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CRAIN COMMUNICATIONS

SPECIAL REPORT REAL ESTATE MANAGERS

Managers rebound strongly following pandemic slump

By ARLEEN JACOBIUS

Raising new funds still may be a challenge, but real estate managers are already getting their investment groove back from a slump caused by the worldwide pandemic, resulting in their combined global assets under management increasing 13.9% to nearly $2 trillion in the year ended June 30.

This is the first year of double-digit growth in worldwide real estate AUM in *Pensions & Investments'* annual real estate money manager survey since 2018, with managers now breathing a collective sigh of relief that the 2020 downturn wasn't as bad as everyone feared, thanks to federal intervention.

Real estate assets for U.S. tax-exempt institutions also rose in the 12-month period but at a slower pace — 6.8% to $652.4 billion. By comparison, real estate assets managed for U.S. tax-exempt investors were up 2.9% in the prior 12-month period.

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- Managers search for opportunities in office and hotels. **Page 14**
- For the full report, go to **pionline.com/realestate21**

Spike Liseiko

BACK ON TRACK: Eric Adler thinks the bounce back from the COVID-19 downturn started in June of 2020.

Staffing

Asset owners hire executives at fast pace, with focus on diversity

By CHRISTINE WILLIAMSON

The changing of the guard among senior asset owner executives is fast-paced so far this year, with a sharp focus on hiring more women and people of color.

Pensions & Investments' reporting through Sept. 30 covered senior-level hires (CEO, executive director or chief investment officer) or open positions for 23 institutional investors so far this year. Four of these asset owners have yet to hire a permanent replacement for CIOs and CEOs, including the $487.7 billion California Public Employees Retirement System, Sacramento.

Senior-level departures that *P&I* analyzed included nine retirements among asset owners. The rest of the newly hired senior executives were replacements for people who left for other reasons. Two new appointees replaced an executive who died.

Among the new CEOs and CIOs of large institutional investors are:

- **Cassandra Lichnock** was promoted to CEO of the $318.4 billion California State Teachers' Retirement System, West Sacramento, on July 1, replacing Jack Ehnes, who retired. Ms. Lichnock was the system's chief operating officer.
- **Allyson Tucker** will take over as CEO of the Washington State Investment Board, Olympia, on Jan. 1. She will replace Theresa Whitmarsh, who is retiring on Dec. 31. Ms. Tucker is CIO of the board, which managed a total of $181 billion, of which $142.5 billion was

SEE **HIRING** ON PAGE 28

ESG

Water risks, opportunities need attention

Sustainability factors permeate many investment sectors, advocates warn

By HAZEL BRADFORD

Institutional investors need to pay more attention to water as an investment risk or opportunity, advocates say.

When sustainability advocacy group Ceres looked at the four main U.S. stock indexes for water risk, it found significant water risks in more than half of the sectors. Most industries face risks tied to water, such as dwindling sources, higher costs, pollution, climate change, more regulation and increasing competition for it, but most companies also are not paying enough attention to manage these risks for themselves or their investors, Ceres maintains.

Those risks could be material for investors, who will have to step up, according to Ceres. "The global water crisis is a global risk. Investors really need to be key players," said Kirsten James, director of Ceres' water program, which is working to mobilize investors and companies to address sustainability risks from water.

WORLDWIDE: Kirsten James said investors need to step up because the water crisis is a global risk.

To that end, some investors, including the $318.4 billion California State Teachers' Retirement System, West Sacramento, are leading the Valuing Water Finance Task Force formed by Ceres and the Netherlands government to drive corporate action on water-related financial risks, including better disclosure and water risk management throughout supply chains.

CalSTRS; Australia's HESTA, a A$62 billion ($45 billion) superannuation fund in Sydney; Dutch pension manager PGGM, with €266 billion ($311.8 billion) in assets under management; and other investors helped Ceres develop an investor water toolkit for evaluating and acting on water risks in investment portfolios.

SEE **WATER** ON PAGE 26

SOUND BITE

INVESTMENT COMPANY INSTITUTE'S **ERIC J. PAN:**

Changing the tax treatment will 'penalize **the exact same American investors** that the Biden administration has identified as the individuals that most need to build financial security.' **Page 2**

Franklin bolsters custom indexing

Franklin Resources announced it will acquire quantitative manager O'Shaughnessy Asset Management. **Page 27**

Ryan Strand Greenberg

BACK IN PLAY: Ted Aronson's new firm, AJOVista, is set to open with $1 billion in assets under management, anchored by a Missouri pension plan.

Money Management

AJO's Ted Aronson launching new firm with HighVista team

By DOUGLAS APPELL

A year after quant manager AJO LP announced it would shut down and return roughly $11 billion to clients amid a crushing five-year drought for value stocks, Ted Aronson, the Philadelphia-based firm's founder, is launching a new boutique in tandem with Boston-based HighVista Strategies LLC's systematic investment team.

Mr. Aronson said in an interview that the new firm — AJOVista — was set to open its doors Oct. 1 with roughly $1 billion in client money, focusing on less efficient market segments such as emerging markets small-cap stocks and U.S. microcap stocks.

The firm is getting off the ground with the backing of a key institutional client, the $10.2 billion Missouri Local Government Employees Retirement System, Jefferson City, which is carrying over roughly $400 million in AJO mandates as

SEE **AJOVISTA** ON PAGE 28

Special Report

REAL ESTATE MANAGERS

Managers rebound after pandemic dip

TIMING: Cohen & Steers' Ji Zhang said many institutional investors saw the downturn REITs experienced as a good buying opportunity.

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"June of last year … is where we started coming out of the deer-in-the-headlights moment from COVID," said Eric Adler, London-based president and CEO of PGIM Real Estate and chairman of PGIM Real Estate Finance. "From late February to early summer, we were just expecting a much more dramatic downturn and shutting down."

Managers placed their bets on two sectors that had already begun their ascent before the pandemic — industrial and multifamily — and stayed away from retail and hospitality, which were being hammered by the global shutdown.

"As with everyone, we are cautious on office and retail and generally are cautious on urban gateway markets, which have questions about what they look like in a post-COVID world," said Mike Kelly, New York-based managing director and head of real estate Americas at J.P. Morgan Asset Management. JPMAM has been shrinking its exposures to these types of properties, he added.

However, JPMAM sees some investment opportunities to build or renovate creative offices in emerging technology nodes of growing cities, as well as in lab space, Mr. Kelly said.

JPMAM's worldwide real estate assets remained roughly flat at $54.5 billion in 2021, and its assets managed for U.S. institutional tax-exempt investors declined 3.2% to $44.7 billion as of June 30.

Managers have plenty of money to spend with $363 billion in dry powder, according to Preqin. However, the pandemic-induced economic downturn and the uncertainty around the future of some real estate sectors has caused many investors to pause new real estate fund commitments. Fundraising dropped 65% in the second quarter ended June 30 from the year-earlier quarter to a combined $18.9 billion.

Industrial property growth

By property type, the industrial sector had the most growth among the top 50 managers of U.S. institutional tax-exempt assets with a weighted average of 21.1% as of June 30, up 2.4 percentage points from June 30, 2020, the results of *Pensions & Investments'* 2021 real estate manager survey showed. Office had the largest drop, down close to 3 percentage points to 26.2% of total assets managed by the largest managers.

In June 2020, PGIM became very active investing in industrial and multifamily properties, Mr. Adler said. Industrial was boosted by online shopping that soared as consumers stayed home.

The firm's investments revolved around supply chains and locations across the globe where new facilities were needed, he said. As for multifamily, the pandemic caused many people to reconsider their living arrangements, he said. PGIM executives are particularly looking to invest in more garden-style apartments that provide more space, Mr. Adler said.

PGIM's worldwide real estate assets grew 6.5% to $126 billion in 2021, and its assets managed for U.S. institutional tax-exempt investors rose by 5.4% to $58.5 billion as of June 30, making it the third-largest manager by worldwide assets and second-largest by U.S. institutional assets in *P&I's* survey.

While it is definitely not business as usual with the rise of the COVID-19 delta variant injecting uncertainty into the investment process, some managers are starting to take on more risk.

Some real estate managers have been investing in regions that appear to be in recovery and in specialty real estate sectors that they expect to outperform in a post-COVID-19 world, such as single-family houses for rent, data centers and properties catering to the life science sector.

In the first half of 2020, PGIM Real Estate executives were conservative, sticking to core investments mainly in industrial and multifamily.

PGIM went into a "make sure you know what you are doing with every dollar" mode, he said. Then last summer, PGIM executives realized that the worst economic scenario had been avoided and its portfolio was in good shape.

Expanding beyond the U.S.

Real estate managers' worldwide assets invested outside the U.S. grew 25.7% from a year earlier to $660 billion as of June 30 and were up 100% from five years earlier. Assets managed outside of the U.S. for domestic tax-exempt investors also grew by double digits, rising 21.4% to $42.4 billion in the 12-month period, and up 42.3% over the five-year period.

Starting at the end of 2020, PGIM executives began investing in riskier strategies, primarily value-add transactions in Europe and Asia, Mr. Adler said.

"In Asia, in particular, the way COVID-19 has been managed, the governments, for better or for worse, have been very consistent" in what they wanted to do, how they do it, how they support certain industries and the duration of the shutdowns, Mr. Adler said.

"It created a certain predictability. Tenants, buyers and sellers were more comfortable positioning themselves," giving PGIM executives the ability to enter into transactions, he said.

PGIM Real Estate's non-U.S. assets managed for clients worldwide rose by 5.5% to $20.6 billion in the 12 months ended June 30, with the biggest share of assets in the U.K. with $5.8 billion, followed by Central and Eastern Europe with $5.6 billion and Asia with $4 billion.

For their part, investors still continue to believe that real assets as a whole, including real estate, is "relatively attractive compared to other types of yielding asset classes," said Jon Pliner, New York-based senior director and head of delegated portfolio management with Willis Towers Watson PLC.

However, real estate capitalization rates — a measure of the rate of return properties are expected to produce — are low and future returns are likely to be below their his-

Real estate investment manager stats at a glance

Assets under management, in millions, as of June 30.

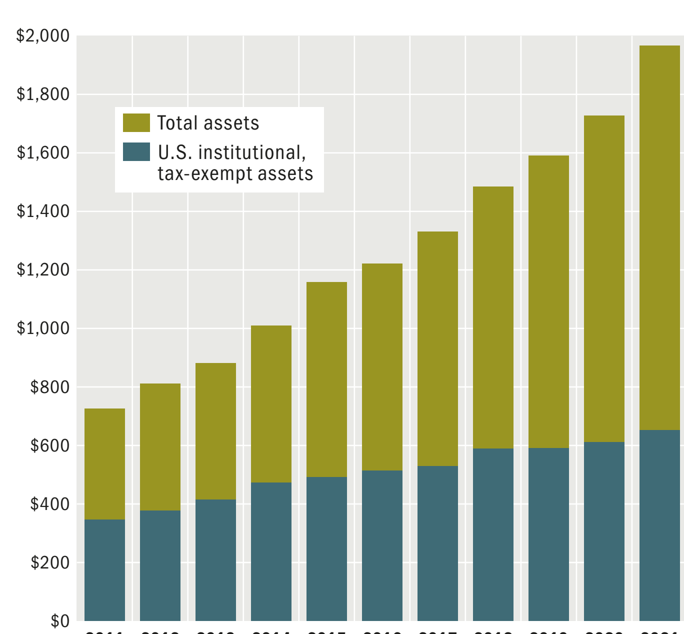
	2021 data	One-year change	Five-year change
Worldwide assets	$1,966,490	13.9%	60.9%
Real estate equity	$1,437,462	14.6%	64.2%
Timber	$29,498	-4.7%	-6.1%
Farmland	$16,663	14.2%	-1.7%
Hybrid debt	$12,551	12.1%	21.4%
Mezzanine	$24,232	5.7%	91.3%
Loans	$59,354	3.9%	2,479.5%
Mortgages	$386,730	15.3%	41.7%
Invested outside the U.S.	$660,080	25.7%	100.2%
Invested in the U.S. for foreign clients	$186,843	21.4%	99.6%
Managed for co-investments	$95,616	29.2%	157.2%
U.S. institutional, tax-exempt assets	$652,427	6.8%	27.1%
Real estate equity	$503,259	6.6%	23.4%
Timber	$13,953	-6.8%	-25.3%

	2021 data	One-year change	Five-year change
Farmland	$13,893	11.8%	5.2%
Hybrid debt	$7,043	4.7%	14.5%
Mezzanine	$12,316	9.7%	161.6%
Loans	$15,215	6.3%	964.0%
Mortgages	$86,748	10.0%	42.0%
Invested outside the U.S.	$42,354	21.4%	42.3%
Managed for defined contribution plans	$33,044	3.2%	90.8%
Total assets in REIT securities	$551,068	31.5%	18.2%
U.S. inst'l, tax-exempt	$125,693	26.3%	-7.5%
Total number of real estate employees	41,274	N/A	N/A
U.S.-based	14,446	N/A	N/A
Number of minority- & women-owned managers	3	N/A	N/A

Historical data may include retroactive updates.

Growth of real estate assets under management

Assets are in billions as of June 30.



torical average relative to other asset classes, Mr. Pliner said.

The NCREIF Property index reflecting unleveraged returns of primarily core properties was 3.59% in the second quarter, the highest quarterly return since the second quarter of 2011. The industrial sector overshadowed all other real estate types with an 8.88% return, the highest in the history of the index, NCREIF reported. By comparison, the NCREIF Property index was -0.99% in the second quarter of 2020, which was the lowest quarterly return since the fourth quarter of 2009, but up to 2.7% for the 12 months ended June 30, 2020.

The NCREIF Fund Index-Open-End Diversified Core Equity index return was 3.93% for the quarter and 8.02% for the year ended June 30. In 2020, the NFI-ODCE was -1.75% for the quarter and 1.33% for the year ended June 30. 2020. The NFI-ODCE is a measure of fund-level performance and can include leverage and cash balances.

Trends accelerated by pandemic

Josh Herrenkohl, New York-based senior managing director in the real estate practice at FTI Consulting, said that the pandemic has accelerated trends that were already present for the past 10 to 12 years.

The question is which trends will persist into the future, Mr. Herrenkohl said.

"We're at a period in which some trends will be durable and others, less so," he said.

The industrial and data center sectors have done well, Mr. Herrenkohl said. But trends can be cyclical, he said.

Industrial was "a sleeper asset class" that took off due to e-commerce that was partly accelerated by the pandemic.

"At some point, it will level off as most trends do," Mr. Herrenkohl said.

Office is in a state of flux.

Although he doesn't think the office sector "is going anywhere," the pandemic caused company executives to rethink their need for and use of offices. With the success of working from home, executives learned that employees did not have to be under their supervision in an office to be productive, Mr. Herrenkohl said.

Before the COVID-19 crisis, offices were seen by tenants to fulfill four purposes: to provide space for people to work, help the organization build and sustain its corporate culture, facilitate ideation and

SEE **MANAGERS** ON PAGE 20

Managers search for opportunities in office, retail, hotels

Some real estate managers are hunting for investment opportunities in the sectors that have been battered during the pandemic: office, retail and hotels.

Assets managed by the top 50 real estate managers in office dropped to 26.2% of their portfolios managed for U.S. tax-exempt institutions as of June 30 from 29.1% as of June 30, 2020, the biggest drop of any property sector, according to this year's *Pensions & Investments* real estate manager survey results. This continues a decline reflected in *P&I*'s 2020 real estate manager report when office assets managed for domestic asset owners dipped close to a percentage point to 29.1%.

Retail also was down in the 2021 report by 1.3 percentage points to 12.2%, while hotels was up slightly at 1.8% as of June 30, compared to 1.5% a year earlier.

Many investors have been underweighting office, retail and hotels compared to their benchmarks, but many anticipate there will be investment opportunities at some point.

For all of the sectors that were hit hardest by the COVID-19 crisis, there will be investment opportunities either building on what the assets were or converting them for new uses, said Jon Pliner, New York-based senior director and head of delegated portfolio management in the U.S. at Willis Towers Watson PLC.

"It's just a matter of what they are and when," Mr. Pliner said.

Executives at PGIM Real Estate are just starting to "dip their toe in the water" in some of these out-of-favor asset classes, said Eric Adler, London-based president and CEO of PGIM Real Estate and chairman of PGIM Real Estate Finance.

Starting at the end of 2020, "when we were comfortable the worst was over, we were hedging our bets on where COVID might be," and PGIM began cautiously searching for deals in sectors such as office and hotels, he said.

The trends in place before the pandemic were accelerated by the COVID-19 crisis, added Josh Herrenkohl, New York-based senior managing director in the real estate practice at FTI Consulting,

For example, the already underperforming retail sector was hit hard during the pandemic as more people relied on online shopping, but grocery-anchored retail "has been largely unscathed," Mr. Herrenkohl said. Class C office buildings, which are the lowest quality properties in less desirable areas, were already not doing well before the pandemic, "and in large part have gone off the cliff" as a result of the pandemic, he said.

"I'm not a believer in the demise of retail," Mr. Herrenkohl said. However, online and in-store retail will continue to coexist with some

CONTINUATION: Josh Herrenkohl said the pandemic accelerated trends that had started before COVID-19 hit, such as retail underperforming.

properties repurposed into technology-supporting uses, such as data centers, as well as to serve as distribution centers and pickup sites. Retail will change from a place where people come to browse to a spot to pick up items after shopping for them online. Retail properties such as shopping centers will be "less a point-of-sale and more use of retail to facilitate a process," Mr. Herrenkohl said.

Tingting Zhang, El Segundo, Calif.-based founder and CEO of TerraCotta Group LLC, also has not counted out retail, but her firm typically forms data-driven views of real estate on a neighborhood-by-neighborhood, property-subsector basis.

"The convergence of the physical retail and e-commerce is really about access," Ms. Zhang said. "Retail is not an irrelevant asset class, but there is a bifurcation between winners and losers."

In retail, TerraCotta has focused since 2004 and 2005 on investing in neighborhood centers, she said.

"Retail winners usually are very well located and digitally oriented, such as Amazon Fresh stores," Ms. Zhang said.

In Europe, King Street executives have seen an increase in office leasing, but these days tenants are most interested in boosting employee retention by choosing a best-in-class space that encourages collaboration and team building, said Paul Brennan, London-based managing director at King Street Capital Management LP.

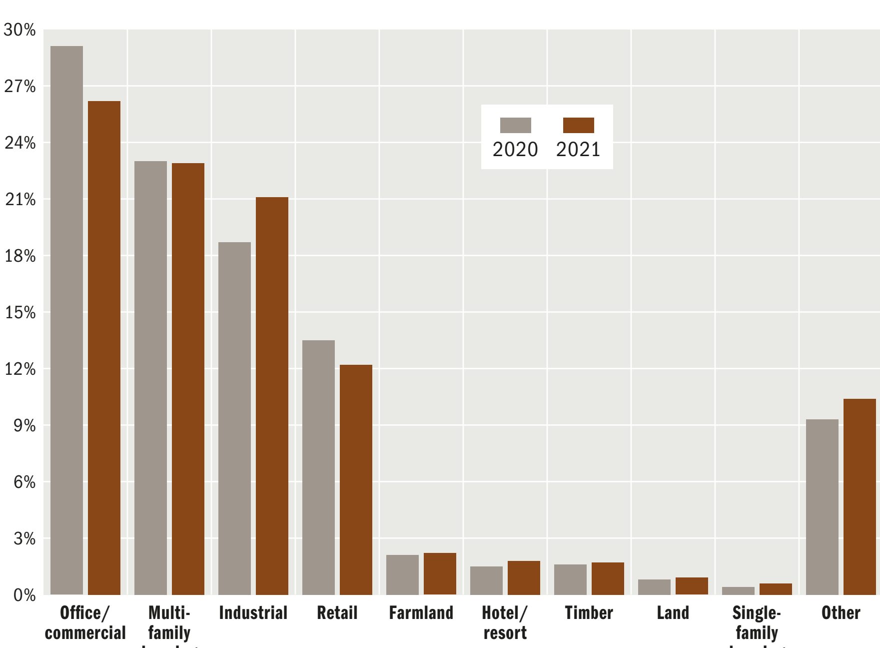
"There is less sensitivity on price for the best quality stuff," he said. King Street has been lending to properties in the hardest hit areas, such as hospitality and high-end residential properties, Mr. Brennan said.

"There was a huge capital vacuum at the end of last year before the vaccine rollout and before air travel began to ramp up," he said. Lenders were not willing to lend even to high-quality hotel assets. So, King Street stepped in to lend to distressed "trophy assets," where the property was still strong but there was some dislocation in the capital structure, Mr. Brennan said.

— ARLEEN JACOBIUS

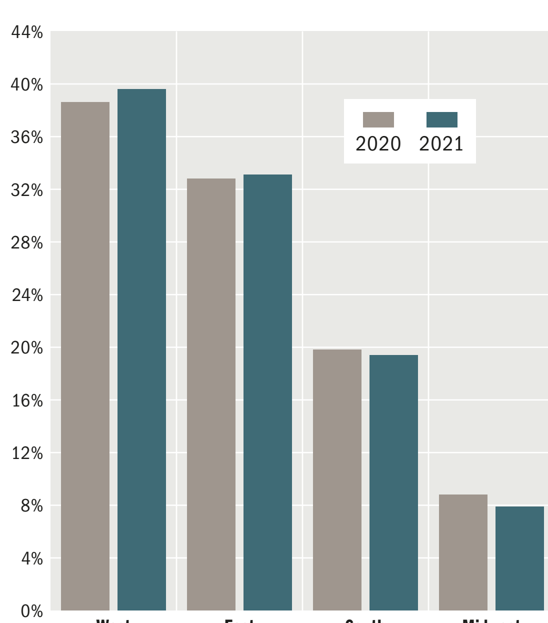
Assets by property type

Weighted average for the top 50 managers of U.S. institutional, tax-exempt real estate assets, as of June 30.



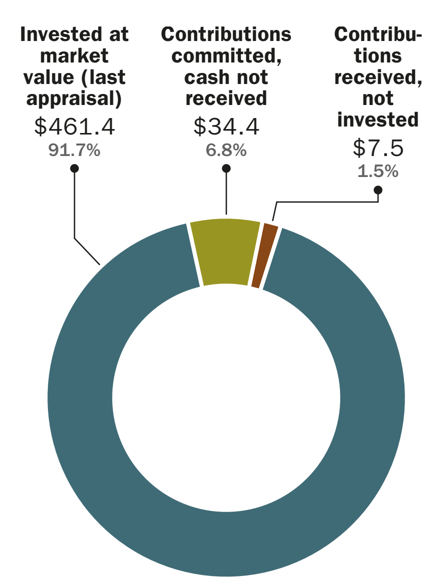
Assets by location

Weighted average for the top 50 managers of U.S. institutional, tax-exempt real estate assets, as of June 30. Based on the NCREIF index.



Real estate equity by asset status

U.S. institutional tax-exempt real estate assets, in billions, as of June 30.



The largest real estate investment managers

Ranked by total worldwide real estate assets, in millions, as of June 30.

		TOTAL WORLDWIDE REAL ESTATE ASSETS								U.S. INSTITUTIONAL, TAX-EXEMPT REAL ESTATE ASSETS								
Rank	Manager	Total assets	Equity	Timber	Farmland	Hybrid debt	Mezzanine	Loans	Mortgages	Total assets	Equity	Timber	Farmland	Hybrid debt	Mezzanine	Loans	Mortgages	Discretionary
1	**MetLife Investment**	$136,939	$25,000				$795	$550	$110,594	$3,916	$3,532						$384	$1,370
2	**Nuveen**	$129,030	$67,830	$2,433	$8,688		$6,786	$297	$42,996	$92,210	$41,079	$2,433	$8,688		$6,786	$297	$32,927	$92,210
3	**PGIM Real Estate**	$125,912	$46,984		$1,518		$1,063		$76,347	$58,531	$32,898		$1,264		$531		$23,838	$57,310
4	**AXA IM Alts**	$109,119	$85,303	$376			$103	$23,337		$13,602	$2,818				$103	$10,681		$349
5	**CBRE Global Investors**	$107,500	$107,400						$100	$11,000	$10,900						$100	$7,200
6	**UBS Real Estate & PM**	$79,239	$73,341		$1,982	$3,485		$431		$23,902	$18,004		$1,982	$3,485		$431		$23,902
7	**Prologis**	$62,260	$62,260							$6,622	$6,622							$6,622
8	**AEW Capital**	$61,556	$59,077				$267		$2,212	$19,312	$18,348				$208		$756	$14,167
9	**Principal Real Estate**	$58,279	$33,410				$1,358		$23,511	$27,729	$25,364				$912		$1,453	$11,559
10	**Abrdn**	$57,442	$57,442							$39	$39							$39
11	**New York Life Inv. Mgmt.**	$56,720	$17,591				$1,540	$754	$36,835	$11,738	$6,440				$147	$262	$4,889	$6,914
12	**DWS-Real Estate**	$55,287	$55,287							$19,229	$19,229							$5,418
13	**Hines**	$55,132	$54,913					$219		$4,384	$4,384							$479
14	**J.P. Morgan Asset Mgmt.**	$54,534	$52,000				$1,099		$1,435	$44,701	$43,149				$117		$1,435	$37,207
15	**LaSalle Investment**	$50,292	$50,292							$11,952	$11,952							$7,607
16	**Great-West LifeCo RE**	$45,881	$21,581				$167	$812	$23,321	$754	$754							
17	**Morgan Stanley Inv. Mgmt.**	$45,777	$41,061						$4,716	$20,847	$18,192						$2,655	$20,548
18	**Invesco Real Estate**	$43,495	$41,936				$1,559			$24,542	$23,288				$1,254			$19,779
19	**Barings**	$43,025	$10,424				$250	$2,285	$30,066	$5,848	$3,607				$42	$128	$2,071	$2,831
20	**Clarion Partners**	$42,892	$42,892							$23,909	$23,909							$19,216
21	**Starwood Capital**	$38,881	$33,444						$5,437	$11,629	$10,003						$1,626	$11,629
22	**Brookfield Asset Mgmt.**	$38,632	$32,454	$469	$419		$5,290			$10,361	$8,896	$104	$153		$1,208			$10,361
23	**Heitman**	$32,715	$29,029				$675		$3,011	$24,978	$22,202				$634		$2,142	$12,896
24	**Kohlberg Kravis Roberts**	$31,766	$31,766							$5,318	$5,318							$5,318
25	**USAA Real Estate**	$29,403	$21,876			$4,297			$3,230	$10,498	$8,317			$2,181				$7,907
26	**Ares Mgmt.**	$20,254	$16,936			$3,318				$4,564	$4,195			$369				$4,564
27	**Harrison Street**	$19,373	$19,373							$12,942	$12,942							$12,942
28	**Manulife Investment**	$18,641	$18,641							$546	$546							$546
29	**Partners Group**	$17,420	$17,420							$1,525	$1,525							
30	**ACORE Capital**	$16,652						$16,652		$274						$274		
31	**BlackRock**	$15,307	$13,458				$1,849			$5,405	$5,261				$144			$5,405
32	**Angelo, Gordon**	$14,904	$14,904							$8,639	$8,639							$8,639
33	**Rockpoint Group**	$14,134	$14,134							$4,060	$4,060							$4,060
34	**Oaktree Capital**	$13,906	$10,249						$3,657	$4,044	$3,032						$1,012	$4,044
35	**Berkshire Group**	$13,623	$7,182					$6,441		$1,695	$954					$741		$1,695
36	**Stockbridge Capital Group**	$12,706	$12,706							$7,897	$7,897							$5,129
37	**Inland Group**	$11,600	$11,565						$35	$330	$330							$180
38	**PCCP**	$11,496	$4,949						$6,547	$5,167	$3,177						$1,990	$2,082
39	**Hancock Timber**	$9,647		$9,647						$2,942		$2,942						$2,722
40	**StepStone Group**	$8,515	$8,123			$392				$1,230	$1,049			$181				$1,179
41	**Intercontinental Real Estate**	$8,244	$8,244							$7,974	$7,974							$7,974
42	**American Realty Advisors**	$7,653	$7,653							$7,219	$7,219							$7,219
43	**Walton Street Capital**	$6,747	$6,747							$1,860	$1,860							

The largest managers of tax-exempt real estate assets

U.S. institutional tax-exempt real estate assets, in millions, as of June 30.

Rank	Manager	Assets
1	**Nuveen**	$92,211
2	**PGIM Real Estate**	$58,531
3	**J.P. Morgan Asset Mgmt.**	$44,701
4	**Principal Real Estate**	$27,729
5	**Heitman**	$24,978
6	**Invesco Real Estate**	$24,542
7	**Clarion Partners**	$23,909
8	**UBS Real Estate & PM**	$23,902
9	**Morgan Stanley Inv. Mgmt.**	$20,847
10	**AEW Capital**	$19,312
11	**DWS-Real Estate**	$19,229
12	**AXA IM Alts**	$13,602
13	**Harrison Street**	$12,942
14	**LaSalle Investment**	$11,952
15	**New York Life Inv. Mgmt.**	$11,738
16	**Starwood Capital**	$11,629
17	**CBRE Global Investors**	$11,000
18	**USAA Real Estate**	$10,498
19	**Brookfield Asset Mgmt.**	$10,361
20	**Angelo, Gordon**	$8,639
21	**Intercontinental Real Estate**	$7,974
22	**Stockbridge Capital Group**	$7,897
23	**American Realty Advisors**	$7,219
24	**Washington Capital**	$6,745
25	**Prologis**	$6,622
26	**ASB Capital Mgmt.**	$6,290
27	**Westbrook Partners**	$6,284
28	**Barings**	$5,847
29	**M3 Capital**	$5,700
30	**L&B Realty**	$5,688
31	**BlackRock**	$5,405
32	**Kohlberg Kravis Roberts**	$5,318
33	**PCCP**	$5,167
34	**AFL-CIO Building Trust**	$4,736
35	**Ares Mgmt.**	$4,564
36	**Hines**	$4,384
37	**Rockpoint Group**	$4,060
38	**Oaktree Capital**	$4,044
39	**MetLife Investment**	$3,916
40	**Union Labor Life**	$3,835
41	**Prima Capital Advisors**	$3,443
42	**Beacon Capital**	$3,438
43	**Domain Capital Advisors**	$3,418
44	**Carmel Partners**	$3,110
45	**National Real Estate**	$3,004
46	**Neuberger Berman**	$2,957
47	**Hancock Timber**	$2,942
48	**Forest Investment**	$2,744
49	**Sentinel Real Estate**	$2,225
50	**Molpus Woodlands Group**	$1,944

TOTAL WORLDWIDE REAL ESTATE ASSETS

Rank	Manager	Total assets	Equity	Timber	Farmland	Hybrid debt	Mezza-nine	Loans	Mort-gages
44	Washington Capital	$6,745	$5,079						$1,666
45	Westbrook Partners	$6,614	$6,614						
46	Beacon Capital	$6,564	$6,564						
47	ASB Capital Mgmt.	$6,351	$6,351						
48	Prima Capital Advisors	$6,219							$6,219
49	L&B Realty	$5,892	$5,892						
50	M3 Capital	$5,700	$5,700						
51	Sentinel Real Estate	$4,994	$4,994						
52	Neuberger Berman	$4,855	$4,855						
53	AFL-CIO Building Trust	$4,736	$4,736						
54	Carmel Partners	$4,615	$4,615						
55	KBS	$4,262	$4,262						
56	Forest Investment	$4,238		$4,238					
57	Madison Realty	$4,156	$773			$141	$63	$3,179	
58	GTIS Partners	$4,074	$4,002				$72		
59	Hancock Agricultural	$3,952			$3,952				
60	Union Labor Life	$3,835							$3,835
61	Domain Capital Advisors	$3,660	$3,319		$104	$210		$27	
62	Blue Vista Capital	$3,643	$2,807					$836	
63	Man GPM	$3,374	$1,237					$2,137	
64	Global Forest Partners	$3,300		$3,300					
65	National Real Estate	$3,213	$3,113				$4	$29	$67
66	Canyon Partners Real Estate	$3,151	$2,202					$949	
67	Resource Mgmt.	$3,103		$3,103					
68	CenterSquare Investment	$2,566	$1,533				$1,033		
69	Russell Investments	$2,549	$2,549						
70	Molpus Woodlands Group	$2,482		$2,482					
71	Timberland Inv. Resources	$1,947		$1,947					
72	Torchlight Investors	$1,811	$613			$708	$38		$452
73	Silver Creek Capital	$1,503		$1,503					
74	Virtus Real Estate	$1,313	$1,313						
75	Hunt	$1,312	$1,312						
76	TGM Associates	$1,255	$1,255						
77	Covenant Capital Group	$1,149	$1,149						
78	Broadshore Capital	$992	$545				$28	$419	
79	Sarofim Realty	$981	$981						
80	Bailard	$791	$791						
81	CS Capital	$593	$593						
82	Hart Realty Advisers	$562	$562						
83	Pearlmark	$467	$274				$193		
84	TerraCotta Group	$441							$441
	TOTAL	$1,966,490	$1,437,462	$29,498	$16,663	$12,551	$24,232	$59,354	$386,730

U.S. INSTITUTIONAL, TAX-EXEMPT REAL ESTATE ASSETS

Rank	Manager	Total assets	Equity	Timber	Farmland	Hybrid debt	Mezza-nine	Loans	Mort-gages	Discre-tionary
44	Washington Capital	$6,745	$5,079						$1,666	$6,539
45	Westbrook Partners	$6,284	$6,284							$6,284
46	Beacon Capital	$3,438	$3,438							$1,048
47	ASB Capital Mgmt.	$6,290	$6,290							$6,290
48	Prima Capital Advisors	$3,443							$3,443	$3,443
49	L&B Realty	$5,688	$5,688							$1,541
50	M3 Capital	$5,700	$5,700							$5,700
51	Sentinel Real Estate	$2,225	$2,225							$851
52	Neuberger Berman	$2,957	$2,957							
53	AFL-CIO Building Trust	$4,736	$4,736							$4,736
54	Carmel Partners	$3,110	$3,110							$3,110
55	KBS	$15	$15							
56	Forest Investment	$2,744		$2,744						$2,744
57	Madison Realty	$1,538	$160			$56	$47	$1,275		$1,538
58	GTIS Partners	$528	$528							$528
59	Hancock Agricultural	$1,702			$1,702					$1,418
60	Union Labor Life	$3,835							$3,835	$3,835
61	Domain Capital Advisors	$3,418	$3,077		$104	$210		$27		$646
62	Blue Vista Capital	$1,199	$1,199							$1,036
63	Man GPM	$219						$219		$219
64	Global Forest Partners	$775		$775						$500
65	National Real Estate	$3,004	$2,911				$4	$27	$62	$3,004
66	Canyon Partners Real Estate	$1,793	$1,319					$474		$1,793
67	Resource Mgmt.	$346		$346						$346
68	CenterSquare Investment	$1,009	$892				$117			$692
69	Russell Investments	$1,267	$1,267							$1,267
70	Molpus Woodlands Group	$1,944		$1,944						
71	Timberland Inv. Resources	$1,458		$1,458						$1,458
72	Torchlight Investors	$1,459	$484			$561	$30		$384	
73	Silver Creek Capital	$1,207		$1,207						$1,207
74	Virtus Real Estate	$956	$956							$956
75	Hunt	$1	$1							
76	TGM Associates	$1,255	$1,255							
77	Covenant Capital Group	$645	$645							$645
78	Broadshore Capital	$589	$182				$28	$379		$9
79	Sarofim Realty	$981	$981							$138
80	Bailard	$791	$791							$791
81	CS Capital	$593	$593							
82	Hart Realty Advisers	$562	$562							$301
83	Pearlmark	$34	$30				$4			$34
84	TerraCotta Group	$80							$80	$80
	TOTAL	$652,427	$503,259	$13,953	$13,893	$7,043	$12,316	$15,215	$86,748	$515,945

Real estate assets are reported net of leverage, including contributions committed or received, but not yet invested; REOCs are included with equity; REIT securities are excluded.

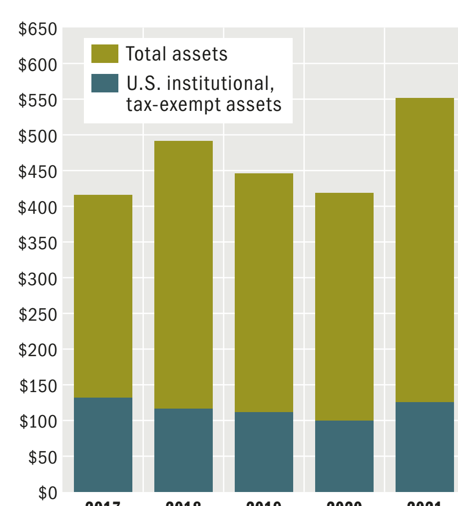
The largest managers of REIT securities

U.S. institutional tax-exempt real estate assets, in millions, as of June 30.

Rank	Manager	Total assets	U.S. inst'l tax-exempt	DC plans
1	BlackRock	$174,736	$16,985	$13,237
2	Vanguard Group	$93,663	$12,170	$8,117
3	Cohen & Steers	$57,262	$7,546	$1,209
4	Dimensional Fund Advisors	$25,453	$23,200	$3,841
5	Principal Real Estate	$25,001	$14,579	$1,363
6	Northern Trust Asset Mgmt.	$24,689	$12,009	$188
7	Invesco Real Estate	$20,507	$1,043	$275
8	Nuveen	$14,252	$5,776	
9	CenterSquare Investment	$11,547	$7,535	$775
10	New York Life Inv. Mgmt.	$11,126		
11	Russell Investments	$11,104		
12	UBS Real Estate & PM	$9,747		
13	CBRE Global Investors	$8,900	$700	
14	DWS-Real Estate	$8,337		
15	J.P. Morgan Asset Mgmt.	$6,039	$5,133	$4,524
16	AEW Capital	$5,927	$4,147	$1,174
17	Security Capital Research	$5,294	$2,781	$100
18	Heitman	$5,115	$1,158	
19	LaSalle Investment	$4,965		
20	Brookfield Asset Mgmt.	$4,776	$3,166	$316
21	Geode Capital Mgmt.	$3,902	$3,882	
22	PGIM Real Estate	$3,560	$111	$22
23	Wellington Mgmt.	$3,501	$82	
24	Morgan Stanley Inv. Mgmt.	$3,321	$673	$91
25	Abrdn	$2,390		

Growth of assets in REIT securities

Assets are in billions as of June 30.



ESG factors

CONTINUED FROM PAGE 3

However, the barriers can be overcome with exceptional investment performance, Ms. Zhang said. And a firm with diverse ownership often attracts a diverse investment team, in background as well as in problem-solving skills and risk management, leading to differentiation and stronger investment performance, she said.

According to *P&I's* real estate manager survey, 38.5% of real estate managers' employees are minorities or female; 19.7% of senior management are women and 14.2% are minorities. Women account for 20.7% of investment roles, while executives who are members of a minority group make up 17.4% of investment positions.

Forty-eight managers provided gender and ethnic breakouts for the survey.

Some managers, including J.P. Morgan, are sponsoring real estate industry diversity initiatives. The asset manager is committed to fostering diversity, equity and inclusion in the real estate industry and at J.P. Morgan, said Mike Kelly, managing director and head of real estate Americas at J.P. Morgan Asset Management.

"Most recently, J.P. Morgan real estate has committed to serve as mentors, educators and financial supporters to Project Destined, a program of project-based real estate training grounded in ownership, access and financial health for urban youth," Mr Kelly said.

Project Destined provides eight-week, paid virtual internships for diverse high school and undergraduate students, according to the organization's website.

The firm is also a founding donor and major sponsor of the SEO/PREA Real Estate Track program, which is the Pension Real Estate Association and the Sponsors for Educational Opportunity's real estate training program for qualified Black, Hispanic, and Native American undergraduates. J.P. Morgan's real estate unit has also hosted SEO internships since 2018.

ESG fundamental to investing

Overall, environmental, social and governance factors are top of mind for managers and asset owners.

"From our point of view, being a long-term investor in assets like real estate requires explicit consideration of ESG aspects as a fundamental part of making an investment decision," said Jon Pliner, New York-based senior director and head of delegated portfolio management in the U.S. at Willis Towers Watson PLC. "For many of the investment managers we talk to, the importance of how an asset fits in with local communities and its environment has always been important."

Likewise, the carbon efficiency of buildings has been increasingly important to tenants for several years, and countries, including the U.K., have regulations around the energy efficiency of buildings, he said.

What is more recent is that investors and consultants are pressing managers to include ESG in their investment process, Mr. Pliner said.

"The whole topic of ESG has become more formalized, with more policies, monitoring and targets expected," Mr. Pliner said.

While several real estate managers are considering ESG aspects implicitly, they have not put in place policies or measurement tools to demonstrate this, Mr. Pliner said.

"Investors and consultants have been keen to encourage managers on these aspects where progress has been lacking," he said.

"We expect more managers will improve their policies and measurement of ESG over time," he said.

However, Anthony Cazazian, New York-based managing director and head of U.S. residential real estate at Man Global Private Markets, said that ESG factors are integral to its investments. For example, the firm's U.K housing strategy has a community and affordable housing focus and the firm strives to obtain Energy Star certifications for homes it builds.

Man GPM was an early investor in the single family home for rent sector, Mr. Cazazian said.

"There's a lot of opportunity to focus on ESG, whether it's affordable housing, energy efficient home building or new technology that bring advancements in energy efficiency," Mr. Cazazian said.

"Many real estate managers concentrate on saving energy with LED lighting and low flush toilets but Man GPM executives are continually trying to be at the forefront," he said.

"While sustainability or ESG and resiliency is gaining increased awareness in the industry and amongst investors, ESG&R (ESG and resiliency) have always been part of how we manage our business and our portfolios," J.P. Morgan's Mr. Kelly said.

J.P. Morgan Asset Management has integrated ESG and resiliency into its investment process, he said.

"It is much more than the numbers, all aspects (of ESG and resiliency) are fully integrated into the way we invest and manage our assets," Mr. Kelly said. "Owning and managing quality assets with high operational efficiencies creates not just a resilient portfolio but one positioned for long-term performance." ■

The largest real estate investment managers by asset class

U.S. institutional tax-exempt real estate assets, in millions, as of June 30.

Real estate equity

Rank	Manager	Assets
1	J.P. Morgan Asset Mgmt.	$43,149
2	Nuveen	$41,079
3	PGIM Real Estate	$32,898
4	Principal Real Estate	$25,364
5	Clarion Partners	$23,909
6	Invesco Real Estate	$23,288
7	Heitman	$22,202
8	DWS-Real Estate	$19,229
9	AEW Capital	$18,348
10	Morgan Stanley Inv. Mgmt.	$18,192

Timber

Rank	Manager	Assets
1	Hancock Timber	$2,942
2	Forest Investment	$2,744
3	Nuveen	$2,433
4	Molpus Woodlands Group	$1,944
5	Timberland Inv. Resources	$1,458
6	Silver Creek Capital	$1,207
7	Global Forest Partners	$775
8	Resource Mgmt.	$346
9	Brookfield Asset Mgmt.	$104

Hybrid debt

Rank	Manager	Assets
1	UBS Real Estate & PM	$3,485
2	USAA Real Estate	$2,181
3	Torchlight Investors	$561
4	Ares Mgmt.	$369
5	Domain Capital Advisors	$210
6	StepStone Group	$181
7	Madison Realty	$56

Mezzanine

Rank	Manager	Assets
1	Nuveen	$6,786
2	Invesco Real Estate	$1,254
3	Brookfield Asset Mgmt.	$1,208
4	Principal Real Estate	$912
5	Heitman	$634
6	PGIM Real Estate	$531
7	AEW Capital	$208
8	New York Life Inv. Mgmt.	$147
9	BlackRock	$144
10	CenterSquare Investment	$117
10	J.P. Morgan Asset Mgmt.	$117

Loans

Rank	Manager	Assets
1	AXA IM Alts	$10,681
2	Madison Realty	$1,275
3	Berkshire Group	$741
4	Canyon Partners Real Est.	$474
5	UBS Real Estate & PM	$431
6	Broadshore Capital	$379
7	Nuveen	$297
8	ACORE Capital	$274
9	New York Life Inv. Mgmt.	$262
10	Man GPM	$219

Mortgages

Rank	Manager	Assets
1	Nuveen	$32,927
2	PGIM Real Estate	$23,838
3	New York Life Inv. Mgmt.	$4,889
4	Union Labor Life	$3,835
5	Prima Capital Advisors	$3,443
6	Morgan Stanley Inv. Mgmt.	$2,655
7	Heitman	$2,142
8	Barings	$2,071
9	PCCP	$1,990
10	Washington Capital	$1,666

The largest real estate investment managers by strategy

U.S. institutional tax-exempt real estate assets, in millions, as of June 30.

Core

Rank	Manager	Assets
1	Nuveen	$81,255
2	PGIM Real Estate	$50,471
3	J.P. Morgan Asset Mgmt.	$33,730
4	Clarion Partners	$23,432
5	UBS Real Estate & PM	$22,889
6	Invesco Real Estate	$20,198
7	Morgan Stanley Inv. Mgmt.	$19,264
8	DWS-Real Estate	$18,632
9	Heitman	$17,307
10	Principal Real Estate	$17,161

Value-added

Rank	Manager	Assets
1	J.P. Morgan Asset Mgmt.	$8,772
2	AEW Capital	$7,013
3	Nuveen	$6,333
4	Westbrook Partners	$6,222
5	M3 Capital	$5,700
6	Heitman	$4,895
7	Angelo, Gordon	$4,709
8	PGIM Real Estate	$3,682
9	USAA Real Estate	$3,193
10	Carmel Partners	$3,110

Opportunistic

Rank	Manager	Assets
1	Starwood Capital	$9,923
2	Brookfield Asset Mgmt.	$7,188
3	Kohlberg Kravis Roberts	$5,318
4	Nuveen	$4,623
5	Harrison Street	$4,144
6	Oaktree Capital	$3,837
7	Rockpoint Group	$3,082
8	New York Life Inv. Mgmt.	$2,848
9	Angelo, Gordon	$2,132
10	PCCP	$1,584

Managers

CONTINUED FROM PAGE 15

to enforce employee accountability, Mr. Herrenkohl said.

"My view of the four objectives is that I think that … building culture and facilitating culture and ideation will be the focus," he said. The pandemic "proved that people can work from a lot more places than the office. We've moved away from companies' need to track people 9 to 5-plus," Mr. Herrenkohl said.

REITs weather disruption

Some of the same trends are playing out in the REIT arena. Despite 2020 being a challenging year for global real estate investment trusts due to the pandemic's effect on the stock market, REIT managers' worldwide AUM grew by 31.5% to $551.1 billion and assets managed for U.S. tax-exempt institutions was up 26.3% to $125.7 billion in the 12 months ended June 30, according to *P&I's* survey results.

"As the economy started to reopen late last year … it's been a choppy return to normalcy," said Ji Zhang, New York-based portfolio manager and vice president of Cohen & Steers Inc. REITs were more negatively impacted by the pandemic than the broader market, she said. But many institutional investors saw the REIT downturn as a buying opportunity, Ms. Zhang said.

Private equity and other private market managers saw the dislocation in the market and bought companies and business units, Ms. Zhang said.

There was also a noticeable shift in flows over the last year to active managers from passively managed real estate funds due to how property types and regions performed in the pandemic, she said.

For example, before the pandemic Cohen & Steers executives were already cautious about offices in New York City because vacancies were up and new buildings were scheduled to be completed. A 5% to 10% drop in demand expected to be caused by the pandemic would make investing in New York offices even less attractive, she said.

By contrast, the vacancy rate in Singapore is very low and employers in the country have a bigger preference for their workers to be in the office than the U.S., Ms. Zhang said.

Cohen & Steers' global REIT assets grew by 47% to $57.3 billion, and its assets managed for domestic investors was up 63% to $7.5 billion. ■