Institutional Real Estate, Inc Global Investment Managers 2019

Special Report

Institutional Real Estate, Inc

Global Investment Managers 2019

Prepared by:

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A lot can change in 10 years



Real estate's quick, powerful recovery beyond impressive

by Larry Gray

It was only a short 10 years ago that real estate investors and managers were sorting through the wreckage caused by the global financial crisis. Fund managers were dealing with redemptions, properties were being repriced — in some cases, portfolio values declined 40 to 50 percent — and investors were tightening their purse strings as they focused on managing existing assets rather than making new deals. In short, things were pretty bleak.

Fast forward to today, and the global real estate industry has reached new heights, riding a wave of unprecedented economic expansion in some regions. To provide some perspective to the industry's quick and impressive turnaround, consider that the assets under management of the top 100 real estate investment managers totaled approximately €0.85trillion in 2008. Based on 2018 data, the top 100 firms now account for AUM of nearly €3.04 trillion, according to *Global Investment Managers 2019*, the annual survey and report produced by Property Funds Research and Institutional Real Estate, Inc. What's more astounding, the top 10 investment managers today have AUM equal to the AUM total of the top 100 firms in 2008.

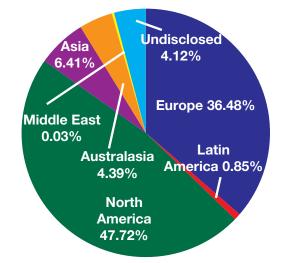
A few more numbers to ponder: the largest investment manager in 2008 — ING Real Estate Investment Management — reported AUM of \notin 65.6 billion; in this year's survey, the industry's largest firm, Blackstone, reported AUM of more than \notin 201.3 billion. The top 10 firms in the industry today represent AUM of more than \notin 1.06 trillion, compared to 2008's corresponding figure of a mere \notin 357 billion.

"The industry has experienced explosive growth since the global financial crisis," says Geoffrey Dohrmann, president and CEO of IREI. "The real estate asset class continues to gain in popularity across the globe, delivering steady income and solid returns in the ongoing low interest rate environment. Investment managers have benefited from a strong flow of new capital and impressive asset appreciation."

"While we are witnessing significant growth in the real estate investment industry, we should also be keenly aware of an undercurrent of consolidation — in a lowerreturn world, M&A looks like the precursor to some serious scale-based innovation, with an opportunity for managers to use more tech to drive efficiency and manage margins," notes Andrew Baum, chairman of Property Funds Research.

"Managers outside the U.S. suffer a triple disadvantage: (i) very low interest rates and bond yields, driving low core real estate IRRs and producing a high fee proportionate drag; (ii) disaggregated capital sources, with Netherlands-based managers having good access to Netherlands-based institutional capital, German managers to German capital, etc., but less efficiency in capital raising than

Assets under management by geographic distribution



Sources: Property Funds Research; Institutional Real Estate, Inc.

the U.S. offers; and (iii) a resulting lack of scale, with the typical pan-European open-ended fund being much smaller than the typical U.S. ODCE fund," adds Baum.

This year's PFR/IREI survey received responses from 206 investment managers, representing an aggregate AUM of approximately $\notin 3.23$ trillion, up from the 2017 survey's total of $\notin 3.06$ trillion (based on 197 respondents). The top 10 firms in this year's rankings totaled more than $\notin 1.07$ trillion of AUM — a 6.1 percent increase from last year — a total that represents 33.5 percent of the entire survey universe. Additional evidence of a concentration of assets in this top-heavy industry: the top 20 firms account for AUM of $\notin 1.628$ trillion (50.4 percent of the total universe), which is more than the other 185 investment managers in the survey ($\notin 1.654$ trillion).

Blackstone remains at the top of the rankings for the third consecutive year with AUM of \notin 201.3 billion, an increase of 19.0 percent from the \notin 169.3 billion reported for 2017. Brookfield Asset Management ranked second with AUM of \notin 168.7 billion (up 17.2 percent), and Nuveen Global Real Estate ranked third with AUM of \notin 108.7 billion (up 14.2 percent). Rounding out the top five were Hines (\notin 104.2 billion)

Top 100 firms in aggregate (AUM, € trillion)



Sources: Property Funds Research; Institutional Real Estate, Inc.

and CBRE Global Investors (€93.6 billion). (For the complete list of investment managers and their AUM breakouts by geographic region, see the table starting on page 4.)

Looking at total market AUM on a geographic basis, North America-based assets account for approximately 47.72 percent, while Europe represents 36.48 percent. Asia claims 6.41 percent of the assets and Australasia accounts for 4.39 percent, while Latin America registers 0.85 percent.

Brookfield Asset Management ranks as the largest investment manager based on AUM just in North America. The firm manages $\notin 127.7$ billion in the region. In Europe, the top-ranking manager is Swiss Life Asset Managers, with AUM of $\notin 81.0$ billion, and in Asia, GLP claims the most assets with AUM of $\notin 31.7$ billion. In the Australasia region, Dexus ranks No. 1 with AUM of $\notin 17.8$ billion. PGIM Real Estate oversees the most assets in Latin America, with AUM of $\notin 2.8$ billion. (For rankings of the top 10 largest investment managers in each region, see page 3.)

The report also ranks real estate managers based on their total AUM in the categories of discretionary separate accounts under management, advisory separate accounts and assets, and indirect real estate investment vehicles. NYL Investors, a subsidiary of New York Life, manages the most capital based solely on discretionary separate accounts, with AUM of \notin 45.5 billion (see page 12). In the category of advisory separate accounts, Principal Real Estate Investors tops the list, with AUM of approximately \notin 35.2 billion (see page 16). And based on indirect real estate investment vehicles, Blackstone ranks highest, with an asset base of \notin 190.4 billion (see page 20).

Larry Gray is editorial director of Institutional Real Estate, Inc

The survey was conducted by U.K.-based Property Funds Research (PFR). PFR is an independent management-owned business that provides confidential research and strategic consulting for investors in European real estate. PFR's foundations are an expert team, a suite of products for underwriting investments in the European market, and access to a unique dataset describing the major investors, vehicles, and managers in the European and global institutional property markets. For more information, please visit www.propertyfundsresearch.com. For additional information on the global fund manager survey, contact Jane Fear at +44 (0)20-3026 3851 or jf@ propertyfundsresearch.com.

Largest investment managers by region

TOP 1	O MANAGERS BASED ON EUROPE ASSE	TS (€M)	
Rank	Investment manager	Europe	Total
1	Swiss Life Asset Managers	80,961.89	80,961.89
2	AXA Investment Managers – Real Assets	69,053.00	74,484.00
3	Blackstone	52,885.52	201,297.72
4	CBRE Global Investors	50,715.49	93,574.88
5	Credit Suisse Asset Management	49,116.70	53,914.88
6	Aberdeen Standard Investments	45,022.56	46,892.79
7	Deka Immobilien	40,609.00	43,519.00
8	PATRIZIA AG	38,524.00	40,634.00
9	M&G Real Estate	34,870.51	41,579.51
10	Aviva Investors	34,672.65	35,121.11

TOP 1	O MANAGERS BASED ON NORTH AMERI	CA ASSETS (€	M)
Rank	Investment manager	North America	Total
1	Brookfield Asset Management	127,724.47	168,710.62
2	Hines	79,493.26	104,207.67
3	Nuveen Global Real Estate	76,967.96	108,733.66
4	MetLife Investment Management	70,779.41	80,138.78
5	J.P. Morgan Asset Management	66,108.21	73,381.21
6	Principal Real Estate Investors	58,037.00	65,100.00
7	NYL Investors	47,594.00	47,594.00
8	PGIM Real Estate	45,565.38	63,459.83
9	Clarion Partners	42,368.82	42,415.96
10	Blackstone	40,541.84	201,297.72

TOP 10	MANAGERS BASED ON ASIA ASSETS	(€M)	
Rank	Investment manager	Asia	Total
1	GLP	31,686.27	54,818.12
2	UBS Asset Management	15,445.79	83,290.43
3	IGIS Asset Management	14,537.46	19,602.36
4	Blackstone	12,382.09	201,297.72
5	Gaw Capital Partners	11,902.52	15,680.16
6	CBRE Global Investors	10,911.25	93,574.88
7	LaSalle Investment Management	10,777.70	56,144.93
8	Prologis	8,879.26	46,374.21
9	Samsung SRA Asset Management	8,357.45	13,299.77
10	PGIM Real Estate	7,419.65	63,459.83

TOP 10	MANAGERS BASED ON AUSTRALASIA	ASSETS (€M)	
Rank	Investment manager	Australasia	Total
1	Dexus	17,775.23	17,775.23
2	Charter Hall	17,461.55	17,461.55
3	LendLease Investment Management	14,576.92	20,727.52
4	AMP Capital Investors Limited	13,570.68	18,043.40
5	ISPT Pty	10,674.37	10,674.37
6	Queensland Investment Corp.	10,236.44	13,752.13
7	Phoenix Property Investors	9,165.45	9,165.45
8	GPT Funds Management	6,988.99	6,988.99
9	Investa Property Group	6,316.91	6,316.91
10	Brookfield Asset Management	5,723.61	168,710.62

Total assets rankings

	Total gross value of real estat	e assets under ma	nagement (gross, € million	, as at 31 Dece	mber 2018)		
Rank	Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
1	Blackstone	201,297.72	52,885.52	40,541.84		12,382.09		
2	Brookfield Asset Management	168,710.62	26,334.52	127,724.47	2,274.78	6,421.93	5,723.61	231.32
3	Nuveen Global Real Estate	108,733.66	29,034.40	76,967.96	124.82	862.43	1,744.05	_
4	Hines	104,207.67	19,538.99	79,493.26	2,479.04	2,587.28	109.11	_
5	CBRE Global Investors	93,574.88	50,715.49	31,948.14		10,911.25		
6	UBS Asset Management	83,290.43	32,466.43	33,824.67	229.04	15,445.79	1,324.51	_
7	Swiss Life Asset Managers	80,961.89	80,961.89	_		_	—	_
8	MetLife Investment Management	80,138.78	3,585.19	70,779.41	710.05		5,063.66	0.47
9	AXA Investment Managers – Real Assets	74,484.00	69,053.00	689.00		1,406.00	3,336.00	_
10	J.P. Morgan Asset Management	73,381.21	5,301.99	66,108.21		1,846.18	124.82	_
11	AEW Global	65,273.72	31,300.45	31,694.13		1,936.09	343.05	
12	Principal Real Estate Investors	65,100.00	4,777.00	58,037.00	34.00	465.00	1,786.00	
13	PGIM Real Estate	63,459.83	7,681.52	45,565.38	2,793.28	7,419.65		
14	LaSalle Investment Management	56,144.93	24,835.75	19,456.94	18.33	10,777.70	1,028.28	27.93
15	GLP	54,818.12	6,372.17	14,315.56	2,444.12	31,686.27		
16	DWS	54,513.40	26,319.10	24,498.50		2,016.00	1,679.80	_
17	Credit Suisse Asset Management	53,914.88	49,116.70	2,097.03	1,108.97	888.83	703.35	_
18	Invesco Real Estate	51,809.23	10,221.66	36,085.69		5,501.89		_
19	NYL Investors	47,594.00		47,594.00				_
20	Aberdeen Standard Investments	46,892.79	45,022.56	1,000.28		869.95		_
21	Prologis	46,374.21	16,572.57	18,138.35	2,784.02	8,879.26		_
22	Starwood Capital Group	45,128.93	6,739.66	38,121.29	102.13	165.85		
23	Tishman Speyer Properties	44,051.77	7,403.06	30,086.24	1,316.33	5,246.13		_
24	Deka Immobilien	43,519.00	40,609.00	1,554.00	594.00	339.00	423.00	
25	Clarion Partners	42,416.00	_	42,369.00	47.14			
26	M&G Real Estate	41,579.51	34,870.51	2,095.24		4,613.76		_
27	PATRIZIA AG	40,634.00	38,524.00	1,423.00	214.00	466.00		7.00

Rank	Total gross value of real estate a Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
28	Barings	39,100.68	5,375.32	33,633.71		76.82	14.84	
29	Colony Capital	37,969.40	6,572.06	31,070.88	326.46			
30	Union Investment	37,643.50	31,194.70	5,230.40	377.40	604.30	236.70	
31	Heitman	36,372.00	2,069.65	32,076.46		554.29	1,671.60	
32	Aviva Investors	35,121.11	34,672.65			448.45		
33	Bentall Kennedy	31,667.07		31,667.07				
34	Morgan Stanley Real Estate Investing	30,259.95	6,351.22	21,762.27	20.95	1,794.68	330.83	
35	Generali Real Estate	30,250.00	30,000.00				250.00	
36	BNP Paribas Real Estate Investment Management	28,720.00	28,600.00			120.00		
37	Greystar Investment Group	28,152.42	6,291.86	21,490.80	369.76			
38	CIM Capital	26,606.00	26,362.00		244.00			_
39	LGIM Real Assets	26,039.55	26,039.55					_
40	Angelo, Gordon & Co.	23,848.50	1,895.94	19,464.80		2,487.77		_
41	BlackRock	21,271.70	7,989.65	7,800.23	1,755.40	3,338.84	387.57	_
42	LendLease Investment Management	20,727.52	984.10	246.02		4,920.48	14,576.92	
43	IGIS Asset Management	19,602.36	2,450.39	2,551.86		14,537.46	62.65	_
44	La Française	19,214.00	19,214.00					
45	Commerz Real AG	18,864.79	15,985.13	2,148.86		581.20	149.60	_
46	Savills Investment Management	18,363.00	16,525.00	370.00		1,285.00	183.00	
47	AMP Capital Investors	18,043.40	611.37	2,278.18		818.64	13,570.68	764.52
48	Dexus	17,775.23	—				17,775.23	
49	Cerberus Capital Management	17,633.10	10,222.53	6,949.51	139.40	222.24	99.42	_
50	Charter Hall	17,461.55					17,461.55	
51	Schroder Real Estate Investment Management	17,322.20	16,436.65	582.57	1.11	222.78	79.09	_
52	Harrison Street Real Estate Capital	15,755.85	1,167.94	14,587.90				
53	Gaw Capital Partners	15,680.16	1,747.89	2,029.75		11,902.52		_
54	Manulife Investment Management	15,168.38		13,429.57			1,738.82	
55	Queensland Investment Corp.	13,752.13		3,515.68			10,236.44	
56	MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH	13,419.00	11,760.00	1,579.00		80.00		
57	Samsung SRA Asset Management	13,299.77	2,644.33	2,156.33		8,357.45	141.66	
58	Rockpoint Group	13,182.10	20.78	13,161.32				

Rank	Total gross value of real of Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
59	Northwood Investors	13,124.30	3,726.85	9,397.45				
60	Bridge Investment Group	12,650.07		12,650.07				_
61	Partners Group	12,312.25	_					
62	Mirae Asset Global Investments	11,984.04	1,154.85	3,909.72	287.18	6,035.23	597.06	
63	Stockbridge Capital Group	11,799.86		11,799.86				
64	Acore Capital	11,610.62		11,610.62				_
65	USAA Real Estate	11,419.28	8.73	11,410.55				
66	Bouwinvest Real Estate Investors	11,278.00	9,214.00	1,171.00		893.00		
67	Exeter Property Group	10,906.89	1,235.15	9,671.73				_
68	Walton Street Capital	10,749.76	187.67	8,255.89	2,098.45	207.75		_
69	ISPT Pty	10,674.37		_			10,674.37	_
70	KBS	10,124.77		10,124.77				_
71	Tristan Capital Partners	10,112.00	10,112.00	_				_
72	Columbia Threadneedle Investments	10,025.06	10,025.06					
73	DTZ Investors	9,974.94	9,974.94					
74	Värde Partners	9,942.33						
75	Ares Management Corp.	9,899.56	3,234.09	6,665.46				
76	GreenOak Real Estate	9,485.80	3,374.63	5,047.98		1,063.19		
77	Kayne Anderson Real Estate	9,348.76	_	9,348.76				
78	Phoenix Property Investors	9,165.45					9,165.45	
79	Syntrus Achmea Real Estate & Finance	8,978.00	8,978.00					_
80	Westbrook Partners	8,966.43						_
81	Quadrant Real Estate Advisors	8,780.53	519.51	8,261.02				
82	American Realty Advisors	8,554.22	_	8,554.22	—			
83	Royal London Asset Management	8,510.17	8,510.17					_
84	Crow Holdings Capital Partners	8,378.79		8,378.79				
85	Beacon Capital Partners	8,140.05		8,140.05				
86	M7 Real Estate	8,086.00	8,086.00					
87	L&B Realty Advisors	8,067.30		8,067.30				
88	CenterSquare Investment Management	8,017.59	412.01	6,947.41		529.85	128.32	
89	PCCP	7,856.28	_	7,856.28				

	Total gross value of real estate a							
Rank	Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
90	KGAL Investment Management GmbH & Co.	7,453.00	7,406.00			47.00		
91	Intercontinental Real Estate Corp.	7,438.77		7,438.77	—			
92	Vesteda	7,337.00	7,337.00					
93	Cromwell Property Group	7,280.00	3,720.00				3,560.00	
94	Landmark Partners	7,162.14						
95	Berkshire Residential Investments (Berkshire Group)	7,145.56		7,145.56				
96	Hermes Real Estate Investment Management	7,128.93	7,128.93					
97	BMO Real Estate Partners	7,100.00	7,100.00		—			_
98	Starlight Investments	7,037.58		7,037.58	—			_
99	GPT Funds Management	6,988.99					6,988.99	—
100	Lubert-Adler Management	6,974.47		6,974.47				
101	GLL Real Estate Partners GmbH	6,973.00	3,743.00	2,835.00	331.00	16.00	48.00	_
102	ASB Real Estate Investments, a division of ASB Capital Management	6,920.38	_	6,920.38				_
103	Mesa West Capital	6,351.57		6,351.57	—			_
104	Investa Property Group	6,316.91					6,316.91	_
105	Lionstone Investments	6,167.04		6,167.04				_
106	Sentinel Real Estate Corp.	6,110.30	29.68	5,945.32			135.30	_
107	Round Hill Capital	5,964.53	5,883.35	81.18				_
108	A.S.R. Real Estate	5,800.00	5,800.00					
109	Divco West Real Estate Services	5,522.05		5,522.05				_
110	PAG Investment Management	5,514.98				5,514.98		_
111	Amvest REIM BV	5,306.00	5,306.00					
112	M3 Capital Partners	4,975.53	2,160.43	1,680.33	436.45	349.16	349.16	_
113	Orchard Street Investment Manager	4,901.14	4,901.14					_
114	National Real Estate Advisors	4,887.37		4,887.37				
115	Carroll Org.	4,828.88		4,828.88			—	_
116	First Washington Realty	4,306.89		4,306.89				
117	Carmel Partners	4,083.25		4,083.25		—	_	_
118	Diamond Realty Management	4,062.78		146.46		3,916.32		
119	Almanac Realty Investors	4,045.89		4,045.89		—		
120	Madison Realty Capital	4,023.20	_	4,023.20				

	Total gross value of real estate a	issets under ma	nagement (gross, € million	, as at 31 Decei	mber 2018)		
Rank	Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
121	GEM Realty Capital	4,015.34		4,015.34	—	—		—
122	Madison International Realty	4,007.48	1,895.94	2,111.55	—			_
123	GTIS Partners	3,943.76	_	2,175.27	1,768.50	—		
124	NREP AB	3,930.00	3,930.00		—			_
125	Unite Integrated Solutions	3,896.41	3,896.41		—	_		_
126	ICG-Longbow (ICG PIc)	3,727.10	3,727.10		—			
127	Blue Vista Capital Management	3,580.64		3,580.64	—	_		_
128	Artemis Real Estate Partners	3,511.68		3,511.68	—	—		_
129	Prima Capital Advisors	3,499.46		3,499.46	—			_
130	Pradera	3,260.00	2,358.00			902.00		_
131	Canyon Partners Real Estate	3,195.69		3,195.69				_
132	Niam AB	3,102.00	3,102.00	—				
133	Knight Frank Investment Management	3,023.56	3,023.56	—				_
134	Realterm	2,980.08		2,264.30		715.78		_
135	Equus Capital Partners	2,967.86		2,967.86	—			_
136	DRC Capital	2,938.46	2,938.46	—				_
137	DIF Management B.V.	2,820.00	2,100.00	600.00			120.00	_
138	Hahn Group	2,800.00	2,800.00	—				
139	Torchlight Investors	2,737.41		2,737.41				_
140	Och Ziff Real Estate Advisors	2,249.55	149.88	2,099.67				
141	Rubenstein Partners	2,182.25		2,182.25	—			_
142	InfraRed Capital Partners	2,180.33	1,562.32	—		618.01		_
143	Hunt Investment Management	2,085.53	7.16	2,078.37				_
144	Franklin Resources (Operating worldwide as Franklin Templeton Investments)	2,052.71	461.24	907.73	1.13	667.33	15.28	_
145	CITIC Capital	2,040.84	98.64			1,942.20		_
146	MaxCap Investment Management	2,024.35		—			2,024.35	
147	Wheelock Street Capital	1,862.77		1,862.77				—
148	TGM Associates	1,765.88		1,765.88				_
149	Degroof Petercam Asset Management	1,736.00	1,736.00	—			—	
150	EURAMCO Group	1,693.00	1,453.00			143.00	97.00	

Rank	Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
151	Areim AB	1,636.00	1,636.00					
152	Conundrum Capital Corp.	1,630.16		1,630.16				
153	Cording Real Estate Group	1,521.00	1,521.00	_				
154	Primevest Capital Partners	1,500.00	1,500.00					
155	Broadshore Capital Partners	1,492.66		1,492.66				
156	Avanath Capital Management	1,483.93		1,483.93				_
157	Western National Group	1,483.93		1,483.93				_
158	Sarofim Realty Advisors Co.	1,395.77		1,395.77				_
159	LEM Capital	1,370.28	_	1,370.28				_
160	Mosser Capital	1,309.35	_	1,309.35				
161	Altis Property Partners	1,302.39	_				1,302.39	_
162	Long Wharf Capital	1,294.51	_	1,294.51				
163	MREC Management	1,263.96		1,263.96				_
164	Presima	1,243.08	223.39	641.35		315.46	62.88	
165	Threestones Capital Management S.A.	1,200.00	1,200.00					_
166	Ancala Partners	1,171.00	1,171.00					
167	GFI Partners	1,136.50		1,136.50				_
168	Ascentris	1,101.60		1,101.60				_
169	HSI – Hemisfério Sul Investimentos S.A.	1,016.06			1,016.06			_
170	AviaRent Invest AG	1,010.21	1,010.21					
171	Colliers Capital	998.05	998.05					_
172	Kairos Investment Management Co.	977.65		977.65				
173	JCR Capital Investment Corp.	969.79		969.79				_
174	Argosy Real Estate Partners	967.17		967.17				_
175	Pearlmark	960.19		960.19				
176	Pactia	960.19		_				
177	Clearbell Fund Management	958.51	958.51					
178	VBI Real Estate Gestão de Carteiras	904.15	_		904.15			
179	BKM Capital Partners	888.18		888.18				
180	CS Capital Management	837.32		837.32				_
181	Rynda Property Investors	835.00	835.00					

	Total gross value of real estate	assets under ma	nagement ((gross, € million	, as at 31 Dece	mber 2018)		
Rank	Investment manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East
182	Berkeley Partners	804.20		804.20				_
183	First Property Group	786.41	786.41					_
184	Covenant Capital Group	739.43	_	739.43		—		_
185	Grubb Properties	721.89	_	721.89				_
186	Alex. Brown Realty	711.06		711.06		_		
187	Equity Estate Holding BV	700.00	700.00					_
188	Thorofare Capital	694.67	_	694.67				_
189	Pamfleet	673.24	_			673.24		_
190	Velocis	664.81		664.81				_
191	Gerrity Group	658.17		658.17	—	_		_
192	Greenman	610.93	610.93			—		_
193	Jaguar Growth Partners	570.88	_	570.88	—	_		_
194	Omni Partners	496.68	496.68					_
195	Hart Realty Advisers	462.64	_	462.64				_
196	SDI Gestão	427.37	_		427.37			_
197	Paloma Capital	394.80	394.80					_
198	Novare Fund Manager Limited Incorporated in Mauritius	368.36	_		—			_
199	ICE Capital REAM	363.00	363.00		—			_
200	Locust Point Capital	272.34	_	272.34	—			_
201	Curlew Capital	256.20	256.20		—			_
202	Newcore Capital Management	233.92	233.92	_	—			
203	Gresham House	183.79	183.79					_
204	Barwood Capital	116.40	116.40					
205	Brasa Capital Management	104.75		104.75				_
206	Bayrock Financial and Development Corp.	87.29	_	87.29				_

End notes

Almanac Realty Investors As of 31st March, 2019.

AMP Capital Investors These are net figures.

Angelo, Gordon & Co.

A region breakdown is not readily available for CMBS and RMBS investments, or for the private equity real estate investments in multi-strategy funds. Those investments are predominately focused in North America and have been 100 percent included in that category. Includes approximately \$1.3 billion (€1.13 billion) of assets managed in multi-strategy commingled funds, separate accounts that invested in real estate and real estate debt (including CMBS and RMBS) and approximately \$542 million (€476 million) of assets managed pursuant to subadvisory consulting arrangements.

Ares Management Corp.

Net, equity figures

Argosy Real Estate Partners

AUM represents the sum of our real estate values plus unfunded equity commitments of \$211 million (€184 million).

A.S.R. Real Estate

Net figures

Barings

AUM includes debt servicing assets and select asset management advisory clients.

Blackstone

Total AUM includes global assets under management (€95.5 million).

Canyon Partners Real Estate

(GAV unrealized investments)

Carroll Org.

AUM includes \$1.120 billion (€978 million) of properties under management and \$159 million (€138.9 million) of balance sheet assets.

CBRE Global Investors

As of March 31, 2019.

Cerberus Capital Management

The data set herein includes the market value of real estate-related investments which Cerberus Capital Management classifies in the following lines of business: Real Estate, Non-Performing Loans (NPLs), and Mortgage Trading. These figures also include uncalled commitments targeting real estate-related investments.

CITIC Capital

2225 includes funds which we are the Fund Manager but not necessarily the Asset Manager of the underlying real estate, for all Co-GP Funds – we have taken up our allocated share only as Co-GP although in certain cases we may be the asset manager as well

Crow Holdings Capital Partners

AUM includes uncalled commitments

DIF Management B.V.

AuM does not include equity commitments

Gresham House

AuM includes capital yet to be deployed.

Hermes Real Estate Investment Management As at March 2019.

Hines AuM includes fund and non-fund assets

IGIS Asset Management

AuM includes 81 joint vehicles worth KRW 18,896,910 million (€14,777 million).

Invesco Real Estate AUM includes 6,254 of Global Securities

J.P. Morgan Asset Management AuM includes c. \$10.0 billion (€8.736 billion) managed in REITs.

Landmark Partners (invested/committed)

M7 Real Estate

AUM includes joint ventures worth €5,167 million.

MaxCap Investment Management AUM is as of 31st May, 2019, and includes fund and non-fund assets.

MetLife Investment Management AuM includes fund and non-fund assets

M&G Real Estate

Includes £4.2 billion (€4.66 billion) of assets managed by M&G Investments

Morgan Stanley Real Estate Investing

Gross value represents Real Estate Assets Under Management (RE AUM), which represents gross fair market value of the real estate assets managed by Morgan Stanley on behalf of the Firm and its clients, presented at direct ownership interest. RE AUM for certain minority interests represents Morgan Stanley's equity investment in the entity. North America is U.S., Latin America is Brazil and Mexico, and Australasia is Australian investments

Mosser Capital

AuM includes \$899 million (${\rm {\ensuremath{\in}}785}$ million) of assets managed with third-party institutional partners.

National Real Estate Advisors

(Fund-level GAV) Property-Level Gross Asset Value (GAV) is based on property-level unleveraged values for real estate investments. The reported GAV is based on the "as is" value (including properties in development) per the most recent property appraisal, and includes working capital and other adjustments such as lender and capital reserves and construction costs spent. However, the GAV for debt (senior and subordinate loans) investments is reported as the fair value of the loan, as opposed to the fair value of the underlying collateral (property). The GAV (pro rata) at market is the ownership percent interest of the property-level GAV.

a. Fund's Share Property-Level GAV: the fund's share of GAV is reported at the fund's economic interest in the investment, which takes into consideration any applicable preferred returns and/or promoted interests, per the partnership operating agreements (if not wholly owned).

b. Fund-level GAV: fund-level GAV represents the Fund's economic interest in real estate investments, cash, cash equivalents, and other fund assets as defined by National. More information can be provided upon request.

Northwood Investors AUM includes uncalled capital that is under management.

NREP AB Aum includes undrawn commitments of €942 million.

Och-Ziff Real Estate Advisors

Total real estate AUM includes an additional \$226.8 million (€198 million) related to vehicles categorized as "Other Real Estate Funds" in the Firm's latest Form 10-K filing, available at www.ozm.com.

Orchard Street Investment Manager

(UK only)

Pactia

As of April 2019.

PATRIZIA AG Includes funds/vehicles in liquidation (~€750 million), balance sheet/principal

includes funds/venicles in liquidation (~ ℓ /50 million), balance sneet/principal assets (~ ℓ 100+ million) and others (~ ℓ 750 million).

Phoenix Property Investors

As of September 30, 2018.

Realterm

AUM includes \$274 million (€239 million) of real estate owned by the firm's partners and managed by the firm. This real estate is not managed through discretionary separate accounts, advisory separate accounts, collective investment vehicles or listed real estate.

Rockpoint Group

Numbers may not tie as there are certain Rockpoint-sponsored funds which Rockpoint is not permitted to disclose.

Torchlight Investors

AUM reflects net value of assets plus available commitments.

USAA Real Estate

AUM represents the combined fair value of real estate, other assets and uncalled capital commitments less total liabilities for USAA Real Estate (\$12.45 billion [€10.88 billion]) and affiliates, Square Mile Capital Management ("Square Mile"; \$5.07 billion [€4.43 billion]) and Investors Diversified Realty ("IDR", \$1.09 billion [€952 million]). The USAA Real Estate and IDR values are as of 31 December, 2018 while the Square Mile values are as of 30 September, 2018.

Walton Street Capital

AUM includes a fund that is currently being marketed.

Discretionary separate accounts

	Discretionary separate a	ccount mandat	es by investo	r domicile (gr	oss, € millio	n, as at 31 De	cember 2018)	
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of Mandates
1	NYL Investors	45,525.23	873.77	44,319.75	_	331.70			10
2	CBRE Global Investors	37,360.12	22,258.95	10,649.38		2,531.41	1,920.38		256
3	AXA Investment Managers – Real Assets	30,598.00	30,369.00	229.00	_	_	_		13
4	M&G Real Estate	24,689.06	21,092.29		_	779.73	2,817.04		23
5	Aviva Investors	23,979.92	23,531.47			448.45	_		59
6	LaSalle Investment Management	18,169.41	12,046.02	5,837.08	18.33	247.90	20.08		74
7	Bentall Kennedy	17,663.13		17,663.13	_		_		6
8	Prologis	17,300.65	5,565.35	7,507.25	740.33	3,487.72	_		5
9	Invesco Real Estate	13,028.91	578.73	5,867.63	_	6,582.54	_		23
10	Aberdeen Standard Investments	12,797.55	12,512.39	—	_	_	18.94	266.22	44
11	Clarion Partners	11,854.85		11,140.82		714.03	_		12
12	MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH	10,690.00	10,690.00	—	_				11
13	DWS	10,303.90	1,007.90	9,179.80		116.20			137
14	PGIM Real Estate	10,269.67	2,857.00	4,806.19	_	2,606.48			33
15	Manulife Investment Management	9,400.26		9,400.26	_	_	_	_	1
16	AEW Global	8,879.14	1,063.19	7,179.60		475.73	160.61		27
17	LGIM Real Assets	8,609.30	8,609.30	—	_	—	—	—	6
18	UBS Asset Management	8,226.69	4,504.39	3,722.29		—	_	—	15
19	Cerberus Capital Management	7,184.40	282.56	6,452.13	_	449.72	—	—	30
20	Principal Real Estate Investors	6,522.00	899.00	3,065.00	_	1,706.00	700.00	151.00	64
21	DTZ Investors	5,522.70	5,522.70				_		9
22	CenterSquare Investment Management	5,431.18	533.34	4,897.84	_	_		_	62
23	Heitman	5,276.68	89.91	3,547.47	_	831.87	796.08	11.35	38
24	Orchard Street Investment Manager	4,905.60	4,700.64					204.96	5
25	BNP Paribas Real Estate Investment Management	4,900.00	4,900.00	_	_		_		31
26	LendLease Investment Management	4,489.94				2,029.70	2,460.24		9
27	Schroder Real Estate Investment Management	4,464.50	4,435.53	_		28.96	_		25

	Discretionary separate ad	count mandat	es by investo	r domicile (gro	oss, € millioı	ı, as at 31 De	cember 2018)	
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of Mandates
28	BlackRock	4,265.86	_	4,265.86		_		—	7
29	Columbia Threadneedle Investments	3,212.48	3,212.48			_		_	3
30	Brookfield Asset Management (Public Securities Group)	3,186.09	185.05	2,843.91			157.12	—	43
31	Bouwinvest Real Estate Investors	3,170.00	1,106.00	1,171.00		893.00	—	_	3
32	Savills Investment Management	3,073.00	3,073.00			_	_	—	14
33	Prima Capital Advisors	2,740.91		2,740.91	_	—	_	_	21
34	CIM Capital	2,655.00	2,655.00			—	_	—	3
35	Acore Capital	2,618.70		436.45	_	2,182.25	_	_	2
36	Credit Suisse Asset Management	2,326.77	2,326.77			—	_	_	5
37	Amvest REIM BV	2,294.00	2,294.00			—			2
38	PATRIZIA AG	2,237.00	948.00			1,289.00	_	_	7
39	Stockbridge Capital Group	2,190.11		2,190.11		—	—	_	3
40	KBS	2,053.06		2,053.06		_			6
41	Tishman Speyer Properties	2,016.40		436.45	_	1,579.95	_		4
42	Barings	2,000.69	107.37	1,274.43		618.89			14
43	A.S.R. Real Estate	2,000.00	2,000.00			—	_	_	3
44	Angelo, Gordon & Co.	1,817.38		1,748.42		68.96			4
45	ICG-Longbow (ICG Plc)	1,765.53	1,068.23			—		697.30	12
46	Avanath Capital Management	1,483.93		1,483.93		—	—		4
47	Hahn Group	1,450.00	1,450.00			—	—	—	1
48	J.P. Morgan Asset Management	1,444.65		1,444.65				—	4
49	Artemis Real Estate Partners	1,431.56		1,431.56			_	_	4
50	Sentinel Real Estate Corp.	1,388.78	_	1,388.78		_			2
51	Nuveen Global Real Estate	1,387.91	834.49	553.42	_	_	_	_	6
52	Hines	1,311.97	_	799.58		487.95		24.44	10
53	Queensland Investment Corp.	1,187.68	_	_		—	1,187.68	—	1
54	Knight Frank Investment Management	1,164.36	1,164.36					—	2
55	Ascentris	1,101.60	_	1,101.60	_			_	2
56	National Real Estate Advisors	1,096.36		1,096.36					1

	Discretionary separate a	ccount mandat	es by investor	domicile (gro	oss, € million	, as at 31 De	ecember 2018)	
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of Mandates
57	Canyon Partners Real Estate	1,086.76		1,086.76	—		_	_	6
58	Generali Real Estate	1,000.00	1,000.00	_				_	2
59	Quadrant Real Estate Advisors	978.71	33.98	459.21	—		485.53		5
60	American Realty Advisors	937.93		937.93	—		_	_	14
61	Sarofim Realty Advisors Co.	829.26		829.26	—		_	_	2
62	Starwood Capital Group	822.27		570.88				251.40	2
63	Franklin Resources (Operating worldwide as Franklin Templeton Investments)	782.21	345.58	243.71	_		192.91	—	12
64	Madison International Realty	745.46				745.46		_	1
65	Almanac Realty Investors	719.18		719.18	—		_	_	16
66	PAG Investment Management	716.65		_	—	716.65		_	6
67	Exeter Property Group	693.08		132.68	—	560.40	_	_	2
68	First Property Group	680.59	680.59					_	13
69	L&B Realty Advisors	679.35		679.35	—		_		4
70	Gaw Capital Partners	593.57				593.57		_	3
71	Presima	591.33		411.42	—		179.90	_	5
72	Colliers Capital	510.16	510.16						3
73	Deka Immobilien	458.00	458.00	—	—		_	_	3
74	Harrison Street Real Estate Capital	452.16	330.83	82.93	—	38.41			3
75	Berkeley Partners	448.85		448.85	—		_	_	1
76	Omni Partners	411.14	145.77	265.36				_	5
77	Degroof Petercam Asset Management	387.00	387.00	—	—		_		11
78	JCR Capital Investment Corp.	380.15		380.15					2
79	Hart Realty Advisers	285.44		285.44	—			_	1
80	IGIS Asset Management	275.50		_		275.50	_	_	1
81	ASB Real Estate Investments, a division of ASB Capital Management	268.44	—	268.44	—	—		—	1
82	Diamond Realty Management	263.48		8.76		254.72			3
83	Ancala Partners	230.00	230.00	—	—		_	—	4
84	Newcore Capital Management	111.39	111.39					_	2

	Discretionary separate account mandates by investor domicile (gross, € million, as at 31 December 2018)											
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of Mandates			
85	Gerrity Group	109.99		109.99	_			—	1			
86	Hunt Investment Management	104.14		104.14	_			—	3			
87	Divco West Real Estate Services	89.12		89.12	_		—		1			
88	HIS – Hemisfério Sul Investimentos S.A.	87.29			87.29			—	1			
89	Gresham House	32.97	32.97		_			_	1			
90	Broadshore Capital Partners	8.82		8.82				—	1			

End notes

Almanac Realty Investors

Please note that these figures are from 31st March, 2019 and contain sidecar vehicles or other single-investor vehicles that are structured as funds of one, and not separate accounts.

Brookfield Asset Management (Public Securities Group)

Reported for Brookfield Investment Management (Public Securities Group)

CBRE Global Investors

As of 31 March, 2019.

Hines

Does not include third-party real estate

Knight Frank Investment Management

Two discretionary mandates are semi-discretionary.

LaSalle Investment Management

Includes sidecar investments but does not include mandates acquired in November 2018 from Aviva Investors' REMM business (following the acquisition to form LaSalle GPS).

National Real Estate Advisors

Fund's share property-level GAV.

PATRIZIA AG

Excludes funds/vehicles in liquidation (~€750 million), balance sheet/principal assets (~€100+ million) and others (~€750 million).

Tishman Speyer Properties

Asian mandates include GP commitment.

Advisory separate accounts

	Advisory separate ac	counts by inve	stor domicile	(gross, € mil	lion, as at 31	December 20	18)		
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of mandates
1	Principal Real Estate Investors	35,206.00	1,466.00	32,152.00		548.00	1,059.00		78
2	Barings	29,230.80	143.16	28,483.60		604.05			13
3	AEW Global	21,781.47	10,535.90	8,591.08		1,291.89	527.23	835.37	31
4	Generali Real Estate	21,000.00	21,000.00	_					15–20
5	CBRE Global Investors	19,902.12	9,776.48	4,451.79		3,404.31		2,269.54	57
6	Nuveen Global Real Estate	18,735.05		4,740.72		1,472.58	2,211.93		35
7	Credit Suisse Asset Management	13,904.14	13,849.72	54.42					10
8	PATRIZIA AG	13,879.00	12,254.00			1,610.00	—	15.00	52
9	Heitman	13,863.40	171.09	12,998.35		693.96	—		19
10	LaSalle Investment Management	12,992.24	4,285.94	4,359.26		3,399.07	947.97		55
11	J.P. Morgan Asset Management	12,334.16	3,201.80	9,132.28			0.09		19
12	Invesco Real Estate	12,127.20	3,193.94	5,614.49	_	2,798.52	520.25		32
13	Savills Investment Management	9,132.00	8,706.00	—		426.00			42
14	Greystar Investment Group	8,773.52	1,270.94	6,454.22			360.51	687.85	135
15	Acore Capital	8,612.03		8,612.03					1
16	DWS	7,980.00	6,770.40	_		1,209.60			16
17	Quadrant Real Estate Advisors	7,784.73		7,784.73					2
18	La Française	7,661.00	6,175.00			1,486.00			23
19	Hines	6,971.85	2,155.19	1,652.40		2,261.68		902.58	15
20	L&B Realty Advisors	6,730.90		6,358.61		372.29		_	8
21	Aberdeen Standard Investments	6,625.45	5,787.80	171.54				666.11	30
22	Exeter Property Group	6,595.63		1,689.06		3,391.22		1,515.35	4
23	Syntrus Achmea Real Estate & Finance	6,310.00	6,310.00						9
24	USAA Real Estate	6,256.95	535.09	5,710.51				11.35	19
25	Samsung SRA Asset Management	6,198.99	121.25	—		6,077.73			57
26	Round Hill Capital	5,883.35	347.41	5,385.79			—	150.14	19

	Advisory separate a	accounts by inve	stor domicile	(gross, € mil	lion, as at 31	December 20	18)		
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of mandates
27	AMP Capital Investors	5,795.96	336.01	1,355.84			3,339.59	764.52	9
28	MetLife Investment Management	5,410.23	1,752.78	3,095.30		264.49	_	297.66	20
29	AXA Investment Managers – Real Assets	5,233.00	1,503.00	69.00		528.00	2,943.00	190.00	22
30	M3 Capital Partners	4,975.53		4,975.53			—		1
31	Lionstone Investments	4,889.11	268.85	4,620.26			—		6
32	GLL Real Estate Partners GmbH	4,426.00	3,381.00			1,045.00	_	_	14
33	DTZ Investors	4,363.13	4,363.13				—		11
34	BNP Paribas Real Estate Investment Management	4,300.00	4,300.00						47
35	Clarion Partners	4,098.27		2,723.45				1,374.82	8
36	Gaw Capital Partners	3,928.05	1,631.54	1,407.29		889.22	_		15
37	UBS Asset Management	3,901.62	2,962.39	76.35	34.62	828.26	—		14
38	Schroder Real Estate Investment Management	3,527.71	3,527.71						34
39	PCCP	3,519.28	_	3,519.28			—		22
40	Dexus	3,352.69					3,352.69		5
41	Investa Property Group	3,138.16		2,791.20		239.20	107.76		3
42	BlackRock	2,901.52	473.98	0.87		2,426.66			4
43	Sentinel Real Estate Corp.	2,865.73	454.78	1,921.25			245.28	244.41	11
44	Beacon Capital Partners	2,816.32	351.34	1,737.86		727.13	_	_	4
45	BMO Real Estate Partners	2,700.00	2,700.00				_	_	16
46	Berkshire Residential Investments (Berkshire Group)	2,591.38		979.48			279.50	1,332.39	6
47	Pradera	2,075.00	725.00				—	1,350.00	7
48	Stockbridge Capital Group	1,909.03		1,909.03			—		4
49	TGM Associates	1,765.88		1,765.88		_	_	—	5
50	Tishman Speyer Properties	1,656.76	1,438.54	218.23			—	_	4
51	Broadshore Capital Partners	1,483.06	224.34	654.68			—	604.05	12
52	Manulife Investment Management	1,462.98	_	1,462.98			_		2
53	KGAL Investment Management GmbH & Co. KG	1,448.00	1,448.00	_		_	—		1
54	Bentall Kennedy	1,373.07	209.50	930.51				233.06	11
55	Realterm	1,341.65		1,341.65			_		3
56	Morgan Stanley Real Estate Investing	1,273.56	1,273.56						1

	Advisory separate ac	counts by inve	stor domicile	(gross, € mil	lion, as at 31	December 20 [°]	18)		
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of mandates
57	Knight Frank Investment Management	1,149.21	327.60		—	753.33	—	68.28	11
58	Hunt Investment Management	1,105.70	7.16	1,098.54	_				4
59	Cording Real Estate Group	1,095.00	1,095.00						12
60	MaxCap Investment Management	1,076.36	184.52				891.84		5
61	CIM Capital	911.00					911.00		1
62	Diamond Realty Management	910.62				910.62	_		9
63	Altis Property Partners	893.07					893.07		3
64	CS Capital Management	837.32		837.32			_		2
65	Rynda Property Investors	835.00	835.00				—		3
66	Blue Vista Capital Management	789.71		789.71					6
67	Mosser Capital	784.26	752.13	32.12			_		9
68	M7 Real Estate	767.38	767.38						8
69	CenterSquare Investment Management	675.62		520.25			155.38		2
70	PGIM Real Estate	651.10	608.85			42.25			5
71	Northwood Investors	629.95	629.95		_				1
72	Primevest Capital Partners	582.00	582.00						2
73	Sarofim Realty Advisors Co.	566.51		566.51	_		—	—	2
74	Hahn Group	500.00	500.00	—	—		—	—	2
75	Colliers Capital	487.89	487.89	_	_			—	1
76	InfraRed Capital Partners	482.02	—		_	339.56	—	142.46	2
77	Mesa West Capital	456.70	_	161.49	_	295.21		—	6
78	Divco West Real Estate Services	400.84	_	400.84	_				2
79	Thorofare Capital	391.23		391.23	_				1
80	GTIS Partners	304.64	_	304.64					2
81	M&G Real Estate	279.59	279.59						3
82	Areim AB	273.00	273.00						2
83	Curlew Capital	256.20	256.20				—		2
84	Ancala Partners	246.00	246.00				_		2
85	ISPT Pty	236.31					236.31		1

	Advisory separate acc	counts by inve	stor domicile	(gross, € mil	lion, as at 31	December 201	18)		
Rank	Fund manager	Total	Europe	North America	Latin America	Asia	Australasia	Middle East	Number of mandates
86	Clearbell Fund Management	213.09	213.09				—	_	2
87	VBI Real Estate Gestão de Carteiras	180.69			180.69	_	_		2
88	Hart Realty Advisers	177.20		177.20		_	—		1
89	Walton Street Capital	170.22		170.22		—	—	—	1
90	KBS	136.17		136.17		_	—		3
91	Franklin Resources (Operating worldwide as Franklin Templeton Investments)	119.85					119.85	—	4
92	MREC Management	117.75		30.46		87.29			3
93	Harrison Street Real Estate Capital	98.64	98.64				—		1
94	Pearlmark	92.09	60.67	31.42		_	—		7
95	Deka Immobilien	91.00	91.00			_	—		2
96	DRC Capital	56.81		56.81	—				1

End notes

CBRE Global Investors

As of 31 March, 2019.

LaSalle Investment Management

Includes sidecar investments but does not include mandates acquired in November 2018 from Aviva Investors' REMM business (following the acquisition to form LaSalle GPS).

Greystar Investment Group

Equity value reported, leverage has beed excluded from US joint ventures and club deals.

Hines

Does not include third-party real estate.

MetLife Investment Management

Number of mandates only represent unaffiliated third-party client mandates.

Tishman Speyer Properties

Does not include 38 one-off joint ventures which indirectly own either operating property or development property.

MaxCap Investment Management

As of 31 May, 2019.

Mosser Capital

Managed with third party institutional partners

Indirect real estate vehicles

	Value and number of vehicles under management (€ million, as at 31 December 2018)		
Rank	Fund manager	Total GAV	Total vehicles
1	Blackstone	190,440.59	9
2	Nuveen Global Real Estate	88,609.82	58
3	UBS Asset Management	71,137.54	47
4	GLP	54,730.83	22
5	PGIM Real Estate	52,484.86	26
6	J.P. Morgan Asset Management	50,849.92	10
7	Starwood Capital Group	44,268.25	4
8	Deka Immobilien	42,305.00	21
9	Tishman Speyer Properties	40,378.61	16
10	AXA Investment Managers – Real Assets	38,655.00	103
11	Credit Suisse Asset Management	37,684.21	47
12	Union Investment	37,643.50	14
13	CBRE Global Investors	36,312.64	63
14	DWS	36,229.40	155
15	AEW Global	34,613.89	82
16	Invesco Real Estate	32,113.12	18
17	Prologis	29,073.56	4
18	Morgan Stanley Real Estate Investing	28,983.77	15
19	Aberdeen Standard Investments	27,469.79	32
20	Clarion Partners	26,462.84	10
21	CIM Capital	23,986.00	11
22	Principal Real Estate Investors	23,372.00	31
23	PATRIZIA AG	22,868.00	57
24	Angelo, Gordon & Co.	20,459.03	23
25	LaSalle Investment Management	19,347.83	13
26	Commerz Real AG	18,864.80	207
27	M&G Real Estate	17,541.63	17
28	Charter Hall	17,462.78	42

	Value and number of vehicles under management (€ million, as at 31 December 2018)								
Rank	Fund manager	Total GAV	Total vehicles						
29	LGIM Real Assets	17,431.36	19						
30	Heitman	17,231.92	15						
31	LendLease Investment Management	16,053.07	13						
32	Harrison Street Real Estate Capital	15,205.05	10						
33	BlackRock	14,615.84	49						
34	Dexus	14,401.01	3						
35	BNP Paribas Real Estate Investment Management	13,430.00	41						
36	Rockpoint Group	13,182.01	8						
37	AMP Capital Investors Limited	12,972.72	9						
38	Bridge Investment Group	12,650.07	11						
39	Bentall Kennedy	12,630.86	4						
40	Gaw Capital Partners	11,752.11	10						
41	Greystar Investment Group (together with its affiliates, "Greystar")	11,739.28	7						
42	La Française	11,555.00	76						
43	Aviva Investors	11,141.14	55						
44	Cerberus Capital Management	10,448.70	3						
45	ISPT Pty	10,438.18	4						
46	Northwood Investors	10,359.66	1						
47	Tristan Capital Partners	10,112.00	7						
48	Queensland Investment Corp.	10,056.23	5						
49	Ares Management Corp.	9,899.21	42						
50	Walton Street Capital	9,777.35	10						
51	Kayne Anderson Real Estate	9,348.76	16						
52	Schroder Real Estate Investment Management	9,329.99	19						
53	Westbrook Partners	8,966.43	6						
54	Generali Real Estate	8,250.00	11						
55	Bouwinvest Real Estate Investors	8,115.00	7						
56	KBS	7,935.53	6						
57	Stockbridge Capital Group	7,698.98	7						
58	American Realty Advisors	7,616.05	3						
59	Intercontinental Real Estate Corp.	7,438.77	3						

	Value and number of vehicles under management (€ million, as at 31 December 2018)									
Rank	Fund manager	Total GAV	Total vehicles							
60	Vesteda	7,337.00	1							
61	GreenOak Real Estate	7,253.89	14							
62	Samsung SRA Asset Management	7,100.78	36							
63	GPT Funds Management	6,988.99	2							
64	Lubert-Adler Management	6,974.47	11							
65	Columbia Threadneedle Investments	6,812.59	5							
66	Crow Holdings Capital Partners	6,720.89	10							
67	ASB Real Estate Investments, a division of ASB Capital Management	6,651.94	2							
68	Barings	6,355.15	20							
69	Hines	6,294.13	6							
70	Savills Investment Management	6,158.00	18							
71	Beacon Capital Partners	5,323.12	3							
72	USAA Real Estate	5,164.08	7							
73	Divco West Real Estate Services	5,032.09	6							
74	MetLife Investment Management	5,020.66	2							
75	PAG Investment Management	4,798.33	3							
76	Phoenix Property Investors	4,623.40	15							
77	IGIS Asset Management	4,587.27	83							
78	Berkshire Residential Investments (Berkshire Group)	4,554.79	7							
79	BMO Real Estate Partners	4,400.00	10							
80	PCCP	4,337.02	11							
81	Manulife Investment Management	4,305.14	4							
82	DIF Management B.V.	4,300.00	4							
83	Carmel Partners	4,083.25	7							
84	Madison Realty Capital	4,023.20	7							
85	Unite Integrated Solutions	3,896.41	3							
86	A.S.R. Real Estate	3,800.00	4							
87	National Real Estate Advisors	3,791.00	1							
88	Royal London Asset Management	3,785.02	2							
89	Carroll Organization	3,712.44	3							

	Value and number of vehicles under management (€ million, as at 31 December 2018)								
Rank	Fund manager	Total GAV	Total vehicles						
90	GTIS Partners	3,639.12	16						
91	Exeter Property Group	3,615.55	7						
92	Almanac Realty Investors	3,326.62	5						
93	Investa Property Group	3,178.69	1						
94	Niam AB	3,102.20	5						
95	Amvest REIM BV	3,012.00	2						
96	NREP AB	2,988.00	13						
97	Equus Capital Partners	2,967.86	13						
98	Diamond Realty Management	2,888.68	11						
99	DRC Capital	2,881.98	7						
100	Blue Vista Capital Management	2,790.75	7						
101	Torchlight Investors	2,728.69	6						
102	MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH	2,728.00	5						
103	Syntrus Achmea Real Estate & Finance	2,590.00	4						
104	Rubenstein Partners	2,183.12	3						
105	M7 Real Estate	2,151.50	13						
106	Canyon Partners Real Estate	2,108.93	3						
107	Artemis Real Estate Partners	2,080.12	4						
108	NYL Investors	2,069.65	4						
109	KGAL Investment Management GmbH & Co. KG	2,052.00	9						
110	Och-Ziff Real Estate Advisors	2,051.58	5						
111	CITIC Capital	2,040.84	8						
112	CenterSquare Investment Management	1,909.91	17						
113	ICG-Longbow	1,892.51	4						
114	Wheelock Street Capital	1,862.77	3						
115	Sentinel Real Estate Corp.	1,855.79	3						
116	Brookfield Asset Management (Public Securities Group)	1,828.73	4						
117	InfraRed Capital Partners	1,698.66	2						
118	Conundrum Capital Corp.	1,630.16	4						
119	Realterm	1,614.87	6						

Value and number of vehicles under management (€ million, as at 31 December 2018)				
Rank	Fund manager	Total GAV	Total vehicles	
120	Western National Group	1,483.93	3	
121	LEM Capital	1,370.28	3	
122	Areim AB	1,362.00	2	
123	Degroof Petercam Asset Management	1,339.00	5	
124	Long Wharf Capital	1,294.51	3	
125	Lionstone Investments	1,277.93	4	
126	GLL Real Estate Partners GmbH	1,244.00	7	
127	Pradera	1,185.00	4	
128	Franklin Resources (Operating worldwide as Franklin Templeton Investments)	1,150.66	7	
129	GFI Partners	1,136.50	38	
130	Threestones Capital Management S.A	1,120.00	3	
131	AviaRent Invest AG	1,010.17	7	
132	Kairos Investment Management Co.	977.30	6	
133	HIS – Hemisfério Sul Investimentos S.A.	928.77	5	
134	Primevest Capital Partners	924.00	6	
135	Hunt Investment Management	875.43	6	
136	Pearlmark	868.36	4	
137	Hahn Group	850.00	2	
138	Argosy Real Estate Partners	782.12	6	
139	Prima Capital Advisors	758.55	1	
140	Clearbell Fund Management	745.42	3	
141	Covenant Capital Group	739.43	2	
142	VBI Real Estate Gestão de Carteiras	723.46	4	
143	Alex. Brown Realty	711.06	6	
144	Knight Frank Investment Management	709.89	1	
145	Ancala Partners	695.00	2	
146	Grubb Properties	677.63	9	
147	Pamfleet	673.24	2	
148	Velocis	664.81	2	
149	L&B Realty Advisors	657.06	1	

Value and number of vehicles under management (€ million, as at 31 December 2018)					
Rank	Fund manager	Total GAV	Total vehicles		
150	Presima	651.76	7		
151	JCR Capital Investment Corp.	647.17	4		
152	Greenman	610.93	1		
153	Jaguar Growth Partners	570.88	4		
154	Gerrity Group	548.18	1		
155	Paloma Capital	445.56	2		
156	SDI Gestão	428.49	3		
157	Cording Real Estate Group	426.42	4		
158	Altis Property Partners	409.32	3		
159	Acore Capital	379.89	1		
160	Novare Fund Manager Limited Incorporated in Mauritius	368.36	2		
161	ICE Capital REAM	363.00	5		
162	Berkeley Partners	355.36	2		
163	MREC Management	342.79	3		
164	Barwood Capital	309.22	3		
165	Locust Point Capital	272.34	1		
166	Thorofare Capital	267.30	3		
167	MaxCap Investment Management	223.82	2		
168	Newcore Capital Management	122.53	4		
169	Brasa Capital Management	104.75	1		
170	Gresham House	91.02	1		
171	DTZ Investors	89.11	2		
172	Omni Partners	85.54	2		
173	Round Hill Capital	81.18	1		
174	Quadrant Real Estate Advisors	16.59	2		

End notes

Almanac Realty Investors As of 31 March, 2019.

AMP Capital Investors Limited Includes listed AIMS REIT and Precinc.

Areim AB Includes co-investments.

Ares Management Corp. NAV.

Barwood Capital GAV represents the end value of the assets post development.

Blackstone Includes commingled real estate funds and co-investment vehicles. Excludes separately managed accounts.

CBRE Global Investors As of 31 March. 2019.

AS 01 31 March, 2019.

DIF Management B.V. Value includes undrawn equity commitments.

Hines

Does not include third-party real estate.

KGAL Investment Management GmbH & Co. KG Only institutional funds included, excludes €3,653 million of retail/private

placement vehicles.
LaSalle Investment Management

Does not include mandates acquired in November 2018 from Aviva Investors' REMM business (following the acquisition to form LaSalle GPS).

MaxCap Investment Management

As of 31 May, 2019.

M&G Real Estate

Includes £3.918 billion (€4.345 billion) listed on the Luxembourg Stock Exchange and £4.075 billion (€4.519 billion) of assets managed by M&G Investments with fund management decisions made by M&G Investments.

PATRIZIA AG

Includes all investing and stable unlisted collective real estate investment vehicles managed on behalf of third-party capital as at end of fourth quarter 2018.

Phoenix Property Investors

As of 30 September, 2018.

Royal London Asset Management

GAV includes cash held by funds amounting to c. £131 million (€145 million).

Tishman Speyer Properties

Includes 38 joint ventures which indirectly own either operating property or development property. Excludes AUM owned through separate account vehicles of approximately \$4.2 billion (€3.67 billion).

Torchlight Investors

Represents the net value of unlisted vehicles and includes available commitments.

Walton Street Capital

Total value excludes a fund that is currently being marketed.

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For more information about PFR, please contact Jane Fear at jf@propertyfundsresearch.com.

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