overall	1,131	8,669	31.02	1.46

How do pension funds invest in real estate?

Public real estate first emerges in the 90s, makes up about 10% now

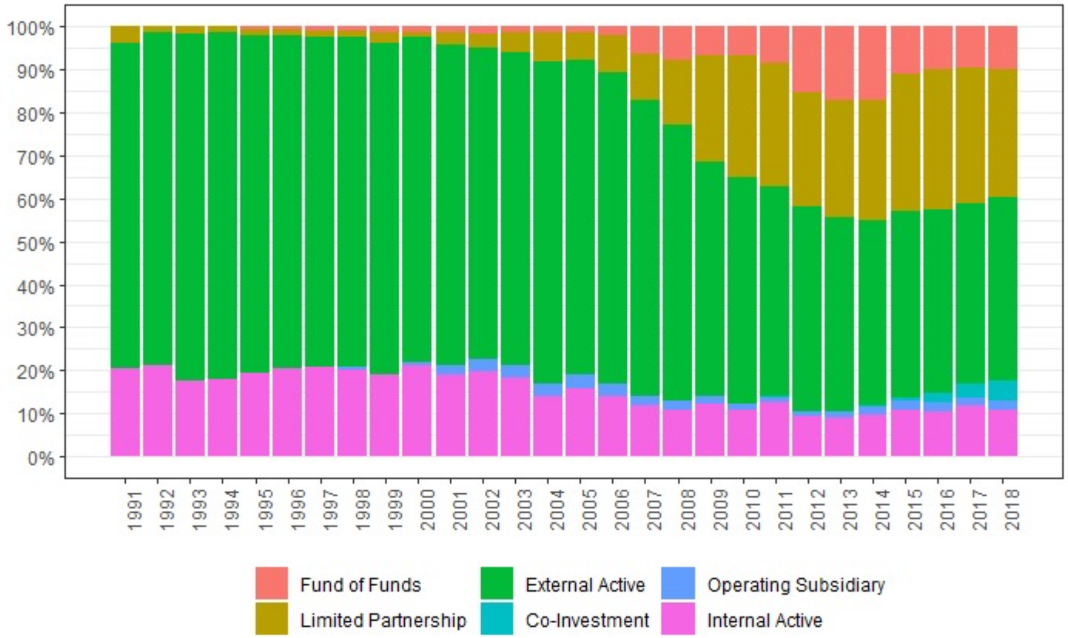


How pension funds invest in real estate (size quintiles, 1=small)

Size matters

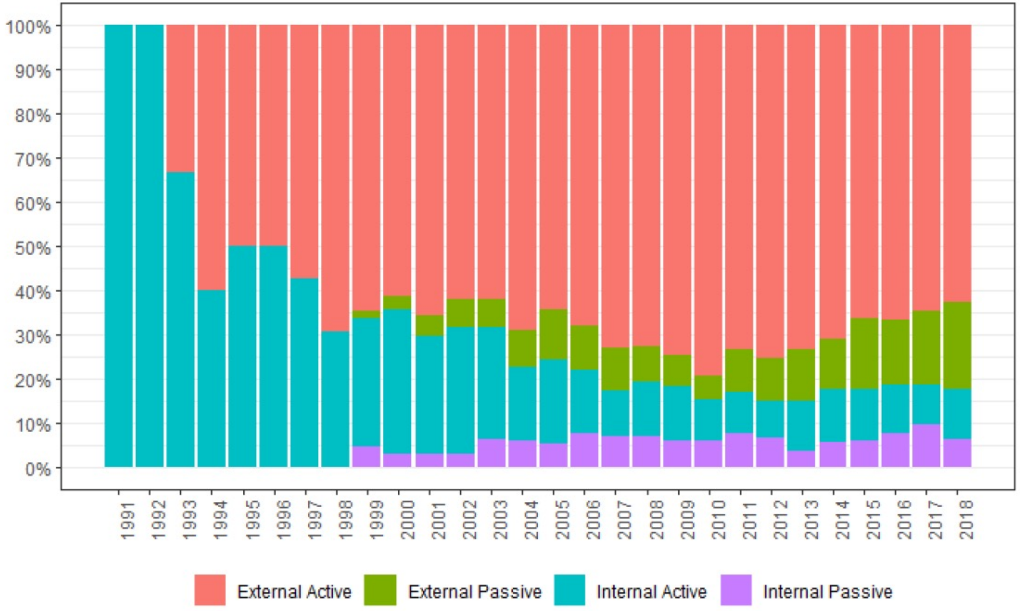
Private real estate -- investment vehicles

Intermediation has become more popular over the decades



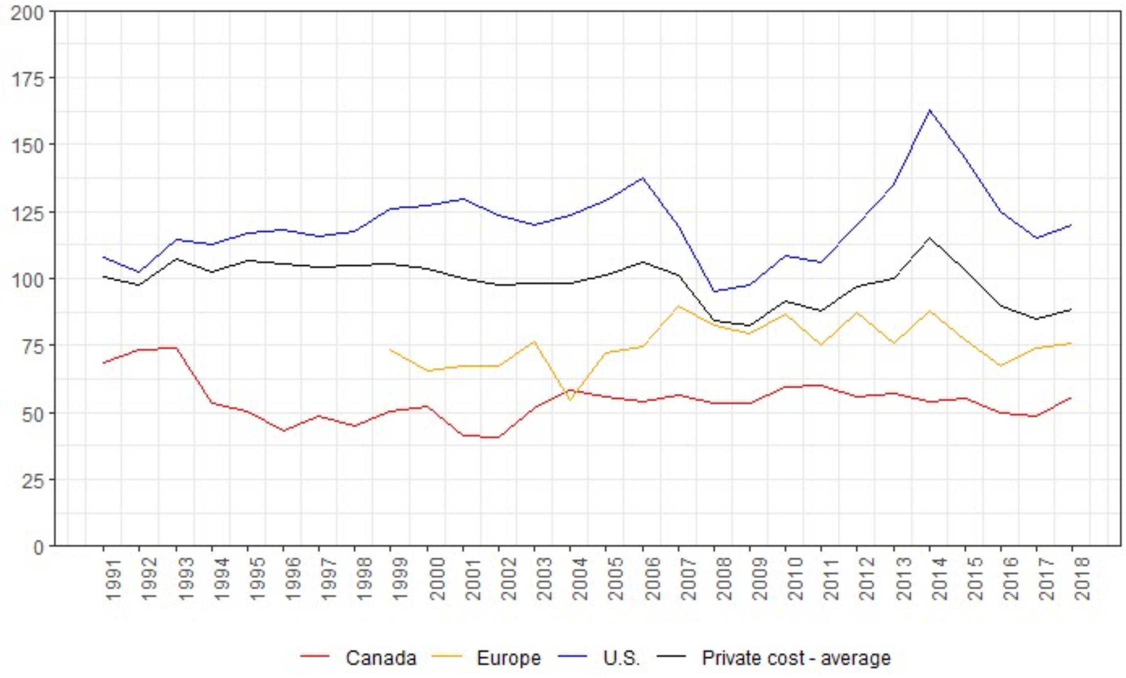
Public real estate -- investment vehicles

From internal active to (almost all) external active



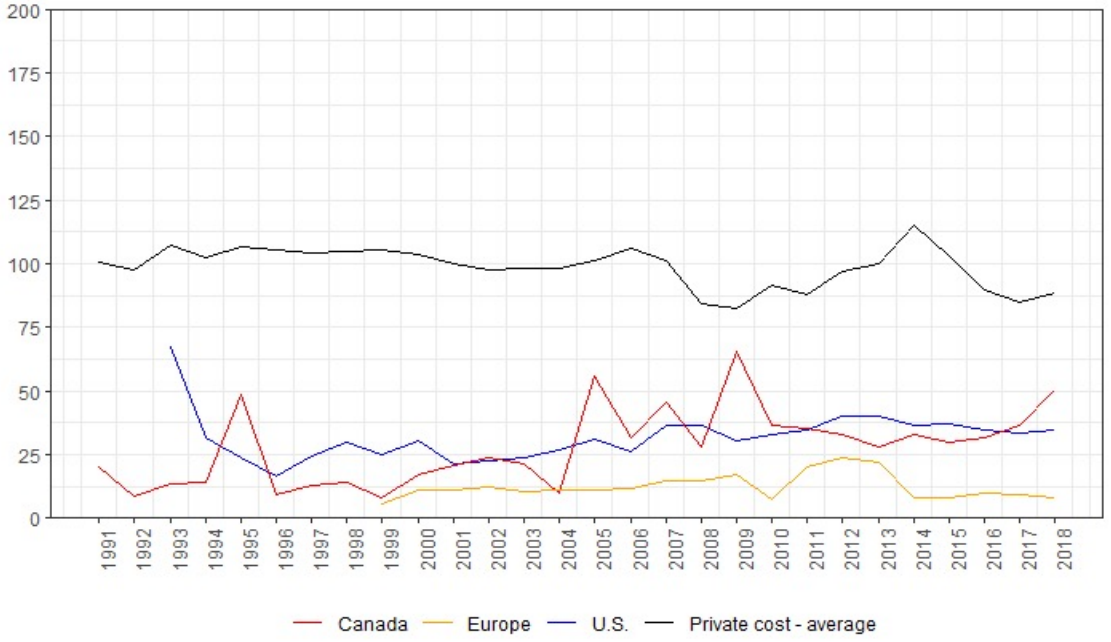
Private real estate investment costs across regions

Investment costs in the U.S. almost double other regions



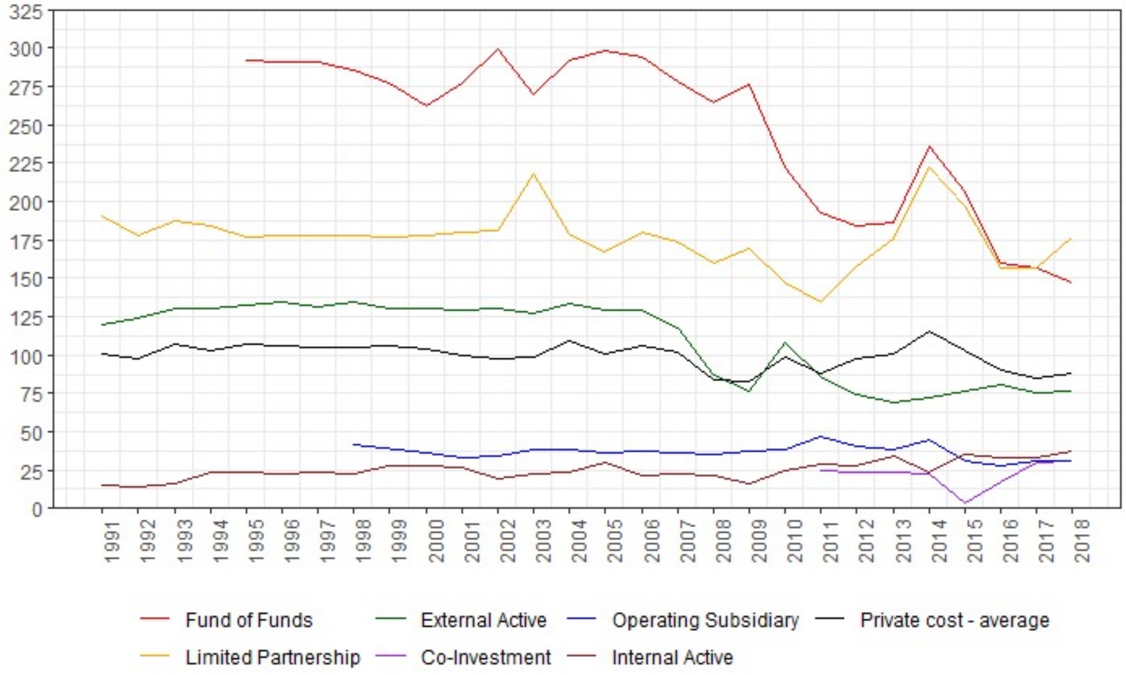
Public real estate investment costs across regions

Investment costs of public real estate much lower, but regional differences persist



Investment approach in private real estate and costs

Intermediation is costly!



Sure, but what does that bring? Gross returns by asset

The 90s were golden for PE and hedge funds, real estate returns are persistent over time

Time Period		All Assets	Stocks	Bonds	Real Estate	Private Equity	Hedge Funds	Real Assets (Excl. Real Estate)
Full sample	E[R]	9.7	10.5	6.7	9.6	18.7	8.9	12.7
	σ	9.2	16.1	5.4	8.8	13.5	9.1	24.1
1991-2000	E[R]	14.0	16.4	9.3	7.8	27.2	14.3	31.8
	σ	7.9	11.9	7.4	7.5	12.1	9.7	47.7
2001-2010	E[R]	6.9	6.1	6.2	10.3	11.8	5.8	8.7
	σ	11.7	21.6	2.5	12.8	15.9	9.6	11.9
				1.0				
2011-2018	E[R]	7.7	8.4	4.4	10.9	16.8	6.1	5.8
	σ	5.2	11.7	4.3	2.2	3.2	3.7	3.0

Sure, but what does that bring? Net returns by asset

The 90s were golden for PE and hedge funds, real estate returns are persistent over time

Time Period		All Assets	Stocks	Bonds	Real Estate	Private Equity	Hedge Funds	Real Assets (Excl. Real Estate)
Full sample	E[R]	9.3	10.3	6.7	8.6	15.6	7.6	12.1
	σ	9.2	16.1	5.4	8.8	13.7	9.4	24.2
1991-2000	E[R]	13.7	16.3	9.2	6.8	24.8	14.0	31.7
	σ	7.9	11.9	7.4	7.6	12.0	9.7	47.7
2001-2010	E[R]	6.5	6.0	6.1	9.4	7.9	3.9	8.2
	σ	11.7	21.6	2.5	12.8	15.8	9.4	12.0
2011-2018	E[R]	7.1	8.2	4.3	10.0	13.6	4.2	4.9
	σ	5.1	11.6	4.3	2.1	3.1	3.6	2.9

Net real estate returns by investment approach

Intermediation decreases performance, public outperforms private

Time Period		All REITS	REITs Internal	REITs External	All Private RE	Private RE Internal	Private RE External	Private RE FoF
Full sample	E[R]	10.3	10.5	9.8	8.4	9.6	8.0	6.9
	σ	15.5	16.3	15.7	9.1	7.5	10.0	7.8
1991-2000	E[R]	9.9	10.6	8.8	6.8	7.3	6.8	8.1
	σ	9.3	11.2	9.7	7.6	6.8	7.9	4.0
2001-2010	E[R]	12.1	11.6	12.6	8.5	11.1	7.3	4.7
	σ	23.1	24.0	22.6	13.5	10.6	15.9	11.1
2011-2018	E[R]	8.4	8.9	7.4	10.2	10.5	10.1	8.8
	σ	11.0	10.7	10.3	1.6	1.8	1.7	4.2

Implications

- Financial intermediation is costly, also when investing real estate.

- Larger pension funds have the ability to keep costs low through internalizing real estate investments, either by setting up an internal real estate group, operating subsidiary, or through co-investment directly into properties.

- Smaller pension funds may not have the scale for internal operations, but can still use different allocation strategies for real estate investments

- Lessons apply to emerging asset classes such as commodities and infrastructure

Thank you for your attention!

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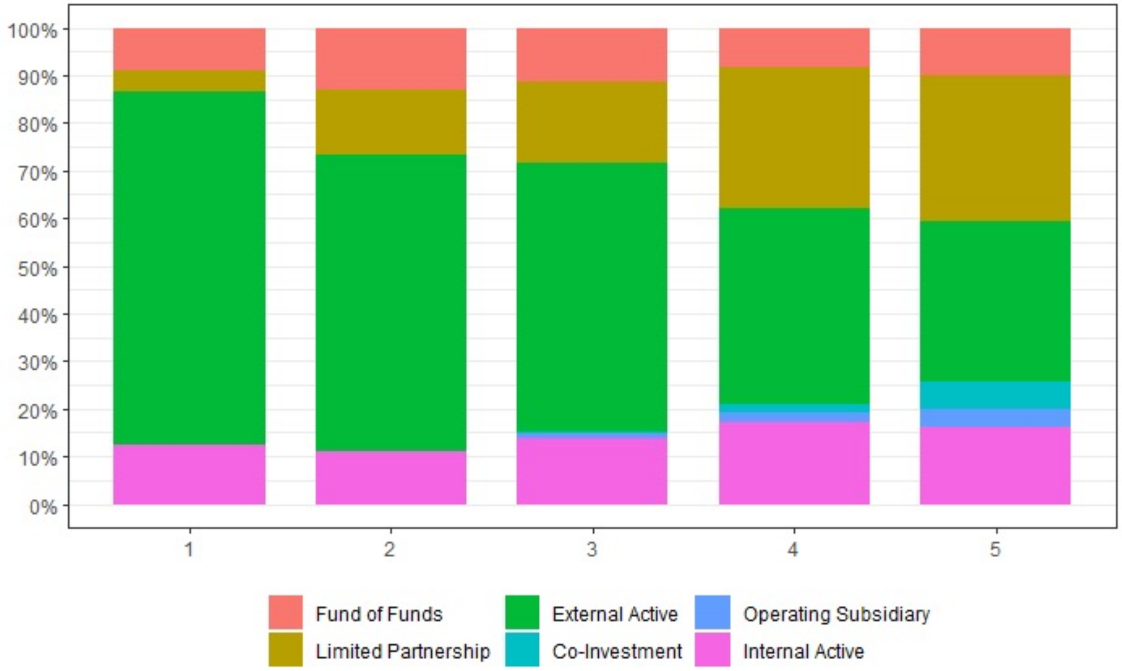
Investment approach for private real estate (per size quintiles)

Bigger funds choose Limited Partnership more often



Investment approach in public real estate and costs

Always cheaper than private….