Dear Industry Friends,

Cornell University’s Baker Program in Real Estate and Hodes Weill & Associates are pleased to present the findings of the fifth annual Institutional Real Estate Allocations Monitor (the “2017 Allocations Monitor”). The 2017 Allocations Monitor focuses on the role of real estate in institutional portfolios, and the impact of institutional allocation trends on the investment management industry. Founded in 2013, the Allocations Monitor is a comprehensive annual assessment of institutions’ allocations to, and objectives in, real estate investments. This report analyzes trends in institutional portfolios and allocations by region, type and size of institution.

The 2017 Allocations Monitor includes research collected on a blind basis from 244 institutional investors in 28 countries. The 2017 participants hold total assets under management (“AUM”) exceeding US$11.5 trillion and have portfolio investments in real estate totaling approximately US$1.1 trillion. Our survey consisted of 25 questions concerning current and future investments in real estate, portfolio allocations to the asset class, investor conviction, investment management trends and the role of various investment strategies and vehicles within the context of the real estate allocation (e.g., direct investments, joint ventures, private funds). We also included questions regarding historical and target returns as well as environmental, social and governance (“ESG”) policies.

Key Findings of the 2017 Allocations Monitor

1. It’s official... the target allocation to real estate in institutional portfolios has now surpassed the 10% threshold. Average target allocations to real estate increased to 10.1% in 2017, up 20 bps from 2016 and up approximately 120 bps since 2013. Approximately 44% of institutions now have a target allocation in excess of 10%, up from 18% and 27% in 2015 and 2016, respectively.

2. However, the annual pace of increase in target allocations appears to be moderating. The pace of increase in target allocations has moderated from 30-40 bps per year over the past four years to 20 bps in 2017. Further, approximately 24% of institutions expect to increase their target allocations over the next 12 months.

3. Actual allocations continue to lag target allocations, as institutions remain meaningfully under-invested. While 92% of institutions reported that they are actively investing in real estate, portfolios remain approximately 100 bps under-invested relative to target allocations. Approximately 60% of institutions are under-invested relative to target allocations, up from 50% in 2016.

4. The average investment performance for institutional real estate portfolios decelerated to high single digits in 2016. Real estate portfolios generated an average annual investment return of 8.6% in 2016, down from 11.0% in 2015 and the prior five-year average of 10.4%. Investment returns were slightly in excess of target returns (by approximately 20 bps) and remain well in excess of global return indices for real estate. Institutions in APAC edged out their peers in the Americas, and get this year’s trophy for the highest average annual return at 9.3%.

5. Institutional conviction for the asset class has declined significantly year-over-year. Led by institutions in APAC, market sentiment has declined over the past 12 months from “moderately optimistic” to “slightly pessimistic”. Between 2016 and 2017, our “Conviction Index”, which measures institutions’ view of real estate as an investment opportunity from a risk return standpoint, declined from 5.4 to 4.9. The combination of rising target allocations, continued under-investment relative to target allocations and declining conviction is resulting in a perception of a “weight of capital” for the asset class.

6. Value-add strategies remain the strong preference for institutions, followed by opportunistic and core. Investors continue to favor alpha-generating strategies for property investments. As an alternative to core investing, institutions are showing increased interest in debt and credit strategies. Approximately 60% of institutions report that they are actively investing in debt strategies (up from 52% in 2016).
7. Third-party managed AUM continues to trend upward. Institutions are allocating the substantial majority (approximately 84%) of their new investment allocations to third-party managers. This trend, in combination with rising allocations and capital appreciation, is driving strong growth in industry-wide AUM. This is the case, in particular, for Smaller Institutions (i.e., institutions with AUM less than US$50 billion) that do not have the resources to internalize management functions, as well as for institutions that are allocating investments cross border.

8. Institutions continue to favor allocating to existing manager relationships. Approximately 64% of new allocations are expected to be awarded by institutions to existing manager relationships. As a result, a small number of large-cap managers continue to garner more than 50% of new allocations. Emerging managers are at a disadvantage, as less than 20% of institutions are willing to invest with first time managers.

9. Demand for real estate private funds continues to rise. Approximately 87% of institutions are actively investing in closed-end private funds, up from 79% in 2016. Closed-end funds are the preferred product type for most institutions, followed by open-end funds in which 55% of institutions are actively investing. Approximately two-thirds of the Larger Institutions (i.e., institutions with greater than $50 billion of AUM) are actively investing on a direct basis, in joint ventures and/or separate accounts.

10. Environmental, Social & Governance (ESG) policies are an increasingly important objective for institutions. The percentage of institutions with formal ESG policies has increased to 36%, led by EMEA based institutions at 70%. Importantly, 31% of institutions report that their investment processes are now influenced by ESG considerations.

The 2017 Allocations Monitor leverages the academic resources of Cornell University and the global institutional relationships and real estate experience of Hodes Weill & Associates. We hope this report provides unique insight into the institutional investment industry, serving as a valuable tool for institutional investors in the development of portfolio allocation strategies and peer benchmarking of returns, and for investment managers in business planning and product development. With this goal in mind, please feel free to contact us with any comments, questions or suggestions.

We look forward to sharing additional insights and our perspective on the industry with you more directly in the near future. Again, we would like to express sincere appreciation to everyone that participated in this year’s survey.

Regards,

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2017 Global Institutional Participants
244 participants in 28 countries representing US$11.5 trillion in AUM

Breakdown of Participants
By Type of Institution

- SWFs & GEs: 3%
- Insurance Company: 14%
- Private Pension: 18%
- Endowment/Foundation: 31%
- Public Pension: 34%

Breakdown of Participants
By Location of Institution

- The Americas: 69%
- EMEA: 20%
- Asia Pacific: 11%

Breakdown of Participants
By Size of Institution

- Greater than $50B: 18.0%
- Less than $50B: 82.0%
Americas
Abilene Christian University
Adams County Retirement Plan
Air Force Aid Society
Alaska Retirement Management Board (ARMB)
Alberta Investment Management Corporation (AIMCO)
Alberta Teachers’ Retirement Fund (ATRF)
American Baptist Home Mission Societies
Ameritas Life Insurance Corp
Annie E. Casey Foundation
AR Teacher Retirement System
Arizona State Retirement System (ASRS)
Arizona State University Foundation
Axis Capital
Ball State University Endowment
Baylor College of Medicine Endowment
Berkshire Taconic Community Foundation
Boston City Retirement System
Boston Foundation
Brandeis University
Calgary Foundation
California Community Foundation
CalPERS
Carnegie Corporation of New York
Church Pension Group
City of Austin ERS
City of Omaha Police and Fire Retirement System
City of Phoenix Employees’ Retirement System (COPERS)
Claude Worthington Benedum Foundation
Colby College Endowment
Colgate University Endowment
Dallas Fort Worth International Airport Retirement Trust
Employees’ Retirement System of the State of Hawaii
FCA US LLC Master Retirement Trust
Fundacao Atlantico de Seguridade Social
Genworth Financial
Glatfelter Pension Fund
HEB Manitoba
HRM Pension Plan
IBM Retirement Fund
Intermountain Healthcare
Ithaca College Endowment
Liberty Mutual Investments
Los Angeles County Employees’ Retirement Association (LACERA)
Maine Community Foundation
Manitoba Public Insurance
Manulife Life Insurance Company
Maryland State Retirement & Pension System
McKnight Foundation
Metropolitan Government of Nashville & Davidson County Employees’ Trust Fund
Metropolitan St. Louis Sewer District
Miami University Foundation
Michael and Susan Dell Foundation
Missouri Local Government Employees Retirement System
Montana Board of Investments
Montgomery County Public Schools
Muskingum University Endowment
NAV Canada Pension Plan
Nevada PERS
New Jersey Division of Investment
North Carolina Department of State Treasurer
North Dakota Legacy Fund
Ontario Pension Board
Oregon State Treasury
Pennsylvania State Employees’ Retirement System
Pepperdine University
Pitcairn Financial Group
Public Employees’ Retirement System of Mississippi
Public School Retirement System of Missouri
Purdue University Endowment
Rasmussen Foundation
Regents of the University of California
Regina Civic Employees’ Superannuation & Benefit Plan
Sacramento County Employees’ Retirement System
San Luis Obispo County Pension Trust
Sempra Energy
Société de transport de Montréal (STM)
Spokane Employees’ Retirement System
State of Wisconsin Investment Board (SWIB)
Tacoma Employees’ Retirement System
Teacher Retirement System of Texas (TRS)
Tennessee Consolidated Retirement System
Texas Christian University Endowment
Texas Municipal Retirement System (TMRS)
Texas Permanent School Fund (PSF)
The Firemen’s Retirement System of St. Louis
The Principia Corporation
The Winnower Rockefeller Foundation
Thomas B. Fordham Foundation
Tulare County Employees’ Retirement Association
Univrsity of Louisville Foundation
University of Nebraska Foundation
UPMC Health System
UPS Group Trust
US Steel and Carnegie Pension Fund
Utah Retirement Systems (URS)
Virginia Retirement System
W.K. Kellogg Foundation
Wealth Benefits and Investments
Workers Compensation Board of Manitoba
Yale University Endowment
YMCA Retirement Fund
And 66 anonymous participants

APAC
DIC Corporation Pension Fund
Future Fund
Hanwha Life Insurance
HOSTPLUS Superannuation Fund
Hyundai Marine & Fire Insurance
Insurance Commission of Western Australia
Mitsubishi Corporation
Muang Thai Insurance Plc
Nam Shan Life Insurance
OQCL
Sunsuper
Telstra Super
Thai Life Insurance
TWUSUPER
And 13 anonymous participants

EMEA
Adimmo AG
All Souls College
Allianz Real Estate
APG Asset Management
Bank of Ireland Staff Pension Fund
Bedfordshire Pension Fund
Blue Sky Group
BPF Bouwinvest
British Airways Pension Investment Management
BVK - Bayerische Versorgungskammer (Bavarian Chamber of Supply)
CNP Assurances
Compagnia di San Paolo
DNB Life
Hermes Real Estate
Lancashire County Council Pension Fund
MACSF
Nationwide Building Society Pension Fund
NN group
Pensionskasse Basel-Stadt
Proximus Pension Fund
PUBLICA
SPM
The Henry Boot Staff pension and Life Assurance Scheme
Tribus Capital Partners
University of Pretoria
VFMC
Zurich Insurance Group
And 21 anonymous participants
<table>
<thead>
<tr>
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<th>Page</th>
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</thead>
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<td>20</td>
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</tbody>
</table>
Participation & Methodology

We wish to thank the 244 institutional investors that participated in our survey this year. The survey participants are from 28 countries and represent institutions with over US$11.5 trillion in total assets and real estate assets of approximately US$1.1 trillion. We believe this continues to be the industry’s most comprehensive global survey of institutional allocations and intentions in global real estate.

We distributed the survey to over 3,000 institutional investors. Our survey includes only primary allocators to investments, such as pension plans, insurance companies, sovereign wealth funds, and endowments and foundations. Approximately 8% of institutions that were contacted completed the survey, and the participation rate was greater than 5% across a range of regions, investor types and size of institutional portfolios. We believe that this participation rate has resulted in a representative sampling of the real estate institutional investor universe from a statistical standpoint.

Notes to readers regarding methodology:

- We conducted the survey over an approximate five-month period from May 2017 to September 2017.
- Target and projected allocations, percent invested and the margin between target and percent invested are presented on a weighted average basis by total AUM. We believe this provides the most relevant presentation of the quantum and directional trend of investable capital.
- To calculate weightings for AUM for each investor, we utilized the midpoint of each investor’s AUM range. For example, investors that indicated an AUM range of US$10 billion to US$25 billion were counted as US$17.5 billion. All investors greater than US$200 billion were weighted at US$200 billion – there were 12 such investors in 2017.
- Unless otherwise stated, all other figures are based on straight averages, including for investment activity, intentions, target returns and risk/return objectives.

Exhibit 1: Total Number of Participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>169</td>
</tr>
<tr>
<td>2014</td>
<td>231</td>
</tr>
<tr>
<td>2015</td>
<td>242</td>
</tr>
<tr>
<td>2016</td>
<td>228</td>
</tr>
<tr>
<td>2017</td>
<td>244</td>
</tr>
</tbody>
</table>

Exhibit 2: Aggregate AUM of Participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Total US$ in trillions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>US$7.0</td>
</tr>
<tr>
<td>2014</td>
<td>US$8.0</td>
</tr>
<tr>
<td>2015</td>
<td>US$11.2</td>
</tr>
<tr>
<td>2016</td>
<td>US$10.3</td>
</tr>
<tr>
<td>2017</td>
<td>US$11.5</td>
</tr>
</tbody>
</table>

Definitions Guide

“APAC” refers to Asia Pacific and includes institutions located in Asia and Australia
“EMEA” includes institutions located in Europe, the Middle East and Africa
“ESG” refers to environmental, social and governance
“SWFs & GEs” refers to sovereign wealth funds and government owned-entities
“The Americas” includes institutions located in North and South America
“Larger Institutions” includes institutions with AUM greater than US$50 billion
“Smaller Institutions” includes institutions with AUM less than US$50 billion
Target Allocations to Real Estate

It's official...the target allocation to real estate in institutional portfolios has now surpassed the 10% threshold

Exhibit 3: Weighted Average Target Allocation to Real Estate, All Institutions

Target Allocations to Real Estate

As reported in prior editions of the Allocations Monitor, the trend towards a 10%+ real estate allocation in institutional portfolios has been widely predicted and recommended for several years by industry participants. This marks a noteworthy milestone for the real estate industry.

The average target allocation to real estate now stands at 10.1%, up 20 bps from 2016, and up 120 bps since 2013. The shift towards a 10%+ target allocation to real estate is most apparent in a year-over-year analysis of the range of target allocations. In 2015, 18% of investors had allocations greater or equal to 10%. In 2016, this figure increased to 27%. Today, that figure has risen to 44%. Overall, 30% of survey participants increased their target allocations in 2017, while just 18% decreased in 2017.1

Exhibit 4: Range of Target Allocations (2016 vs. 2017), All Institutions

While target allocations continue to rise, annual increases appear to be moderating. The pace of increase in target allocations has moderated from 30-40 bps per year over the past four years to 20 bps in 2017. In prior editions of the survey, the expected increase in “next year’s” target allocation was highly predictive of where actual targets ended up. The results of this year’s survey were meaningfully below our findings from last year’s survey, as institutions increased target allocations by an average of 20 bps in 2017 vs. an expected “next year” increase of 40 bps from last year’s report. While the industry appears to be in the early stages of a long-term trend of increasing target allocations, it can be expected that over the near-term the rate of annual increases may slow down.

1 Based on “same-store” comparison for institutions that participated in the Allocations Monitor survey in both 2016 and 2017.
**Target Allocations by Type of Institution**

With a 40 bps decrease in target allocations in 2017, Endowments & Foundations were the only category of institutions that reduced targets this year. This decline may be attributed to the tendency of Endowments & Foundations to focus their investments in real estate on “higher yielding” strategies and the difficulty of achieving such objectives at this point in the cycle. Endowments & Foundations (as reported below) have one of the highest target return amongst their peers (at 9.5%).

After an average annual increase of 40 bps per year between 2014 and 2016, target allocations for Public Pensions remained essentially flat between 2016 and 2017. This is consistent with numerous reports that a few high-profile institutions (including CalPERS and PASERS) have decided to slow down their pace of investment due to lack of “attractive opportunities”. However, it is important to note that several other Public Pensions have announced plans to expand their real estate investment programs. For example, Washington State Investment Board has announced an increase in its target allocation from 15% to 18%.

While year-over-year changes in target allocations have moderated for many of the most historically active capital allocators to real estate, insurance companies, SWFs & GEs and private pensions continue to show increases year-over-year. Much of this trend is driven by non-US based institutions. This includes several prominent insurance companies that have announced plans to either begin or increase capital allocations to the asset class.

**Exhibit 6: Change in Target Allocation, By Type of Institution – Repeat Participants**

**Exhibit 7: Weighted Average Target Allocation, By Size of Institution**

**Target Allocations by Size of Institution**

Larger Institutions have a target allocation of 10.2% and expect to increase their target by an average of 20 bps in 2017, to 10.4%. This indicates a deceleration in year-over-year increases, after several years in which Larger Institutions were actively pushing up their target allocations. The growth in allocations has been largely driven by larger, non-US institutions. Smaller Institutions have a target allocation of 9.8% and expect to increase by an additional 30 bps in 2018 to 10.1%.

Approximately 24% of institutions surveyed indicated an intention to increase their target allocations over the next 12 months (roughly consistent with 2016), by an average of approximately 150 bps. Approximately 71% of institutions intend to hold their target allocations flat over the next 12 months, and just 5% intend to decrease their target allocations by an average of approximately 144 bps.

**Exhibit 8: Expected Change in Target Allocations, All Institutions**
Current Investments

Actual allocations continue to lag target allocations, as institutions remain meaningfully under-invested

Exhibit 9: Percent Invested vs. Target Allocation, By Location of Institution

Exhibit 10: Percent Invested vs. Target Allocation, By Size of Institution

While 92% of institutions report that they are actively investing in real estate, portfolios remain 100 bps under-invested relative to target allocations. This margin has fluctuated between 88 bps and 110 bps over the past five years, as institutions have struggled to catch up to their target allocations. A “denominator effect” has compounded the issue for institutions, as most asset classes have delivered strong investment performance (i.e., appreciation) since the global financial crisis. On average, institutional portfolios are 9.1% invested in real estate, up 20 bps from 2016 and 30 bps over the past five years. If the pace of new investments declines due to ongoing concerns regarding late cycle valuations, the margin at which institutions are under-invested may be expected to widen. As predicted in last year’s report, institutions have shifted to more defensive strategies including credit, corporate net leases and non-cyclical/niche asset classes such as net lease, student housing, healthcare and self-storage, as a result of a heavy weight of capital and “pressure to invest”. Year-to-date, over US$12.2 billion of capital has been invested in funds focused on credit, representing 16% of capital raised.

Current Investments and Target Allocations by Location of Institution

Institutions across all regions remain under-invested relative to target allocations. By a wide margin, APAC-based institutions have the highest target allocation at 11.5% and are the most under-invested at 130 bps below target (as compared to 100 bps in 2016). The widening margin of under-investment for APAC-based institutions may be attributed in part to the investment restrictions placed on Chinese institutions over the past several months, compounding challenges faced by these relatively young investment programs in reaching target allocation levels.

Institutions in EMEA have the lowest target allocation at 9.0% and their target was flat year-over-year between 2016 and 2017. However, as the percent invested for EMEA-based institutions has declined from 8.4% to 8.1% between 2016 and 2017, the gap between actual and target allocations widened from 60 bps to 90 bps. Institutions in the Americas increased their target allocations by an average of 40 bps over the past 12 months and are under-invested at a margin of 100 bps. Investors in the Americas continue to cite realizations as a factor in their inability to “catch up to target allocations”.

2 Preqin Quarterly Fundraising Update, Q3 2017.
**Under-Investment on the Rise**

The percentage of institutional investors that are under-invested relative to target allocations has increased year-over-year. Approximately 60% of institutions are under-invested relative to their target allocations (up from 50% in 2016), at an average margin of under-investment of 216 bps. Approximately 40% of institutions are at, or in excess of, their target allocation by an average of 181 bps.

**Real Estate Investments**

Despite declining conviction and continued caution on the part of investors, 92% of institutions report that they are actively investing in real estate. This is in line with 2016, demonstrating continued momentum in capital flows to the asset class. While capital allocations to real estate private equity funds has declined in 2017 on a year-to-date basis, approximately 87% of institutions indicate that they are actively investing in funds – up from 79% in 2016. That said, two-thirds of Larger Institutions (i.e., institutions with greater than $50 billion of AUM) are actively investing on a direct basis, in joint ventures and/or separate accounts.

**Exhibit 12: Investing in Real Estate and Real Estate Private Funds, All Institutions**
The average investment performance for institutional real estate portfolios decelerated to high single digits in 2016.

### Target Returns vs. Actual Returns

<table>
<thead>
<tr>
<th></th>
<th>2016 Target Return</th>
<th>2017 Target Return</th>
<th>Actual 2012</th>
<th>Actual 2013</th>
<th>Actual 2014</th>
<th>Actual 2015</th>
<th>Actual 2016</th>
<th>Actual 5-Year Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Institutions</td>
<td>8.4%</td>
<td>8.2%</td>
<td>9.6%</td>
<td>10.8%</td>
<td>11.8%</td>
<td>11.0%</td>
<td>8.6%</td>
<td>10.4%</td>
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<tr>
<td><strong>By Type</strong></td>
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<tr>
<td>Public Pension</td>
<td>7.9%</td>
<td>7.6%</td>
<td>10.3%</td>
<td>10.0%</td>
<td>11.7%</td>
<td>11.6%</td>
<td>9.0%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Endowment &amp; Foundation</td>
<td>9.6%</td>
<td>9.5%</td>
<td>9.3%</td>
<td>13.9%</td>
<td>13.0%</td>
<td>10.9%</td>
<td>8.1%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Private Pension</td>
<td>7.8%</td>
<td>7.9%</td>
<td>9.1%</td>
<td>10.5%</td>
<td>12.6%</td>
<td>11.2%</td>
<td>8.8%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Insurance Company</td>
<td>7.8%</td>
<td>7.5%</td>
<td>6.8%</td>
<td>7.3%</td>
<td>8.3%</td>
<td>9.6%</td>
<td>8.6%</td>
<td>8.1%</td>
</tr>
<tr>
<td>SWFs &amp; GEs</td>
<td>8.8%</td>
<td>9.6%</td>
<td>14.4%</td>
<td>11.4%</td>
<td>11.4%</td>
<td>10.0%</td>
<td>8.8%</td>
<td>11.2%</td>
</tr>
<tr>
<td><strong>By Location</strong></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Americas</td>
<td>8.5%</td>
<td>8.5%</td>
<td>10.6%</td>
<td>12.5%</td>
<td>12.6%</td>
<td>11.7%</td>
<td>8.7%</td>
<td>11.2%</td>
</tr>
<tr>
<td>EMEA</td>
<td>8.0%</td>
<td>6.9%</td>
<td>5.9%</td>
<td>6.2%</td>
<td>10.4%</td>
<td>9.5%</td>
<td>7.9%</td>
<td>8.0%</td>
</tr>
<tr>
<td>APAC</td>
<td>8.4%</td>
<td>8.8%</td>
<td>9.4%</td>
<td>9.3%</td>
<td>9.5%</td>
<td>10.0%</td>
<td>9.3%</td>
<td>9.5%</td>
</tr>
<tr>
<td><strong>By Size</strong></td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater than US$50 billion</td>
<td>7.7%</td>
<td>7.7%</td>
<td>10.2%</td>
<td>10.1%</td>
<td>11.1%</td>
<td>11.2%</td>
<td>9.8%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Less than US$50 billion</td>
<td>8.5%</td>
<td>8.3%</td>
<td>9.5%</td>
<td>10.9%</td>
<td>12.0%</td>
<td>11.0%</td>
<td>8.4%</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

The average long-term target return for global institutional allocations to real estate declined from 8.4% in 2016 to 8.2% in 2017. Target returns for institutions in the Americas remained relatively flat year-over-year, whereas institutions in Asia Pacific increased their target returns from 8.4% in 2016 to 8.8% in 2017, which may suggest a shift from core investments, including a focus on trophy assets, to more alpha-driven strategies. At the same time, EMEA-based institutions decreased their target returns from 8.0% in 2016 to 6.9% in 2017, suggesting a shift towards core investment strategies.

As in previous years, target returns also vary by type and size of institution. Public Pensions, Private Pensions and Insurance Companies are at the lower end of the range of target returns at approximately 7.7%, as compared to Endowments & Foundations that tend to focus on “higher yielding” strategies and have a target return of approximately 9.5% (down slightly from 9.6% in 2016). Similarly, Smaller Institutions tend to target higher returns than Larger Institutions (8.3% vs. 7.7%) – which can be attributed to Endowments & Foundations, which are generally sub-$10 billion in AUM.

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*MSCI – IPD, IPD Global Property Index, 2012 - 2017*
For several years, institutions have achieved actual returns significantly above their long-term target. Over a trailing 5-year period, portfolio returns have averaged 10.4%. While real estate’s favorable recent performance as an asset class has likely contributed to its growth as an allocation within institutional portfolios, multiple years of strong appreciation has resulted in lofty valuations that are increasingly a cause for concern amongst many institutions. As such, institutions are indicating an expectation that returns will moderate over the near-term. CalSTRS, by way of example, recently expressed their expectation for annual capital appreciation to slow from a range of 5%-8% to 1%-3%. Several survey participants expressed similar concerns regarding asset valuations and the implications for future performance. In fact, 64% of survey participants noted high current asset valuations as a concern when investing in real estate in today’s current market environment – this was the most cited concern by a wide margin.

The average return for institutions in 2016 was 8.6%, which remains higher than target returns, but meaningfully lower than returns in recent years. While it is not prudent to extrapolate based on a single year of performance, current investor expectations for moderated future capital appreciation directly affects the price they are willing to pay for assets, moderating the returns current owners can realize upon a sale. Despite a decline in expected returns, institutional returns of 8.6% were once again in excess of global unlevered property returns of 7.4%. It is important to note that a comparison to unlevered property returns is not necessarily analogous, as institutions utilize leverage, assume various degrees of risk, and often pay portfolio management fees and/or taxes.

Institutions in the Americas have the highest trailing five-year average annual return at 11.2%, which is 270 bps above their target return. In part, we believe this may reflect “home country bias”, as these investors have most of their exposure in the Americas, in markets that have experienced strong returns over the past few years. That said, in 2016, institutions in APAC edged out their peers in the Americas, and they get this year’s trophy for the highest average annual return at 9.3%.

When segmenting by type of institution, Endowments & Foundations lead the industry with a trailing five-year average annual return of 11.0%. However, over the same period of time, Public and Private Pensions realized the greatest spread over their target return, beating their respective targets by about 290 bps and 250 bps, respectively.

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*MSCI – IPD, IPD Global Property Index, 2012 - 2017*


Conviction Index

Institutional conviction for the asset class has declined significantly year-over-year

Exhibit 17: Conviction Index, All Institutions

Our survey asks investors to rate on a scale of one-to-ten their view of the investment opportunity in real estate from a risk/return perspective (one being the least favorable, ten being the most favorable). From 2013 to 2016, this “Conviction Index” (i.e., investor sentiment) has steadily declined from 6.4 to 5.4. In 2017, the Conviction Index remained on a downward trend to 4.9. Led by institutions in APAC, market sentiment has declined over the past 12 months from “moderately optimistic” to “slightly pessimistic”. The combination of rising target allocations, continued under-investment relative to target allocations and declining conviction is resulting in a perception of a “weight of capital” for the asset class. Investors continue to cite too much capital pushing valuations ahead of fundamentals, the risk of rising interest rates, global capital markets volatility and geopolitical risks as causes for concern. We have seen investors increasingly focus on defensive strategies, where most of the return is generated from current income (as opposed to appreciation), and niche strategies (i.e., net lease, student housing, healthcare and self-storage), where assets may not be priced to perfection and fundamentals are perceived to be less correlated with economic growth trends.

The Conviction Index for APAC-based institutions is down by the widest margin at 1.0 points, which may be attributed to concerns that stabilized assets in domestic markets across the region are very fully priced, and a widely held belief that the US market cycle is nearing a potential peak. Capital controls in China may also have a dampening effect on conviction towards real estate amongst Chinese institutions that had previously been actively seeking foreign assets. It is interesting to note that conviction in APAC had increased two years in a row, which may have been attributed to the recent strong performance of cross-border real estate investments from the region. APAC-based institutions are now showing the lowest conviction by region.

Conviction in the Americas decreased as institutions have been increasingly vocal regarding concerns about valuations and rising interest rates. In EMEA, the slight rise in conviction may be due in part to the view that the EU economy is finally growing with most elections behind us and that the only political distraction now is BREXIT. The end of QE by the European Central Bank is the issue that is most worrisome for institutions. As discussed below, the preference of EMEA-based institutions has shifted to the UK and Europe.

Exhibit 18: Conviction Index, By Location of Institution
“Abundance of capital yet a slower rate of deployment, historically high asset valuations in core markets and some markets in late cycle, investors are rightfully cautious on many fronts most on geo-political and economic issues while some also believe interest rates could rise materially in the US.”
– Public Pension, The Americas, Greater than US$200 billion

“Everything looks pricey. Hence the shift to niche strategies. But even that is facing the weight of huge capital inflows.”
– Endowment & Foundation, Asia Pacific, US$5.0 to US$10.0 billion

“Very high absolute valuations, but supported by relative cheapness to risk-free bonds and smaller supply pipeline at this stage in the cycle than most of the time before. Foreign capital flows are a noticeable factor and the slowdown of these should not be discounted as irrelevant. Leverage is still low and memories of 2008 in place.”
– Insurance Company, EMEA, US$100.0 to US$200.0 billion

“Due to the current valuation level of commercial real estate in most of the developed markets, we are focusing on CRE debt opportunities in the markets.”
– Insurance Company, Asia Pacific, US$100.0 to US$200.0 billion

“While property fundamentals remain healthy amid strong demand, returns in the space have begun to normalize with appreciation under pressure as the cycle matures.”
– Endowment & Foundation, The Americas, US$5.0 to US$10.0 billion

Exhibit 19: Conviction Index, By Type of Institution

Exhibit 20: Conviction Index, By Size of Institution

Exhibit 21: Range of Conviction Index, All Institutions
Third Party Management

Third-party managed AUM continued to trend upward in 2017

Existing Investments

Roughly two-thirds of institutional investors outsource their entire real estate portfolio to third-party managers. Only 7% of investors manage their entire real estate allocation in-house. Not surprising, 72% of Smaller Institutions outsource their entire real estate portfolio to third-party managers, as compared to 42% for Larger Institutions.

Future Allocations

Institutions are allocating the substantial majority (approximately 84%) of new investment allocations to third party managers. This trend, in combination with rising allocations, is driving strong growth in industry-wide AUM. This is the case, in particular, for Smaller Institutions that do not have the resources to internalize management functions, as well as for institutions that are allocating investments cross border.

Institutions continue to favor allocating capital to existing manager relationships. Approximately 64% of new allocations are expected to be awarded to existing manager relationships. As a result, a small number of large-cap managers continue to garner more than 50% of new allocations.

Emerging managers are at a particular disadvantage, as less than 20% of institutions are willing to invest with first-time fund managers. Most institutions are either unlikely or very unlikely to invest with first-time managers, indicating a strong desire to see a demonstrated track record before investing. The notable exception is among SWFs & GEs, where 50% indicated that they are willing to invest with first-time managers. In many cases, these investors have discretion over investment decisions in separate account or joint venture programs.

Exhibit 22: Percentage of Portfolio Outsourced to Third-Party Managers, All Institutions

Exhibit 23: Allocations to Managers, All Institutions

Exhibit 24: Estimated Breakdown of 2017 Investments

Exhibit 25: Willingness to Invest with First-Time Managers, All Institutions and by Type of Institution
Value-add strategies remain the strong preference for institutions, followed by opportunistic and core.

**Exhibit 26: Risk Preference, All Institutions**

The percent of institutions intending to invest in core, value-add and opportunistic strategies remained relatively similar year-over-year. Institutions continue to be highly focused on value-add strategies, with 86% of institutions targeting value-add investments in 2017. Investors globally continue to favor alpha-generating strategies for property investments.

Along with value-add strategies, institutions in EMEA and APAC continue to show strong interest in core strategies, but significantly lower interest in opportunistic programs. Although the percent of EMEA-based institutions interested in opportunistic strategies rose from 57% to 64% year-over-year, interest remains well below the level of demand for lower risk strategies. Conversely 78% of institutions based on the Americas are showing interest in opportunistic strategies, while only 63% intend to invest in core strategies.

Investor appetite for core and opportunistic strategies also varies by type and size of institution. For example, only 48% of Endowments & Foundations intend to invest in core, as compared to about 88% of public pensions and SWFs & GEs. Similarly, while 64% of Smaller Institutions intend to invest in core strategies, about 89% of larger investors intend to do so.
Demand for real estate debt increased year-over-year with 60% of institutions intending to invest in 2017, compared to 52% in 2016. The percentage of Larger Institutions intending to invest in real estate debt grew significantly from 60% to 83% over the same period. One APAC-based survey participant stated that they are focused on commercial real estate debt “due to the current valuation level of commercial real estate in most of the developed markets.” This is consistent with feedback provided by many institutions. Managers have reacted to this market demand and today there are over 94 debt fund offerings in the market⁵.

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⁵ Preqin Quarterly Update: Real Estate Q2 2017
Cross-region capital flows are expected to remain robust, led by strong interest from APAC-based investors.

**Exhibit 30: Geographic Focus, All Institutions**

Overall, institutional interest in each region remained relatively static year-over-year. North America continues to be the priority destination for capital, with 92% of institutions intending to invest in the region in 2017. As in previous years, domestic interest in each region tends to be higher than for cross border investments. This is perhaps most exemplified by the strong interest in Continental Europe from EMEA institutions (96%) compared to that of North American and APAC institutions (66% and 83%, respectively). Another strong example is that 75% of APAC-based institutions intend to invest in Australia in 2017, compared to 26% for institutions in the Americas and 48% for EMEA-based institutions.

Despite this “home region bias”, institutions are actively investing in other regions. APAC-based institutions are most intent on investing in other regions, with 95% intending to do so in 2017, with a preference for North America. Despite lagging behind EMEA- and APAC-based institutions in their cross-region interests, a meaningful 66% of Americas-based institutions intend to invest cross border, with a preference for Continental Europe.
Investment Product Trends

Demand for real estate private funds is rising

Exhibit 33: Investment Product Preferences, All Institutions

The complexity and internal staff requirements for various investment products greatly influence institutional preferences. Private funds are by nature less management intensive for institutions, as compared to direct investments, or investing in joint venture and separate accounts. In particular, closed-end private funds generally eliminate the need for institutions to participate in investment and asset management decisions, making funds an attractive option for both Smaller Institutions with limited staff and Larger Institutions allocating capital on a global basis. As a result, closed-end private funds are overwhelmingly in demand from all types of institutional investors – with approximately 87% of institutions indicating that they are actively investing in funds in 2017. Open-end funds are the next most popular investment product, with 55% of investors indicating an intention to allocate capital in 2017.

Most institutions are not staffed to run direct or joint venture programs, or otherwise don’t have sufficient scale of capital to allocate to separate accounts. Larger Institutions, which presumably have larger staffs and more resources, are significantly more inclined to invest through these more management intensive vehicles. Approximately 65% of Larger Institutions are investing directly or through joint ventures and separate accounts, compared to approximately 28% of Smaller Institutions.
Environmental, Social & Governance (ESG)

Environmental, Social & Governance policies are an increasingly important objective for institutions.

**ESG Considerations**

In recent years, a focus on ESG has emerged in the investment process. Institutions are showing an increasing preference for investments that meet not only their return targets but also their standards for environmental sustainability and social responsibility. These standards and the importance placed on them can vary widely from institution to institution.

We asked institutions if they have a stated formal policy toward ESG and whether that policy influences their investment process. The percentage of firms with formal ESG policies rose this year to 36% from 32% in 2016. Importantly, 31% of institutions report that their investment processes are now influenced by ESG considerations.

**Exhibit 35: Formal ESG Policies**

*All Institutions and by Location of Institution*

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Institutions</td>
<td>33%</td>
<td>32%</td>
<td>36%</td>
</tr>
<tr>
<td>APAC</td>
<td>38%</td>
<td>40%</td>
<td>43%</td>
</tr>
<tr>
<td>EMEA</td>
<td>61%</td>
<td>61%</td>
<td>70%</td>
</tr>
<tr>
<td>The Americas</td>
<td>24%</td>
<td>21%</td>
<td>26%</td>
</tr>
</tbody>
</table>

ESG continues to be a regional story. EMEA-based institutions, and to some lesser degree APAC-based institutions, have made strides toward embracing ESG as an important part of their investment process. Not only is EMEA the only region in which the majority of investors (70%) have a formal ESG policy, 60% of EMEA-based institutions report that their investment decision making is influenced by ESG. In contrast, the Americas continues to fall further behind their peers, demonstrating a lack of emphasis on ESG factors when making investments.

While it is clear that ESG is a trend that has gained momentum in the industry, its effect on investment returns is less clear. Interestingly, the three-year average returns of survey participants who indicated their investment process are influenced by ESG trailed those that indicated no influence - by approximately 60 bps. Given that the emphasis on ESG is relatively new for most institutions, it has likely only influenced more recent investments. As a result, it will take many years before the data on returns of these investments is robust enough to begin drawing true conclusions.

**Exhibit 36: Investment Process Influenced by ESG Policies**

*All Institutions and by Location of Institution*

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Institutions</td>
<td>16%</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>APAC</td>
<td>14%</td>
<td>37%</td>
<td>46%</td>
</tr>
<tr>
<td>EMEA</td>
<td>37%</td>
<td>51%</td>
<td>60%</td>
</tr>
<tr>
<td>The Americas</td>
<td>11%</td>
<td>21%</td>
<td>20%</td>
</tr>
</tbody>
</table>

**Exhibit 37: 3-Year Average Returns, By Influence of ESG on Investment Process, All Institutions**

- Not Influenced by ESG: 10.8%
- Influenced by ESG: 10.2%
Cornell’s Baker Program in Real Estate is home to the 2-year Masters of Professional Studies in Real Estate degree, a comprehensive, graduate-level curriculum that educates the next generation of real estate industry leaders. Cornell is also home to the Cornell Real Estate Council, an extensive alumni network of over 2,000 real estate industry leaders, with 10 domestic chapters that host the annual Cornell Real Estate Conference.

Cornell boasts the largest full-time, on campus real estate faculty in the country, including three endowed positions in real estate, with its 19-full-time real estate field faculty selected from seven colleges at Cornell to create a unique interdisciplinary structure. The core courses in the Program in Real Estate are drawn from each of the colleges to create a multidisciplinary educational experience that utilizes the full resources of Cornell. Students at Cornell receive broad exposure to real estate, from architectural design, construction management, real estate finance/investment, and real estate development to deal structuring, as part of their core coursework. The ability to specialize in one of ten real estate niches during their second year, furthermore, creates the opportunity to maximize Cornell’s extensive real estate offerings in sculpting a concentration ideally suited to the individual student’s interests.

Hodes Weill & Associates (“Hodes Weill”) is a real estate advisory boutique with a focus on the investment and funds management industry.* The firm has offices in New York, Hong Kong and London. Founded in 2009, Hodes Weill provides institutional capital raising for funds, transactions, co-investments and separate accounts; M&A, strategic and restructuring advisory services; and fairness and valuation analyses. Clients include investment and fund managers, institutional investors, lenders, property owners and other participants in the institutional real estate market.

The Partners of Hodes Weill have 175 years of institutional real estate experience across many disciplines including institutional capital raising, investment banking, restructuring, advisory and principal investing. The Partners leverage their deep skill set and a global network of relationships to provide advice and solutions to a wide range of complex situations impacting the real estate investment and funds management industry. Hodes Weill is employee-owned and managed.

Since its establishment in July 2009, Hodes Weill has undertaken advisory assignments for property companies and fund managers involving approximately US$75.9 billion of assets under management and completed private placements representing in excess of US$9.9 billion, including capital raises for closed and open-end funds, separate accounts and joint ventures. The firm has 33 professionals and global coverage of over 1,500 institutional investors and consultants.

Hodes Weill is also co-sponsor of, and advisor to, Tunbridge Partners, LLC, an asset management company focused on making minority equity investments in real estate- and real asset-focused investment managers.

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