

FUND EVALUATION REPORT

Plymouth County Retirement Association

Investment Review
April 10, 2018



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- 1. Hedge Fund Respondent Review**
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- 4. Disclaimer, Glossary, and Notes**

Hedge Fund RFP Respondent Review

Search Summary

- On March 1, 2018, Meketa Investment Group issued an RFP on behalf of the Retirement Association. Subsequently, the search was posted to Meketa's website, sent to PERAC, and picked up by a variety of news sources.
- Meketa requested that all respondents submit the RFP by March 15, 2018.
- The following pages are completed in accordance with PERAC regulations, and follow the revised search process provided in the new Chapter 176 regulations enacted at the end of 2011.
 - The ratings reflect Meketa Investment Group's opinions on each manager within the context of the Plymouth County Retirement Association's overall plan.

RFP Respondents

- Seven managers responded to the RFP. The amount of RFPs is representative of the nascent stages of the fund of funds co-investment business.

Manager	Headquarters	Fund of Fund Strategy
BlackRock, Inc.	New York, NY	Co-Investments
Corbin Capital Partners, LP	New York, NY	Co-Investments
EnTrustPermal	New York, NY	Co-Investments
Old Farm Partners, LP	New York, NY	Co-Investments
Prisma Capital Partners, LP	New York, NY	Co-Investments
Titan Advisors, LLC	Stamford, CT	Co-Investments
UBS Hedge Fund Solutions, LLC	Stamford, CT	Co-Investments



RFP Respondents

Overall Manager Rating Overview

Manager	Overall Rating	Rationale
BlackRock, Inc.	Advantageous	BlackRock is a reputable, well-established firm. Lagging performance and overall size were detractors.
Corbin Capital Partners, LP	Advantageous	Corbin has a rich history allocating to hedge funds and co-investments. However, the strategy is only focused on credit-related securities.
EnTrustPermal	Highly Advantageous	EnTrustPermal's Special Opportunities platform is a formidable approach to hedge fund co-investing and should be retained for clients looking for co-investment exposure.
Old Farm Partners, LP	Highly Advantageous	Old Farm Partners is a very compelling emerging hedge fund investor that provides clients with unique, off-the-run hedge fund exposure.
Prisma Capital Partners, LP	Advantageous	Prisma Capital Partners has a global sourcing platform in KKR, which gives them unique access to deals. However, organizational makeup was a detractor.
Titan Advisors, LLC	Advantageous	Titan Advisors is well-known and successful hedge fund investor who offers multiple products clients could consider. Their co-investment program is still in its infancy, but should be monitored closely as a future alternative.
UBS Hedge Fund Solutions, LLC	Advantageous	UBS's scale as the second largest hedge fund of funds, coupled with their direct investing experience makes them a compelling candidate.

BlackRock, Inc. – Co-Investment Fund V

Rating Criteria	Rating	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> BlackRock is a globally recognized asset manager with multiple lines of business, including a hedge fund investing platform, which is a legacy business from BlackRock's purchase of the Quellos Group's hedge fund of fund investment. The firm has approximately \$6 trillion in total assets under management and they are on their 5th co-investment products for a total of \$2.4 billion in commitments.
Organization	Advantageous	<ul style="list-style-type: none"> BlackRock was founded in New York City in 1988 by eight partners, five of whom remain active in the firm today. Headquartered in New York, BlackRock operates in more than 30 countries and 100 cities across the Americas, Europe, Asia-Pacific, the Middle East and Africa. The firm manages approximately \$6 trillion in assets under management. In 2007, BlackRock purchased hedge fund of funds business of the Quellos Group. This established BlackRock's hedge fund investing platform and is the legacy manager of the co-investment products.
Team	Highly Advantageous	<ul style="list-style-type: none"> BlackRock has a Co-investment Portfolio Management Group ("PMG") with oversight of BlackRock's current generation co-investment fund, CFV. This group is composed of David Barenborg, Dave Matter, Mark Everitt, Mark Woolley and Brian Schwartz. The PMG oversees all investment activities of the co-investment program, including approving new investment commitments. In addition, members of BAA's 35 person Hedge Fund Manager Research team, in conjunction with the 19-person Risk Management team, are responsible for sourcing, evaluating and structuring co-investment deals.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> The Co-Investment products invest across equity and credit, but has favored direct lending (25%-30% of investments), structured products, and event driven equities. Nearly 80% of the portfolio is invested domestically. Blackrock favors emerging managers and nearly 65% of the investments they make are within the first year of a funds launch. They believe this is a competitive advantage given their size and scale.
Investment Process	Advantageous	<ul style="list-style-type: none"> Most of the co-investment deals are sourced through BlackRock's approved manager platform. It is rare they will source a deal from a non-approved manager whom they haven't had a relationship with. In the event the manager is approved, it will only take them a few days to underwrite the investment, otherwise their standard manager review process can take a few months. When a deal is presented the team will set an investment committee meeting, which is the formal approval board for all co-investments.
Performance	Advantageous	<ul style="list-style-type: none"> Fund 1: 6.6% (Net IRR) Fund 2: 13.8% Fund 3: 4.1% Fund 4: 6.8%
Fees	Not Advantageous	<ul style="list-style-type: none"> Commingled Account: 0.75% management fee and a 15% incentive fee with an 8% preferred return.

Corbin Capital Partners

Rating Criteria	Rating	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> Corbin Capital Partners (“Corbin”) is a sound hedge fund of funds provider who takes more of an investment perspective versus an allocator perspective. They offer a variety of multi-strategy and diversified products that could potentially add value to an institutional portfolio.
Organization	Advantageous	<ul style="list-style-type: none"> Founded in 1984 as Dubin & Swieca, Corbin was reorganized and rebranded as Corbin Capital Partners, L.P. in 2005. Corbin’s global multi-strategy products, The Overlook Performance Fund, Corbin’s first fund of funds available to outside investors, and Pinehurst Partners, were launched in 1988 and 2002, respectively. Corbin also manages specialty products (opportunistic credit, small managers, and global macro) and provides custom solutions services. The firm has a total of \$4.5 billion under management. Approximately 40% of the firm’s equity interest is owned by the current partners responsible for the day-to-day management and operations of the business. The remaining equity is shared by founders Glenn Dubin and Henry Swieca (co-founders of Highbridge Capital Management).
Team	Advantageous	<ul style="list-style-type: none"> The firm is led by Tracy McHale Stuart, CFA, who acts as Corbin’s CEO. Portfolio management and research are headed by Craig Bergstrom, CFA and Robert Zellner, who act as CIO and Deputy CIO respectively. The CIOs are supported by a team of six investment analysts, three risk management professionals, and a fully built out operational, finance, and legal team.
Investment Philosophy	Not Advantageous	<ul style="list-style-type: none"> Corbin has presented their private credit co-investment platform where they invest in private credit deals in smaller, lower middle market direct lending investments. They are typically lending in \$50 million deal sizes across sectors. They are targeting 12% return objectives on their individual deals. They focus on shorter duration paper with a 1.3x multiple target.
Investment Process	Advantageous	<ul style="list-style-type: none"> Before investing in any underlying hedge fund, the prospective fund is generally undergoes an in-depth investment screening including an assessment of manager’s investing capabilities as well as the fund’s terms relative to the underlying strategy and the stability of the underlying asset base, a full back office operational due diligence screening and a portfolio fit and quantitative risk strategy screening. Post screening, Corbin conducts fundamental investment research, which they self-describe as a “show me, don’t tell me” process of unpacking a managers source of returns, followed by operational research.
Performance	Advantageous	<ul style="list-style-type: none"> Fund 1: 14.6% (Net IRR) Fund 2: 10.8%
Fees	Advantageous	<ul style="list-style-type: none"> 0.75% management fee with a 5% performance fee and a 7% preferred return

EnTrustPermal – Strategic Opportunities Fund IV

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> EnTrustPermal's Special Opportunities platform is a best in class co-investment strategy that gives limited partners the ability to access the best ideas from highly regarded hedge fund managers.
Organization	Not Advantageous	<ul style="list-style-type: none"> EnTrustPermal is 65% owned by Legg Mason, Inc., a global asset management firm publicly listed on the New York Stock Exchange (NYSE: LM) and a member of the S&P 500, and 35% owned by Gregg Hymowitz, founder of Entrust. Permal was established in 1973 by Worms & Cie (later renamed Sequana) and was acquired by Legg Mason, Inc. (NYSE: LM), the US-based asset management firm, in 2005. In 2016, EnTrust combined its business with Permal to form a new company, EnTrustPermal, resulting in a combined \$29 billion in assets. All investment vehicles from both companies migrated to EnTrustPermal, with the exception of the Boston-based Private Market business of the Permal Group.
Team	Highly Advantageous	<ul style="list-style-type: none"> Special Opportunities Products are managed by Chris Keenan who is a Senior Managing Director and head of Co-Investments for EnTrustPermal. Mr. Keenan also sits on the 7-person investment committee that is chaired by the firm's CEO, Gregg Hymowitz. They are supported by their 21-person investment staff.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> The team seeks to create high quality multi-manager hedge fund of funds co-investment product by sourcing the best ideas from their roster of hedge fund managers. The firm favors individual investments that have catalyst are not dependent on market beta. They underwrite the co-investments to a 30% upside
Investment Process	Highly Advantageous	<ul style="list-style-type: none"> The Investment Committee establishes the top-down macroeconomic view for all the funds; however, top-down investment themes and opportunities are identified via the existing manager roster, independent research on fundamental indicators, and sell-side research. Each year, the team reviews approximately 1,000 managers and has face to face meetings with approximately 500 managers, of which 150 are new manager meetings. Typically, new managers have at least a three year track record and between \$300mm and \$500mm in assets. They seek managers that are experienced, have performed credibly during good and bad periods, possess a competitive advantage, have a stable, well-staffed organization and invest their own money alongside the clients.
Performance	Advantageous	<ul style="list-style-type: none"> Fund 1: 12.1% (Net IRR) Fund 2: 10.6% Fund 3: 8.2%
Fees	Not Advantageous	<ul style="list-style-type: none"> 1.25% management fee, 10% performance fee over a 7.5% hurdle.

Old Farm Partners, LP

Rating Criteria	Rating	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> Old Farm Partners (“OFP”) is an exceptional hedge fund of funds provider that focuses on investing in off the run specialist hedge fund managers. In addition to their investments in commingled hedge funds, they also manage a co-investment sleeve where they source best ideas from their manager roster.
Organization	Advantageous	<ul style="list-style-type: none"> OFP launched the Old Farm Partners Master Fund LP, (The Fund”), on June 1 2016 with backing from a group of institutional investors including a large university foundation. Kieran Cavanna, the CIO of Old Farm Partners LP, (“OFP”) partnered with Nishi Shah and Barry Purcell to form OFP. Mr. Cavanna and Ms. Shah worked together in the manager selection group at Soros Fund Management where Mr. Cavanna was the head of group and Ms. Shah was a senior analyst focused on manager selection and co-investments. The third partner is Barry Purcell was previously a Partner and COO of Blue Pool Capital, an investment management company based in Hong Kong. Today, Blue Pool Capital is a family office for founders of the Alibaba Group.
Team	Highly Advantageous	<ul style="list-style-type: none"> OFP’s team is led by Kieran Cavanna, the firm’s co-founder and Chief Investment Officer. He works alongside Nishi Shah who is the firm’s Director of Research. They are supported by Barry Purcell who is the firm’s President and CEO and handles all non-investment related matters.
Investment Philosophy	Highly Advantageous	<ul style="list-style-type: none"> OFP executes a hedge fund allocation strategy that invests predominantly in smaller and mid-sized long/short equity and global macro hedge funds, while also devoting a significant portion of the portfolio to co-investing alongside the underlying managers. Co-investments can be themes, single stocks or macro trades, and are typically sourced from the underlying hedge fund managers they cover.
Investment Process	Advantageous	<ul style="list-style-type: none"> OFP sources both established managers and emerging managers generally through existing relationships and previous investments. Specifically, OFP’s relationships include previously successful investment professionals leaving existing hedge funds, industry participants, current portfolio managers, FOFs, family offices, allocators and service providers. OFP prefers to invest with managers with proven track records where OFP can understand the driver of returns, drawdowns and areas of expertise. They tend to look for performance driven managers that keep assets to a level that maximizes the opportunity to achieve superior returns. OFP often gravitates to industry and asset class specialists. Willingness to partner with OFP on co-investments is a consideration in both the sourcing and due diligence stages, but it is not the only determining factor.
Performance	Advantageous	<ul style="list-style-type: none"> Since OFP launched in June 2016 they have had strong performance in the face of poor hedge fund performance. The strategy has annualized at 7.0% since June 2016.
Fees	Highly Advantageous	<ul style="list-style-type: none"> 0.50% management fee with 5% performance fee without a hurdle rate, but OFP is open to negotiating terms

Prisma Capital Partners – Prisma Apex Credit Strategy

Rating Criteria	Rating	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> PAAMCO Prisma Holdings, LLC is a hedge fund of fund provider that was formed following the strategic merger between KKR (Prisma) and PAAMCO to combine the two entities. This created one of the largest hedge fund investors in the world with a total of \$35 billion in assets under management. The firm provides commingle hedge fund of fund products, co-investments, long only products, as well as advisory work.
Organization	Not Advantageous	<ul style="list-style-type: none"> PAAMCO Prisma Holdings, LLC is 60.1% employee-owned and KKR owns the remaining 39.9% of the newly formed entity. KKR is a passive owner given their ownership is a non-controlling interest. The day-to-day management is governed by the firm's Investment Committee One thing to note is this product is not registered with the SEC.
Team	Advantageous	<ul style="list-style-type: none"> The Prisma Apex Credit strategy is managed day-to-day by Bob Friend, Dan Lawee, and Mark Fox. Mr. Friend and Mr. Lawee are also members of the strategy's investment committee. In addition, Girish Reddy, the firm's CEO and Co-CEO of PAAMCO Prisma, is a member of the investment committee. There is no CIO, but an Investment Oversight Committee, which is the ultimate authority for the entire investment process at the firm, as it monitors the performance and risk of portfolios, votes on making manager eligible for investment, and governs the investment process.
Investment Philosophy	Not Advantageous	<ul style="list-style-type: none"> The Prisma Apex Credit strategy is an unconstrained co-investment strategy that sources and invests in credit-related securities alongside hedge fund managers. The strategy only invests in credit-related securities including, direct lending, mortgage-backed securities, corporate bonds, bank loans etc. The team favors shorter duration securities where they can achieve 2/3x multiples. The firm favors mid-sized credit specialists as sourcing partners because they believe the larger hedge funds are sized out of interesting ideas. Investing in emerging managers has always been a part of the heritage at both PAAMCO and Prisma and nearly 25% of their investments will be with early stage managers.
Investment Process	Advantageous	<ul style="list-style-type: none"> The team uses both PAAMCO's and KKR's roster of managers to source deals. They review roughly 300 deals a year and have invested in 26 deals since the inception of the product in 2013. Managers do not necessarily have to be approved on the firm's platform prior to investment, but nearly 75% of the investments are with approved managers. KKR has also been a valuable resource for the strategy, given their direct investing platform. Underwriting a deal takes 2 to 3 weeks depending on the type of security. All deals are independently verified by one of the 3 portfolio managers with the intention of being able to confirm or deny the sponsors investment thesis. Once the diligence is completed, the deal is brought to the investment committee where it is formally pitched and approved.
Performance	Not Advantageous	<ul style="list-style-type: none"> Prisma Apex Credit Strategy has annualized at 8.7% gross IRR since initial investment in October 2013.
Fees	Advantageous	<ul style="list-style-type: none"> 0.75% management fee; 8% performance fee, 6% preferred return

Titan Advisors, LLC

Rating Criteria	Rating	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> Titan Advisors is a reputable hedge fund of funds provider that was founded in 1992 by George Fox. Prior to rebranding to Titan Advisors in 2000, the firm operated as an asset manager run by George Fox, and as a result their culture is much closer to investor than allocator.
Organization	Highly Advantageous	<ul style="list-style-type: none"> Titan Advisors currently has 42 employees and offices in Stamford, CT, and London, United Kingdom. The investor base includes corporate pensions, public pensions, insurance companies, global banks, hospital systems, wealth advisors and family offices across the U.S., Canada, Europe, Asia and the Middle East. There is approximately \$2.6 billion in assets managed within Titan's Custom Solutions business. The remaining \$1.8 billion is predominantly invested across Titan's commingled products.
Team	Advantageous	<ul style="list-style-type: none"> Titan's Investment Committee, which makes all investment decisions regarding the Fund, is based at the Stamford, CT headquarters. Titan's Investment Committee ("I.C.") is comprised of George Fox, Tom Holliday, Brian Walsh and Peter Dittel. They are supported by 12 investment professionals are responsible for sourcing and underwriting managers.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> Titan takes an absolute return approach to investing in hedge fund managers. They favor managers who are small to mid-sized and are very conscience of asset growth. However, they do not favor specialists and prefer generalist managers who have strong risk management procedures. Titan invests in the more liquid part of the hedge fund markets and therefore do not necessarily invest in global macro/CTA managers.
Investment Process	Advantageous	<ul style="list-style-type: none"> Titan has historically preferred to source and/or execute co-investments with managers where they have already completed the underwriting process. Often times, Titan have had an existing relationship for many years. Not only does this provide a general comfort level, but it helps to expedite the co-investment underwriting process because Titan is able to focus exclusively on the merits of the trade, rather than having to perform the extensive underwriting of the manager. This results in the ability to turnaround a co-investment in as little as two weeks or less if required. In the event where they have not already completed our underwriting process, the ability to turnaround a co-investment takes on average six to eight weeks.
Performance	Not Advantageous	<ul style="list-style-type: none"> Titan's commingled products have slightly lagged the broader hedge fund market. Since January 2002, the master fund has annualized at 6.0%.
Fees	Advantageous	<ul style="list-style-type: none"> 0.75% management fee; 10% performance fee with a 5% soft hurdle

UBS Hedge Fund Solutions, LLC

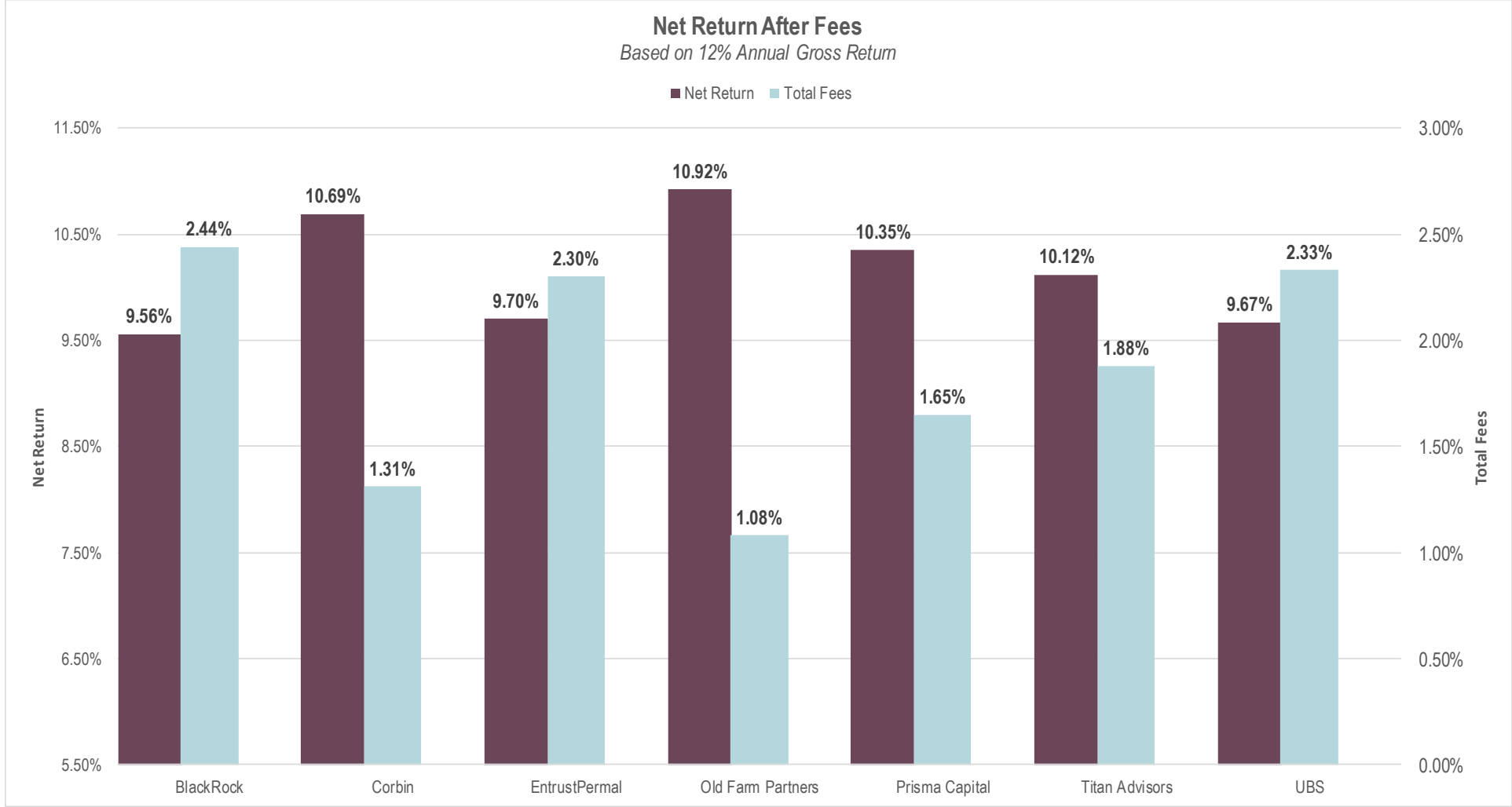
Rating Criteria	Rating	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> The UBS organization has been providing hedge fund of funds services since 1994 with a focus on customized solutions for institutional clients. They have been able to create unique mandates for clients, while maintaining robust manager due diligence capabilities. They are the second largest hedge fund of funds in the world at \$38 billion.
Organization	Advantageous	<ul style="list-style-type: none"> UBS is a global financial institution which provides financial services directly and through its divisions and subsidiaries. Its divisions include Investment Bank (equity, derivative, fixed income sales and prime brokerage services), Asset Management (investment advisory and administration services) and Wealth Management and Swiss Banking (customized investment advisory services for high net worth clients).
Team	Advantageous	<ul style="list-style-type: none"> The proposed strategy is managed by Bruce Amlicke, Chief Investment Officer (CIO), Glenn Shapiro, Head of Special Situations and Fundamental Strategies, Jeff Colodny, Director of Portfolio Management and Betty Chen, Director of Research. The Special Situations Approval Forum voting members are supported by Kenneth Kozack, Special Situations Analyst and Musaab Javed, Investment Officer. The investment team is comprised of eight Sector Specialists, a Portfolio Construction Group with four professionals, a Global Research Leadership team of three, and a single Adviser. UBS has over 60 investment professionals who are responsible for underwriting and sourcing managers and co-investments. All of them are strategy specialists.
Investment Philosophy	Advantageous	<ul style="list-style-type: none"> UBS typically looks for four criteria when examining co-investment opportunities: 1. Asymmetric perceived return profile with high potential gains and limited potential losses. 2. A clear expected pathway to crystallization 3. IRR of at least 2x the underlying hedge fund manager's flagship fund 4. Expected liquidity
Investment Process	Advantageous	<ul style="list-style-type: none"> The team screens their manager roster for deals with expected asymmetry, liquidity and timeline and pathway to crystallization. If a prospective investment meets this criteria, the Special Situations Teams will be looped in. Many Hedge Funds are motivated and incentivized to talk to the hedge fund team and have a constant dialogue with the Investment Team and the conversations about their flagships offerings can easily transition into discussions about co-investments. The team places a large emphasis on sourcing emerging managers and smaller, more nimble funds that are often more interested in working as a strategic partner and provide co-investment ideas to foster their relationship with UBS. Currently UBS has investments with over 200 hedge funds and is actively engaged with over 350 prospect funds.
Performance	Advantageous	<ul style="list-style-type: none"> UBS has had strong results with their co-investment performance. However, they have only made a total of 30 investments since 2011 and have yet to formalized a direct product.
Fees	Not Advantageous	<ul style="list-style-type: none"> 1.25% management fee; 10% performance fee with a 6% preferred return

Proposed Product Terms¹

	Category	Vehicle Type	Management Fee	Incentive Fee	Comments
BlackRock, Inc.	Not Advantageous	Commingled	0.75%	15%	8% preferred return
Corbin Capital Partners, LP	Advantageous	Commingled	0.75%	5%	7% preferred return, 80/20 GP catch-up
EntrustPermal	Not Advantageous	Commingled	1.25%	10%	7.5% hurdle rate
Old Farm Partners, LP	Highly Advantageous	Commingled	0.50%	5%	OFP is open to fee negotiations
Prisma Capital Partners, LP	Advantageous	Commingled	0.75%	8%	6% preferred return with a full GP catch-up
Titan Advisors, LLC	Advantageous	Commingled	0.75%	10%	5% soft hurdle rate
UBS Hedge Fund Solutions, LLC	Not Advantageous	Commingled	1.25%	10%	6% preferred return

¹ The proposed product terms do not provide liquidity or lock up provisions for each of the underlying fund of fund providers. Additionally we are not including any additional costs being incurred by either the fund of fund limited partnership (e.g. operating expenses, accounting, administration, legal) or the underlying costs of the hedge funds in which the firms invest capital.





Performance Analysis

Trailing Performance (net of fees) As of December 31, 2017

Manager	Vintage ¹	Net IRR	HFRI Fund of Funds Composite	HFRI Fund Weighted Composite	Russell 3000 Index	60% Russell 3k/40% Barclays Agg
BlackRock, Inc.						
Fund I	2006	6.6%	2.6%	4.5%	8.9%	7.3%
Fund II	2007	13.8%	1.9%	3.8%	21.1%	7.0%
Fund III	2011	4.1%	2.7%	3.6%	13.5%	9.5%
Fund IV	2014	6.8%	2.8%	3.9%	11.5%	8.2%
Corbin Capital Partners, LP						
Fund I	2014 ²	14.6%	2.8%	3.8%	11.6%	8.0%
Fund II	2017	10.7%	7.8%	8.6%	21.1%	13.8%
EntrustPermal						
SOF I	2008	12.1%	1.1%	3.2%	8.6%	7.1%
SOF II	2011	10.6%	2.7%	3.6%	13.5%	9.5%
SOF III	2015	8.2%	2.6%	4.2%	11.1%	7.6%
Old Farm Partners, LP	2016 ³	7.0%	6.6%	8.4%	19.2%	11.3%
Prisma Capital Partners, LP	2013	7.3%	4.0%	4.9%	15.6%	10.1%
Titan Advisors, LLC	2002	6.0%	3.6%	5.6%	7.9%	6.8%
UBS Hedge Fund Solutions, LLC	2002	11.9%	3.6%	5.6%	7.9%	6.8%

¹ All vintages begin in January of the respective year, unless otherwise noted. The benchmarks associated also begin within the corresponding vintage year.

² Start date: June 1, 2014

³ Start date: June 1, 2016



Summary

Summary

- Based upon our review and evaluation of each respondent, Meketa Investment Group ranked two strategies as highly advantageous.

Highly Advantageous

EnTrustPermal – EnTrust SOF IV

Old Farm Partners, LP

Private Equity Search Summary

Background

- To reach and maintain a 13% target to private equity, the Retirement Association should commit an average of \$36 million per year, spread across approximately three commitments.
- To help execute this strategy, Meketa issued an RFP for middle market buyout managers on March 12, 2018, with responses due on April 2, 2018.
- Meketa Investment Group received eight responses; these responses are reviewed on the following pages.

Manager Search Respondent Reviews

Manager Respondents Composite Rating Overview

Traditional Partnership Respondents

Manager	Score	Rationale
Ridgemont Partners Management	Highly Advantageous	<ul style="list-style-type: none"> • Large, capable team; impressive track record with consistently strong returns.
Levine Leichtman Capital Partners	Highly Advantageous	<ul style="list-style-type: none"> • Robust organizational history; relatively strong historical performance.
Behrman Capital	Advantageous	<ul style="list-style-type: none"> • Small team; prior fund performance is variable.
Vestar Capital Partners	Advantageous	<ul style="list-style-type: none"> • Extensive firm history; historical performance is variable.

Direct / Co-investment Respondents

Manager	Score	Rationale
Constitution Capital Partners	Highly Advantageous	<ul style="list-style-type: none"> • Stable team with solid continuity; strong track record featuring consistent prior fund performance.
HarbourVest Partners	Highly Advantageous	<ul style="list-style-type: none"> • Broad, global mandate; prior fund performance is impressive.
Caspian Private Equity	Advantageous	<ul style="list-style-type: none"> • Diversified mandate targeting a range of investments; relatively strong historical performance.
WP Global Partners	Advantageous	<ul style="list-style-type: none"> • Large team with limited turnover; consistent prior fund performance.

Ridgemont Equity Partners III

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> Large, capable team and an impressive track record with consistently strong returns.
Organization	Highly Advantageous	<ul style="list-style-type: none"> Ridgemont was founded in 2010 and is a private equity manager headquartered in Charlotte, NC. Much of the senior investment team previously worked together at Bank of America prior to forming Ridgemont. Ridgemont currently manages assets of approximately \$2.4 billion.
Team	Advantageous	<ul style="list-style-type: none"> The team consists of 36 employees, including 20 investment professionals, based out of Charlotte, NC and a smaller satellite office located in Dallas, TX. Ridgemont has had modest turnover, with one Partner retiring and two Principals leaving the firm over the past five years.
Investment Philosophy & Process	Highly Advantageous	<ul style="list-style-type: none"> The Fund will make buyout and growth equity investments in middle market companies across North America. The Fund will focus mainly on businesses operating within the industrial and business services, energy, healthcare, technology, and telecommunications sectors.
Performance ¹	Highly Advantageous	<ul style="list-style-type: none"> Secondary Fund: 2012 vintage year, 42.0% net IRR. Fund I: 2012 vintage year, 24.0% net IRR. Fund II: 2015 vintage year, 25.0% net IRR.
Fees	Advantageous	<ul style="list-style-type: none"> 2.0% of commitments during the Commitment Period; thereafter, 1.75% of unrealized contributions. 20.0% Carried Interest; 8.0% Preferred Return.

¹ As of 12/31/2017.



Levine Leichtman Capital Partners VI

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> • Large team; relatively strong historical performance.
Organization	Highly Advantageous	<ul style="list-style-type: none"> • Levine Leichtman was founded in 1984 and is a middle market private equity firm headquartered in Los Angeles with additional offices in Dallas, Chicago. • The firm currently manages assets of approximately \$9.5 billion.
Team	Advantageous	<ul style="list-style-type: none"> • The team comprises 54 employees, including 29 dedicated invest professionals, and senior professionals have worked together at the firm for at least ten years. • Levine Leichtman has experienced meaningful turnover recently with eight senior employees leaving the firm in the past five years.
Investment Philosophy & Process	Highly Advantageous	<ul style="list-style-type: none"> • The Fund will execute a diversified buyout strategy, focusing on U.S. middle market companies with revenues ranging from \$50 million to \$500 million. • The Fund intends to make investments across a broad range of industries while avoiding companies with principal business activities that involve high technology, biotech, and internet services.
Performance ¹	Advantageous	<ul style="list-style-type: none"> • Fund III: 2003 vintage year, 9.8% net IRR. • Fund IV: 2008 vintage year, 20.0% net IRR. • Fund V: 2013 vintage year, 12.1% net IRR.
Fees	Advantageous	<ul style="list-style-type: none"> • 1.75% of commitments during the Commitment Period and 1.65% of invested capital thereafter. • 20.0% Carried Interest; 8.0% Preferred Return.

¹ As of 12/31/2017.



Behrman Capital VI

Rating Criteria	Score	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> • Small team; historical performance is variable.
Organization	Advantageous	<ul style="list-style-type: none"> • Behrman Capital was founded in 1991 and is a private equity firm headquartered in New York with an additional office in San Francisco. • The firm currently has approximately \$3.3 billion under management across five prior funds raised.
Team	Advantageous	<ul style="list-style-type: none"> • The team consists of nine investment professionals who are supported by two exclusive Operating Partners. • Behrman has experienced limited employee turnover with only one senior level departure in the last five years
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> • The Fund will make buyout and growth equity investments in North American middle market companies operating within the defense and aerospace, specialty manufacturing, and healthcare services industries. • The Fund intends to add value to portfolio companies through add-on acquisitions, operational improvements, and the implementation of strategic business initiatives.
Performance ¹	Advantageous	<ul style="list-style-type: none"> • Fund III: 2000 vintage year, 11.8% net IRR. • Fund IV: 2008 vintage year, 7.3% net IRR. • Fund V: 2012 vintage year, 16.1% net IRR.
Fees	Not Advantageous	<ul style="list-style-type: none"> • 2.0% of commitments during the Commitment Period; thereafter, 2.0% of invested capital. • 20.0% Carried Interest; 8.0% Preferred Return.

¹ As of 12/31/2017.



Vestar Capital Partners VII

Rating Criteria	Score	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> • Extensive firm history; historical performance is variable.
Organization	Advantageous	<ul style="list-style-type: none"> • Vestar was founded in 1988 and is a private equity firm headquartered in New York, NY with additional offices in Denver, CO and Boston, MA. • The firm currently has approximately \$7.0 billion under management across six prior funds raised.
Team	Advantageous	<ul style="list-style-type: none"> • The team consists of 22 total investment professionals and is led by the firm's twelve Managing Directors, who combine for more than 300 years of private equity experience. • Vestar has experienced notable employee turnover with four Managing Directors (including one Founder) leaving the firm in the past five years.
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> • The Fund will make buyout investments in U.S. middle market companies across the consumer, industrial, business services, and healthcare industries. • The Fund intends to add value to portfolio companies through operational improvements and the implementation of strategic initiatives.
Performance ¹	Advantageous	<ul style="list-style-type: none"> • Fund IV: 1999 vintage year, 13.0% net IRR. • Fund V: 2005 vintage year, 4.0% net IRR. • Fund VI: 2011 vintage year, 35.0% net IRR.
Fees	Not Advantageous	<ul style="list-style-type: none"> • 2.0% of commitments during the Commitment Period; thereafter, 2.0% of invested capital. • 20.0% Carried Interest; 8.0% Preferred Return.

¹ As of 12/31/2017.

Ironsides Direct Investment Fund V (Constitution Capital Partners)

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> Stable team with solid continuity; strong track record featuring consistent prior fund performance.
Organization	Advantageous	<ul style="list-style-type: none"> Constitution Capital is an alternative asset management firm founded in 2008 with headquarters in Andover, MA. The firm currently manages approximately \$3.0 billion across sixteen funds raised to date.
Team	Advantageous	<ul style="list-style-type: none"> The team consists of 17 investment professionals with over 206 years of collective investment experience. Constitution has not experienced any senior or mid-level turnover over the history of the organization.
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> The Fund will make lower middle buyout and growth equity co-investments in North American businesses across the consumer, industrials, business services, and healthcare industries. The Fund will focus on companies with enterprise values of between \$100 million and \$1.0 billion. The Fund expects to complete 11-13 direct investments ranging from \$10 million to \$40 million in size.
Performance ¹	Highly Advantageous	<ul style="list-style-type: none"> Ironsides Co-Investment Fund II: 2011 vintage year, 22.6% net IRR. Ironsides Co-Investment Fund III: 2013 vintage year, 15.8% net IRR. Ironsides Direct Investment Fund IV: 2016 vintage year, performance is not meaningful.
Fees	Highly Advantageous	<ul style="list-style-type: none"> 0.5% of committed capital during the Commitment Period; thereafter, 0.5% of invested capital. (Reflects 50% fee discount for first close investors.) 15.0% Carried Interest; 8.0% Preferred Return.

¹ As of 6/30/2017.



HarbourVest Partners Co-Investment Fund V

Rating Criteria	Score	Rationale
Overall	Highly Advantageous	<ul style="list-style-type: none"> Broad, global mandate; prior fund performance is impressive.
Organization	Highly Advantageous	<ul style="list-style-type: none"> HarbourVest was founded in 1982 and is a global private investment firm with headquarters in Boston, MA. The firm currently manages assets of approximately \$49.6 billion.
Team	Advantageous	<ul style="list-style-type: none"> HarbourVest is led by a group of 35 Managing Directors, and there are 31 investment professionals solely dedicated to direct co-investments. The firm has experienced some turnover recently with two Managing Directors and three Principals departing in the last five years.
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> The Fund will execute a continuation of the co-investment strategy utilized throughout the firm's history, targeting direct investment opportunities alongside top tier private equity managers. The Fund will aim to broadly diversify co-investments across a wide range of industries and geographies.
Performance ¹	Highly Advantageous	<ul style="list-style-type: none"> Co-Investment Fund II: 2007 vintage year, 10.7% net IRR. Co-Investment Fund III: 2013 vintage year, 22.6% net IRR. Co-Investment Fund IV: 2016 vintage year, 35.3% net IRR.
Fees	Highly Advantageous	<ul style="list-style-type: none"> The management fee rate will be 1% from the date of the first commitment through the fifth anniversary thereof and such percentage will decline by 20% per year (projected average annual management fee of 0.62% of capital commitments assuming the Fund is fully invested after three years). 12.5% Carried Interest; 8.0% Preferred Return.

¹ As of 9/30/2017.



Private Equity U.S. Opportunities III (Caspian Private Equity)

Rating Criteria	Score	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> • Diversified mandate targeting a range of investments; relatively strong historical performance.
Organization	Advantageous	<ul style="list-style-type: none"> • Caspian Private Equity was founded in 2008 and is a private investment firm with headquarters in New York, NY. • The firm currently manages assets of approximately \$3.2 billion.
Team	Advantageous	<ul style="list-style-type: none"> • The team consists of 16 professionals led by two Partners who have worked together at the firm for more than 10 years. • The firm has experienced some turnover recently with two senior level departures (including one Partner) occurring in the last five years.
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> • The Fund will invest in small and middle market co-investment opportunities throughout the U.S., including buyout, growth equity, special situations, and direct secondary deals. • The majority of investments will include small and middle market buyouts, while the Fund intends to diversify exposure across numerous industries.
Performance ¹	Advantageous	<ul style="list-style-type: none"> • Fund I: 2008 vintage year, 23.0% net IRR. • Fund II: 2013 vintage year, 14.0% net IRR.
Fees	Not Advantageous	<ul style="list-style-type: none"> • 1.5% of aggregate capital commitments during the Investment Period; thereafter, 1.5% of invested capital. • 15.0% Carried Interest; 8.0% Preferred Return.

¹ As of 12/31/2017.



COREalpha Private Equity Partners Co-Investment Fund V (WP Global Partners)

Rating Criteria	Score	Rationale
Overall	Advantageous	<ul style="list-style-type: none"> Large team with limited turnover; consistent prior fund performance.
Organization	Advantageous	<ul style="list-style-type: none"> WP Global Partners was founded in 2005 and is a private investment firm headquartered in Chicago with additional offices located in New York and Los Angeles. The firm currently manages assets of approximately \$3.5 billion.
Team	Advantageous	<ul style="list-style-type: none"> The team includes 28 total professionals and is led by five Managing Directors who have worked together at the firm for 12 years. WP Global has experienced limited employee turnover with one Managing Director leaving the firm in the last 5 years.
Investment Philosophy & Process	Advantageous	<ul style="list-style-type: none"> The Fund will aim to develop a diversified portfolio of co-investments in companies operating within growing industries and underserved markets. The Fund will consider a variety of industries including healthcare, consumer, and business services while adding value to investments through operational improvements, strategic add-ons, and cost synergy realizations.
Performance ¹	Advantageous	<ul style="list-style-type: none"> Fund II: 2007 vintage year, 17.6% net IRR. Fund III: 2010 vintage year, 19.1% net IRR. Fund IV: 2013 vintage year, 11.0% net IRR.
Fees	Advantageous	<ul style="list-style-type: none"> 1.0% of aggregate capital commitments during the Investment Period; thereafter, 1.0% of invested capital. 15.0% Carried Interest; 8.0% Preferred Return.

¹ As of 9/30/2017.



Summary

	Ridgemont Partners Management	Levine Leichtman Capital Partners	Behrman Capital	Vestar Capital Partners
Location	Charlotte, NC	Los Angeles, CA	New York, NY	New York, NY
Fund Name	Ridgemont Equity Partners III	Levine Leichtman Capital Partners VI	Behrman Capital VI	Vestar Capital Partners VII
Fund Size	\$1.25 billion target	\$2.2 billion target	\$500 million target	\$1.0 billion target
Track Record	<p>As of 12/31/2017</p> <ul style="list-style-type: none"> • Secondary Fund: 2012 vintage year, 42.0% net IRR. • Fund I: 2012 vintage year, 24.0% net IRR. • Fund II: 2015 vintage year, 25.0% net IRR. 	<p>As of 12/31/2017</p> <ul style="list-style-type: none"> • Fund III: 2003 vintage year, 9.8% net IRR. • Fund IV: 2008 vintage year, 20.0% net IRR. • Fund V: 2013 vintage year, 12.1% net IRR. 	<p>As of 12/31/2017</p> <ul style="list-style-type: none"> • Fund III: 2000 vintage year, 11.8% net IRR. • Fund IV: 2008 vintage year, 7.3% net IRR. • Fund V: 2012 vintage year, 16.1% net IRR. 	<p>As of 12/31/2017</p> <ul style="list-style-type: none"> • Fund IV: 1999 vintage year, 13.0% net IRR. • Fund V: 2005 vintage year, 4.0% net IRR. • Fund VI: 2011 vintage year, 35.0% net IRR.
Strategy	The Fund will make buyout and growth equity investments in middle market companies across North America. The Fund will focus mainly on businesses operating within the industrial and business services, energy, healthcare, technology, and telecommunications sectors.	The Fund will execute a diversified buyout strategy, focusing on U.S. middle market companies with revenues ranging from \$50 million to \$500 million. The Fund intends to diversify across industries while avoiding companies with principal business activities that involve high technology, biotech, and internet services.	The Fund will make buyout and growth equity investments in North American middle market companies operating within the defense and aerospace, specialty manufacturing, and healthcare services industries. The Fund intends to add value to investments through add-ons, operational improvements, and strategic business initiatives.	The Fund will make buyout investments in U.S. middle market companies across the consumer, industrial, business services, and healthcare industries. The Fund intends to add value to portfolio companies through operational improvements and the implementation of strategic initiatives.
Geographic Focus	North America	North America	North America	North America
Management Fee	2.0% of aggregate commitments; 1.75% of invested capital.	1.75% of aggregate commitments; 1.65% of invested capital.	2.0% of aggregate commitments; 2.0% of invested capital.	2.0% of aggregate commitments; 2.0% of invested capital.
Preferred Return	8.0%	8.0%	8.0%	8.0%
Carried Interest	20.0%	20.0%	20.0%	20.0%

Summary (continued)

	Constitution Capital Partners	HarbourVest Partners	Caspian Private Equity	WP Global Partners
Location	Andover, MA	Boston, MA	New York, NY	Chicago, IL
Fund Name	Ironsides Direct Investment Fund V	Co-Investment Fund V	Private Equity U.S. Opportunities III	COREalpha Private Equity Partners Co-Investment Fund V
Fund Size	\$300.0 million target	\$2.5 billion target	\$300.0 million target	\$125 million target
Track Record	<p>As of 6/30/2017</p> <ul style="list-style-type: none"> Ironsides Co-Investment Fund II: 2011 vintage year, 22.6% net IRR. Ironsides Co-Investment Fund III: 2013 vintage year, 15.8% net IRR. Ironsides Direct Investment Fund IV: 2016 vintage year, performance is not meaningful. 	<p>As of 9/30/2017</p> <ul style="list-style-type: none"> Co-Investment Fund II: 2007 vintage year, 10.7% net IRR. Co-Investment Fund III: 2013 vintage year, 22.6% net IRR. Co-Investment Fund IV: 2016 vintage year, 35.3% net IRR. 	<p>As of 12/31/2017</p> <ul style="list-style-type: none"> Fund I: 2008 vintage year, 23.0% net IRR. Fund II: 2013 vintage year, 14.0% net IRR. 	<p>As of 9/30/2017</p> <ul style="list-style-type: none"> Fund II: 2007 vintage year, 17.6% net IRR. Fund III: 2010 vintage year, 19.1% net IRR. Fund IV: 2013 vintage year, 11.0% net IRR.
Strategy	The Fund will make buyout and growth equity co-investments in small to mid-cap businesses across the consumer, industrials, business services, and healthcare industries. The Fund expects to complete 11-13 direct investments ranging from \$10 million to \$40 million in size.	The Fund will execute a continuation of the co-investment strategy utilized throughout the firm's history, targeting direct investment opportunities alongside top tier private equity managers. The Fund will aim to broadly diversify co-investments across a wide range of industries and geographies.	The Fund will make small and middle market co-investments throughout the U.S., including buyout, growth equity, special situations, and direct secondary deals. The majority of investments will include small and middle market buyouts, while the Fund intends to diversify exposure across numerous industries.	The Fund will aim to develop a diversified portfolio of co-investments in companies operating within growing industries and underserved markets. The Fund will consider several industries including healthcare, consumer, and business services while adding value to investments through operational improvements, strategic add-ons, and cost synergy realizations.
Geographic Focus	North America	Global	North America	North America
Management Fee	0.5% of aggregate commitments; 0.5% of invested capital. (Reflects 50% discount for first close investors)	Projected average annual management fee of 0.62% of capital commitments.	1.5% of aggregate commitments; 1.5% of invested capital.	1.0% of aggregate commitments; 1.0% of invested capital.
Preferred Return	8.0%	8.0%	8.0%	8.0%
Carried Interest	15.0%	12.5%	15.0%	15.0%

Summary

- Based upon our review and evaluation of each respondent, Meketa Investment Group has ranked:
 - Ridgemont Equity Partners III and Levine Leichtman Capital Partners VI as highly advantageous.
 - Ironsides Direct Investment Fund V and HarbourVest Co-Investment Fund V as highly advantageous relative to respondents offering co-investment exposure.
- We recommend the Board consider interviewing Ridgemont Equity Partners and Levine Leichtman Capital Partners at the May meeting.
- We recommend considering co-investments at a later date following additional education and discussion.

INTERIM REPORT

Plymouth County Retirement Association

Private Markets Program
September 30, 2017



M E K E T A I N V E S T M E N T G R O U P

BOSTON
MASSACHUSETTS

CHICAGO
ILLINOIS

MIAMI
FLORIDA

PORTLAND
OREGON

SAN DIEGO
CALIFORNIA

LONDON
UNITED KINGDOM

1. **Private Equity Program**
2. **Private Real Assets Program**
3. **Private Real Estate Program**
4. **Appendices**
 - Market and Industry Analysis
 - Disclaimer and Valuation Policies
 - Glossary of Terms

The purpose of this document is to offer a review of the Retirement Association's aggregate private market investments.

As of September 30, 2017, the Retirement Association had committed \$349.5 million to 43 partnerships. The reported fair value of those 43 partnerships, in aggregate, was \$156.3 million at the end of the third quarter.

Aggregate Private Equity Program ¹		Aggregate Real Assets Program ¹		Aggregate Real Estate Program ¹	
Number of Partnerships	23	Number of Partnerships	6	Number of Partnerships	14
Committed Capital²	\$131.1 million	Committed Capital²	\$60.4 million	Committed Capital	\$158.0 million
Capital Called	\$88.2 million	Capital Called	\$21.2 million	Capital Called	\$110.6 million
Distributions	\$74.7 million	Distributions	\$1.5 million	Distributions	\$61.5 million
Reported Value	\$33.8 million	Reported Value	\$17.3 million	Reported Value	\$105.2 million
Total Value Multiple	1.2x	Total Value Multiple	0.9x	Total Value Multiple	1.5x
Net IRR	4.4%	Net IRR	-3.4%	Net IRR	5.5%
Q3 2017 IRR³	5.3%	Q3 2017 IRR³	-1.5%	Q3 2017 IRR³	1.1%
Trailing Year IRR³	15.8%	Trailing Year IRR³	1.0%	Trailing Year IRR³	1.3%

¹ Throughout this report, numbers may not sum due to rounding.

² Some partnership commitments were made in foreign currency. This total reflects committed capital in U.S. dollars, adjusted for foreign currency exchange rates, as of the report date.

³ IRR is net of Meketa Investment Group fees, but gross of prior advisory fees.



The Retirement Association made one new commitment of \$12.0 million during the quarter to LLR Equity Partners V, a middle-market buyout fund targeting growth oriented U.S. companies across the B2B, healthcare, education, financial services, and security (digital and physical) sectors.

In aggregate, approximately \$1.1 million was called by the underlying managers from the Retirement Association during the third quarter.

- Summit Partners Growth Equity Fund IX called approximately \$0.8 million from the Association primarily to fund new investments in Elevate Brandpartners, a San Francisco-based company providing support to growing, socially-connected consumer brands, and Ascentis Corporation, a U.S. provider of cloud-based human capital management solutions.
- Landmark Equity Partners XIV called approximately \$0.1 million from the Association to fund follow-on investments in various underlying partnerships.
- Globespan Capital Partners V called approximately \$0.1 million from the Association to fund several follow-on investments.

Distributions received by the Retirement Association from underlying partnerships during the third quarter totaled approximately \$1.4 million.

- Ascend Ventures II distributed \$0.6 million to the Association during the quarter, primarily from proceeds received in connection with the sale of SWN Communications and Play.
- Lexington Capital Partners VII distributed \$0.3 million to the Association, primarily from realized gains.
- Siguler Guff Distressed Opportunities Fund III distributed \$0.2 million to the Association in proceeds received from the partial realization of H/2 Investors.

During the third quarter of 2017, the Retirement Association did not make any new commitments.

In aggregate, approximately \$0.1 million was called by the underlying managers from the Retirement Association during the third quarter.

- JPMorgan Global Maritime Investment Fund called approximately \$0.1 million during the quarter primarily to fund the completion of a Bulker vessel.

Distributions received by the Retirement Association from underlying partnerships during the third quarter totaled approximately \$0.1 million.

- Domain Timbervest Partners III distributed \$0.1 million in proceeds to the Association during the quarter, primarily from realized gains related to the sale of various timberland assets.

The Retirement Association did not make any new commitments during the quarter.

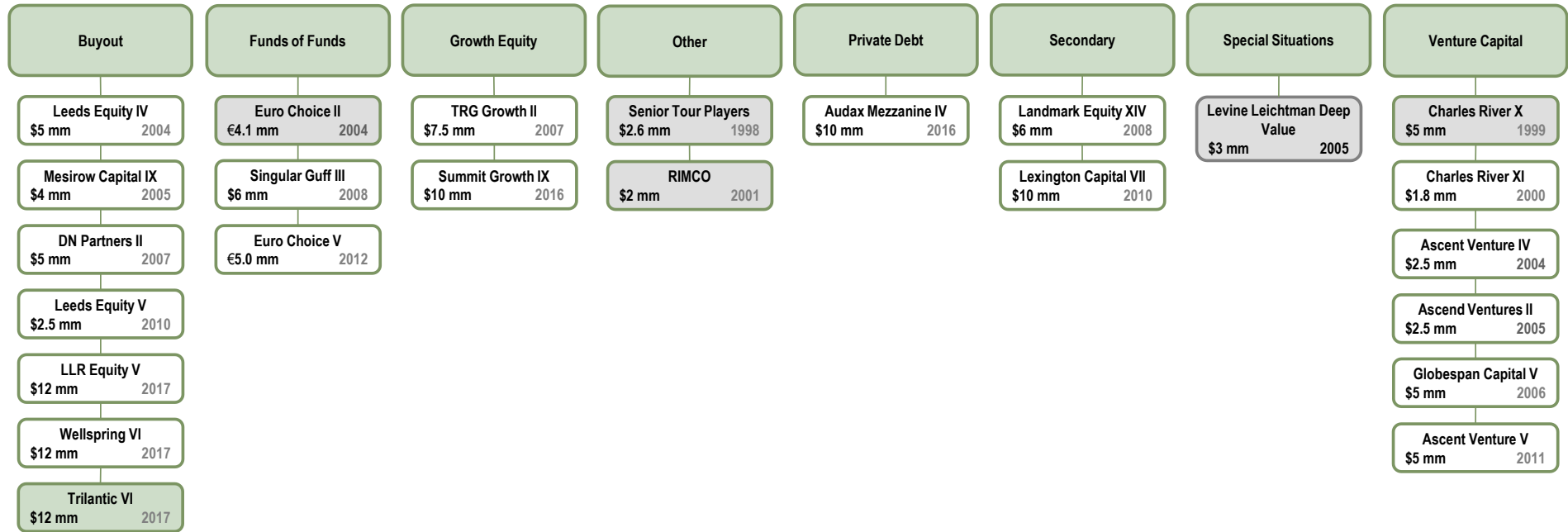
In aggregate, \$1.9 million was called by the underlying managers from the Retirement Association during the third quarter.

- AEW Partners Real Estate Fund VIII called approximately \$1.7 million from the Association primarily to fund the acquisitions of South Bronx Industrial, a 97,043 sq. ft. industrial property in South Bronx, New York; Foothills Corporate Center II, a 144,908 sq. ft. office building located in Phoenix, Arizona; and 1 Technology Drive Industrial, a 186,591 sq. ft. industrial property in Peabody, Massachusetts.
- Carlyle Realty Partners VIII called \$0.1 million from the Association during the quarter to fund quarterly management fees.

Distributions received by the Retirement Association from underlying partnerships during the third quarter totaled approximately \$1.5 million.

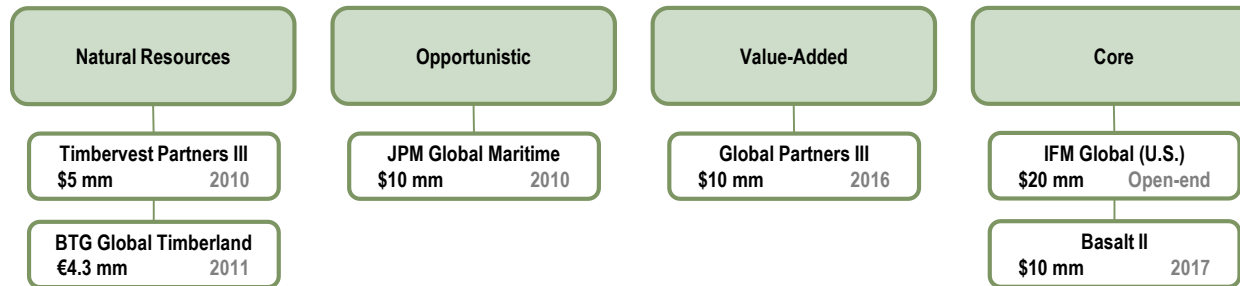
- AEW Partners Real Estate Fund VIII distributed \$0.6 million to the Association during the quarter primarily in proceeds received from various existing portfolio investments.
- DSF Capital Partners IV distributed \$0.6 million to the Association during the quarter primarily in operating proceeds received from existing portfolio investments as well as realization proceeds received in conjunction with the Halstead Tewksbury asset.
- Berkshire Multifamily Value Fund II distributed \$0.2 million to the Association during the quarter primarily in financing proceeds received in connection with the MetroPlace at Town Center mezzanine loan as well as realization proceeds received in conjunction with the Berkshires at Rock Springs asset.

As of February 15, 2018



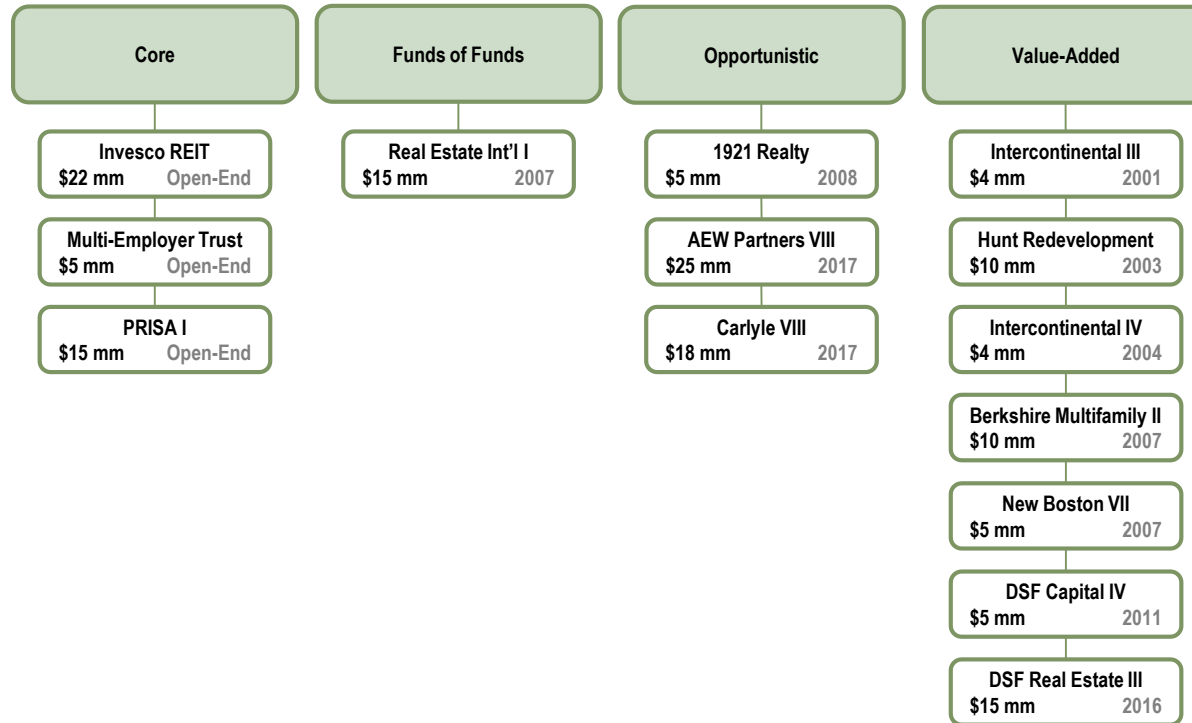
- White box: Current investment.
- Green box: Investment made subsequent to quarter end and, as such, is not included in any other section of this report.
- Gray box: Liquidated Investment.

As of February 15, 2018



- White box: Current investment.
- Green box: Investment made subsequent to quarter end and, as such, is not included in any other section of this report.

As of February 15, 2018



- White box: Current Investment.
- Green box: Investment made subsequent to quarter end and, as such, is not included in any other section of this report.

Aggregate Private Equity Program Partnership Roster

	Vintage Year	Commitment (\$ mm)	Committed (%)	Reported Fair Value (\$ mm)	Reported Fair Value (%)
Total Program		131.1	100	33.8	100
Fund of Funds		17.7	13	6.5	19
Euro Choice II, L.P.	2004	5.5	4	0.0	0
Siguler Guff Distressed Opportunities Fund III, L.P.	2008	6.0	5	1.4	4
Euro Choice V, L.P.	2012	6.1	5	5.0	15
Secondary		16.0	12	6.1	18
Landmark Equity Partners XIV, L.P.	2008	6.0	5	2.3	7
Lexington Capital Partners VII, L.P.	2009	10.0	8	3.8	11
Buyout		40.5	31	4.8	14
Leeds Equity Partners IV, L.P.	2004	5.0	4	1.1	3
Mesirow Financial Capital Partners IX, L.P.	2005	4.0	3	1.0	3
DN Partners II, L.P.	2007	5.0	4	0.7	2
Leeds Equity Partners V, L.P.	2010	2.5	2	2.2	7
LLR Equity Partners V, L.P. ¹	2017	12.0	9	NM	NM
Wellspring Capital Partners VI, L.P.	2017	12.0	9	0.0	0
Special Situations		3.0	2	0.0	0
Levine Leichtman Capital Partners Deep Value Fund, L.P.	2005	3.0	2	0.0	0
Private Debt		10.0	8	1.0	3
Audax Mezzanine Fund IV, L.P.	2016	10.0	8	1.0	3
Venture Capital		21.8	17	10.3	30
Charles River Partnership X, L.P.	1999	5.0	4	0.0	0
Charles River Partnership XI, L.P.	2000	1.8	1	0.2	< 1
Ascent Venture Partners IV, L.P.	2004	2.5	2	0.4	1

¹ Due to a negative account balance as of 9/30/17, Reported Fair Value for the Partnership has been listed as "Not Meaningful."

Aggregate Private Equity Program Partnership Roster

	Vintage Year	Commitment (\$ mm)	Committed (%)	Reported Fair Value (\$ mm)	Reported Fair Value (%)
Ascend Ventures II, L.P.	2005	2.5	2	0.2	1
Globespan Capital Partners V, L.P.	2006	5.0	4	4.8	14
Ascent Venture Partners V, L.P.	2011	5.0	4	4.7	14
Growth Equity		17.5	13	4.7	14
TRG Growth Partnership II, L.P.	2007	7.5	6	2.8	8
Summit Partners Growth Equity Fund IX, L.P.	2016	10.0	8	1.9	6
Other		4.6	4	0.3	1
Senior Tour Players, L.P.	1998	2.6	2	0.2	1
Rimco Production Company, Inc	2001	2.0	2	0.2	< 1

	Vintage Year	Commitment (\$ mm)	Committed (%)	Reported Fair Value (\$ mm)	Reported Fair Value (%)
Total Program		60.4	100	17.3	100
Core		30.0	50	NA	NA
IFM Global Infrastructure (U.S.), L.P.	Open-End	20.0	33	NA	NA
Basalt Infrastructure Partners II	2017	10.0	17	NA	NA
Natural Resources		10.4	17	9.5	55
Domain Timbervest Partners III, L.P.	2010	5.0	8	5.6	32
BTG Pactual Global Timberland Resources Fund, LLC ¹	2011	5.4	9	3.9	22
Opportunistic		10.0	17	6.4	37
JPMorgan Global Maritime Investment	2010	10.0	17	6.4	37
Value-Added		10.0	17	1.6	9
Global Infrastructure Partners III, L.P.	2016	10.0	17	1.6	9

¹ The Retirement Association committed €4.3 million to the Partnership in 2010. The \$5.4 million is an estimated amount based on the contributed capital and unfunded commitment as of 9/30/2017.

Aggregate Real Estate Program Partnership Roster

	Vintage Year	Commitment (\$ mm)	Committed (%)	Reported Fair Value (\$ mm)	Reported Fair Value (%)
Total Program		158.0	100	105.2	100
Core		42.0	27	83.2	79
PRISA I	Open-End	15.0	9	37.6	36
Multi-Employer Property Trust	Open-End	5.0	3	15.4	15
Invesco Equity Real Estate Securities Trust	Open-End	22.0	14	30.1	29
Opportunistic		48.0	30	3.8	4
1921 Realty, Inc.	2008	5.0	3	0.9	1
AEW Partners Real Estate Fund VIII, L.P.	2017	25.0	16	2.8	3
Carlyle Realty Partners VIII, L.P.	2017	18.0	11	<0.1	< 1
Value-Added		53.0	34	12.3	12
Intercontinental Real Estate Investment Fund III, LLC	2001	4.0	3	0.1	< 1
Hunt Redevelopment and Renovation Fund, LLC	2003	10.0	6	1.1	1
Intercontinental Real Estate Investment Fund IV, LLC	2004	4.0	3	0.1	< 1
Berkshire Multifamily Value Fund II, L.P.	2007	10.0	6	0.1	< 1
New Boston Institutional Fund, L.P. VII	2007	5.0	3	2.2	2
DSF Capital Partners IV, L.P.	2011	5.0	3	4.0	4
DSF Multi-Family Real Estate Fund III, L.P.	2016	15.0	9	4.7	4
Fund of Funds		15.0	9	6.0	6
Real Estate International Partnership Fund I, L.P.	2007	15.0	9	6.0	6

Aggregate Program Performance Summary

Investment Strategy	Capital Committed (\$ mm)	Total Contributions Paid to Date ¹ (\$ mm)	Unfunded Commitment ² (\$ mm)	Total Distributions Received to Date (\$ mm)	Reported Fair Value (\$ mm)	Reported Fair Value Plus Distributions (\$ mm)	Net IRR ³ (%)	Inv. Multiple ⁴ (x)
Total Program	131.1	88.2	47.4	74.7	33.8	108.5	4.4	1.2
Vintage Year 1998	2.6	2.7	0.0	0.1	0.2	0.3	-13.4	0.1
Senior Tour Players, L.P. Other	2.6	2.7	0.0	0.1	0.2	0.3	-13.4	0.1
Vintage Year 1999	5.0	4.4	0.6	2.2	0.0	2.2	-14.9	0.5
Charles River Partnership X, L.P. Venture Capital	5.0	4.4	0.6	2.2	0.0	2.2	-14.9	0.5
Vintage Year 2000	1.8	1.8	0.0	1.9	0.2	2.1	3.2	1.2
Charles River Partnership XI, L.P. Venture Capital	1.8	1.8	0.0	1.9	0.2	2.1	3.2	1.2
Vintage Year 2001	2.0	2.0	0.0	7.5	0.2	7.6	29.1	3.8
Rimco Production Company, Inc Other	2.0	2.0	0.0	7.5	0.2	7.6	29.1	3.8
Vintage Year 2004	13.0	13.1	0.4	13.3	1.5	14.8	2.1	1.1
Ascent Venture Partners IV, L.P. Venture Capital	2.5	2.5	0.0	0.4	0.4	0.8	-15.4	0.3
Euro Choice II, L.P. Fund of Funds	5.5	5.5	0.4	7.7	0.0	7.7	6.4	1.4
Leeds Equity Partners IV, L.P. Buyout	5.0	5.0	0.0	5.2	1.1	6.3	3.5	1.2
Vintage Year 2005	9.5	11.0	0.3	7.2	1.2	8.5	-4.7	0.8
Ascend Ventures II, L.P. Venture Capital	2.5	2.3	0.2	0.8	0.2	1.0	-8.4	0.4
Levine Leichtman Capital Partners Deep Value Fund, L.P. Special Situations	3.0	4.9	0.0	5.1	0.0	5.1	1.3	1.0
Mesirow Financial Capital Partners IX, L.P. Buyout	4.0	3.8	0.2	1.3	1.0	2.3	-6.0	0.6
Vintage Year 2006	5.0	4.8	0.2	4.6	4.8	9.4	12.4	2.0

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³ The Net IRR calculations were performed by Meketa Investment Group. Total Program IRR is net of fees, expenses, and carried interest for each partnership and net of Meketa Investment Group fees. Partnership and Vintage Year IRRs are net of partnership fees but gross of Meketa Investment Group fees.

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Aggregate Program Performance Summary

	Investment Strategy	Capital Committed (\$ mm)	Total Contributions Paid to Date ¹ (\$ mm)	Unfunded Commitment ² (\$ mm)	Total Distributions Received to Date (\$ mm)	Reported Fair Value (\$ mm)	Reported Fair Value Plus Distributions (\$ mm)	Net IRR ³ (%)	Inv. Multiple ⁴ (x)	
	Globespan Capital Partners V, L.P.	Venture Capital	5.0	4.8	0.2	4.6	4.8	9.4	12.4	2.0
	Vintage Year 2007		12.5	9.7	2.8	6.3	3.5	9.9	0.3	1.0
	DN Partners II, L.P.	Buyout	5.0	2.3	2.7	0.0	0.7	0.7	-17.2	0.3
	TRG Growth Partnership II, L.P.	Growth Equity	7.5	7.4	0.1	6.3	2.8	9.2	4.7	1.2
	Vintage Year 2008		12.0	12.1	0.2	12.9	3.7	16.6	9.2	1.4
	Landmark Equity Partners XIV, L.P.	Secondary	6.0	6.2	0.0	5.3	2.3	7.6	7.2	1.2
	Siguler Guff Distressed Opportunities Fund III, L.P.	Fund of Funds	6.0	5.8	0.2	7.6	1.4	9.0	10.2	1.5
	Vintage Year 2009		10.0	10.3	0.0	11.1	3.8	14.9	15.0	1.4
	Lexington Capital Partners VII, L.P.	Secondary	10.0	10.3	0.0	11.1	3.8	14.9	15.0	1.4
	Vintage Year 2010		2.5	3.6	0.0	2.8	2.2	5.0	12.2	1.4
	Leeds Equity Partners V, L.P.	Buyout	2.5	3.6	0.0	2.8	2.2	5.0	12.2	1.4
	Vintage Year 2011		5.0	4.8	0.4	3.0	4.7	7.8	11.6	1.6
	Ascent Venture Partners V, L.P.	Venture Capital	5.0	4.8	0.4	3.0	4.7	7.8	11.6	1.6
	Vintage Year 2012		6.1	5.2	1.1	1.5	5.0	6.5	10.9	1.3
	Euro Choice V, L.P.	Fund of Funds	6.1	5.2	1.1	1.5	5.0	6.5	10.9	1.3
	Vintage Year 2016		20.0	2.6	17.4	0.2	2.9	3.1	NM	1.2
	Audax Mezzanine Fund IV, L.P.	Private Debt	10.0	1.2	8.8	0.2	1.0	1.2	NM	1.0
	Summit Partners Growth Equity Fund IX, L.P.	Growth Equity	10.0	1.4	8.6	0.0	1.9	1.9	NM	1.3
	Vintage Year 2017		24.0	0.0	24.0	0.0	NM	NM	NM	NM
	LLR Equity Partners V, L.P. ⁵	Buyout	12.0	0.0	12.0	0.0	NM	NM	NM	NM
	Wellspring Capital Partners VI, L.P.	Buyout	12.0	0.0	12.0	0.0	NA	NA	NA	NA

⁵ Due to a negative account balance as of 9/30/17, Reported Fair Value for the Partnership has been listed as "Not Meaningful."

Aggregate Program Performance Summary

Investment Strategy	Capital Committed (\$ mm)	Total Contributions Paid to Date ¹ (\$ mm)	Unfunded Commitment ² (\$ mm)	Total Distributions Received to Date (\$ mm)	Reported Fair Value (\$ mm)	Reported Fair Value Plus Distributions (\$ mm)	Net IRR ³ (%)	Inv. Multiple ⁴ (x)
Total Program	60.4	21.2	39.6	1.5	17.3	18.9	-3.4	0.9
Total Closed-end	40.4	21.2	19.6	1.5	17.3	18.9	-3.4	0.9
Vintage Year 2010	15.0	14.2	1.1	1.2	12.0	13.2	-2.0	0.9
Domain Timbervest Partners III, L.P.	5.0	5.0	0.0	0.4	5.6	6.0	3.7	1.2
JPMorgan Global Maritime Investment	10.0	9.2	1.1	0.8	6.4	7.2	-8.5	0.8
Vintage Year 2011	5.4	5.0	0.4	0.1	3.9	4.0	-5.3	0.8
BTG Pactual Global Timberland Resources Fund, LLC	5.4	5.0	0.4	0.1	3.9	4.0	-5.3	0.8
Vintage Year 2016	10.0	2.0	8.1	0.2	1.6	1.8	NM	0.9
Global Infrastructure Partners III, L.P.	10.0	2.0	8.1	0.2	1.6	1.8	NM	0.9
Vintage Year 2017	10.0	0.0	10.0	0.0	NA	NA	NA	NA
Basalt Infrastructure Partners II	10.0	0.0	10.0	0.0	NA	NA	NA	NA
Total Open-end	20.0	0.0	20.0	0.0	NA	NA	NA	NA
IFM Global Infrastructure (U.S.), L.P.	20.0	0.0	20.0	0.0	NA	NA	NA	NA

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Aggregate Program Performance Summary

Investment Strategy	Capital Committed (\$ mm)	Total Contributions Paid to Date ¹ (\$ mm)	Unfunded Commitment ² (\$ mm)	Total Distributions Received to Date (\$ mm)	Reported Fair Value (\$ mm)	Reported Fair Value Plus Distributions (\$ mm)	Net IRR ³ (%)	Inv. Multiple ⁴ (x)	
Total Program	158.0	110.6	55.5	61.5	105.2	166.7	5.5	1.5	
Total Closed-end	116.0	64.5	55.5	48.5	22.0	70.5	1.7	1.1	
Vintage Year 2001	4.0	4.6	0.0	5.6	0.1	5.7	2.4	1.2	
Intercontinental Real Estate Investment Fund III, LLC	Value-Added	4.0	4.6	0.0	5.6	0.1	5.7	2.4	1.2
Vintage Year 2003	10.0	9.0	1.9	10.6	1.1	11.7	5.2	1.3	
Hunt Redevelopment and Renovation Fund, LLC	Value-Added	10.0	9.0	1.9	10.6	1.1	11.7	5.2	1.3
Vintage Year 2004	4.0	4.6	0.0	2.4	0.1	2.4	-8.0	0.5	
Intercontinental Real Estate Investment Fund IV, LLC	Value-Added	4.0	4.6	0.0	2.4	0.1	2.4	-8.0	0.5
Vintage Year 2007	30.0	26.9	4.3	26.9	8.3	35.2	5.6	1.3	
Berkshire Multifamily Value Fund II, L.P.	Value-Added	10.0	11.3	0.0	17.8	0.1	17.9	11.0	1.6
New Boston Institutional Fund, L.P. VII	Value-Added	5.0	3.0	2.0	1.9	2.2	4.1	6.1	1.4
Real Estate International Partnership Fund I, L.P.	Fund of Funds	15.0	12.7	2.3	7.2	6.0	13.2	0.8	1.0
Vintage Year 2008	5.0	5.4	0.0	0.0	0.9	0.9	-17.1	0.2	
1921 Realty, Inc.	Opportunistic	5.0	5.4	0.0	0.0	0.9	0.9	-17.1	0.2
Vintage Year 2011	5.0	5.0	0.0	1.9	4.0	5.9	5.0	1.2	
DSF Capital Partners IV, L.P.	Value-Added	5.0	5.0	0.0	1.9	4.0	5.9	5.0	1.2
Vintage Year 2016	15.0	5.2	10.2	0.5	4.7	5.2	NM	1.0	
DSF Multi-Family Real Estate Fund III, L.P.	Value-Added	15.0	5.2	10.2	0.5	4.7	5.2	NM	1.0

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Aggregate Program Performance Summary

Investment Strategy	Capital Committed (\$ mm)	Total Contributions Paid to Date ¹ (\$ mm)	Unfunded Commitment ² (\$ mm)	Total Distributions Received to Date (\$ mm)	Reported Fair Value (\$ mm)	Reported Plus Distributions (\$ mm)	Net IRR ³ (%)	Inv. Multiple ⁴ (x)
Vintage Year 2017	43.0	3.9	39.1	0.6	2.8	3.4	NM	0.9
AEW Partners Real Estate Fund VIII, L.P.	25.0	3.8	21.2	0.6	2.8	3.4	NM	0.9
Carlyle Realty Partners VIII, L.P.	18.0	0.1	17.9	0.0	NA	NA	NA	NA
Total Open-end	42.0	46.1	0.0	13.0	83.2	96.2	7.2	2.1
Invesco Equity Real Estate Securities Trust	22.0	23.9	0.0	13.0	30.1	43.1	8.6	1.8
Multi-Employer Property Trust	5.0	5.0	0.0	0.0	15.4	15.4	6.5	3.1
PRISA I	15.0	17.2	0.0	0.0	37.6	37.6	6.6	2.2

Open-end Real Estate Time-Weighted Performance

	3Q17 (%)	1 YR (%)	3 YR (%)	5 YR (%)	Since Inception (%)	Inception Date
Private Real Estate	1.1	4.7	9.8	9.8	6.8	12/30/1999
Invesco REIT	0.7	2.1	9.5	9.6	9.9	11/20/2002
MSCI US REIT	0.6	-0.7	8.3	8.2	10.0	
Multi-Employer Property Trust	1.4	6.2	9.8	9.5	6.3	12/30/1999
NCREIF ODCE Equal Weighted (net)	1.7	6.9	10.1	10.6	7.2	
PRISA I	1.4	6.7	10.7	10.9	6.8	6/30/2004
NCREIF ODCE Equal Weighted (net)	1.7	6.9	10.1	10.6	7.1	

The IRR (internal rate of return) and investment multiple are the most meaningful measures of performance for a private equity fund. IRR measures how assets are performing in relation to time. Investment multiple shows the cash on cash return generated on the invested capital by the underlying assets.

As of September 30, 2017, the Retirement Association's Private Equity Program generated a 4.4% net IRR and a 1.2x net TVM. After adjusting for capital calls and distributions that occurred during the quarter, the reported fair value of the Program increased by approximately \$1.7 million or 5.3% which was primarily driven by increases in the valuations of Globespan Capital Partners V (\$1.0 million or 25.3%), Leeds Equity Partners IV (\$0.2 million or 24.5%), and Leeds Equity Partners V (\$0.2 million or 9.5%).

As of September 30, 2017, the Retirement Association's Real Assets Program generated a -3.4% net IRR and a 0.9x net TVM. After adjusting for capital calls and distributions that occurred during the quarter, the reported fair value of the Program decreased by approximately \$0.3 million or -1.5%. Performance was primarily driven by a decline in the valuations of Global Infrastructure Partners III (\$0.2 million or -13.1%) and BTG Pactual Global Timberland Resources Fund (\$0.2 million or -5.0%).

As of September 30, 2017, the Retirement Association's Real Estate Program generated a 5.5% net IRR and a 1.5x net investment multiple. After adjusting for capital calls and distributions that occurred during the quarter, the reported fair value of the Program increased by approximately \$1.1 million or 1.0%. Performance was primarily driven by increases in the valuations of PRISA I (\$0.7 million or 2.0%), Multi-Employer Property Trust (\$0.2 million or 1.3%), and Hunt Redevelopment and Renovation Fund (\$0.2 million or 18.8%).

Appendices

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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

Private Equity

Global fundraising for all private equity funds totaled \$95 billion during the third quarter¹ of 2017, marking a 31% decline from the more than \$138 billion raised in the prior quarter, but represented a 43% increase compared to the third quarter of 2016.

- Fundraising by buyout funds during the third quarter stood at \$66 billion, a decrease from \$88 billion in the prior quarter. The third quarter's slowdown in fundraising was also reflected in venture capital fundraising in the U.S., with \$11 billion raised, a decrease from \$16 billion in the second quarter of 2017. A total of 80 venture funds were closed during the third quarter, representing 44% of all closed private equity funds.
- According to Preqin, the number of buyout deals completed or announced in Q3 decreased by 9% from the previous quarter, while the aggregate value of deals fell only slightly, decreasing by less than \$1.0 billion, or 1%. The number of global private equity buyout-backed exits decreased by 7% from the previous quarter, to 381, and the respective aggregate exit values decreased by 4%, to \$65 billion.
 - The largest buyout deal announced during the quarter was Bain Capital's ¥2,000 billion (approximately \$18 billion) deal to purchase Toshiba Memory Corporation, a subsidiary of Toshiba Corporation. Bain Capital is leading the deal and will be supported by Apple, Dell, Hoya Corporation, Kingston Technology, Seagate Technology, and SK Hynix.
- The aggregate value of venture capital deals globally rose slightly during the quarter to \$49 billion, a 2% increase from the previous quarter. North American venture deal activity fell by 5%, although it accounted for 40% of venture capital deals globally. Meanwhile, venture capital activity in Asia also declined, accounting for \$19 billion (39%) of global deal value during the quarter compared to the previous quarter's value of \$20 billion (43%). Angel/seed stage and Series A were the most common type of venture capital deals, representing 56% of all deals.

¹ All data cited as of Q3 2017 are from Preqin as of October 2017 and subject to revision, unless otherwise noted.

- The most notable venture deal during the quarter was Grab's \$2 billion funding round led by Didi Chuxing and Softbank. Grab operates private car, motorcycle, taxi and carpooling services across seven countries in Southeast Asia.
- Transaction valuations continued to increase through the third quarter of 2017, as buyout transaction data published by S&P Capital IQ showed average pricing at 10.2x trailing EBITDA for all U.S. buyout transactions year to date, compared to 9.7x trailing EBITDA for 2016 and 9.9x trailing EBITDA for 2015. Transaction valuations in Europe showed a significant increase in the third quarter, with transactions between €250 million and €500 million completed at average LTM pricing of 9.6x EBITDA, compared to 8.8x EBITDA for the full year 2016. Even though the availability of debt financing remained high, transactions on average were well capitalized with an average of 44% equity.
- Asia is still the second most targeted region in terms of funds in the market and target capital commitments, with 368 funds targeting \$249 billion as of Q3 2017. Europe, after being surpassed by Asia in 2016, is the third most targeted region, with 347 funds targeting \$97 billion as of Q3 2017.
- According to EMPEA data, emerging markets comprised 11% of the global fundraising market and 9% of global invested capital year-to-date. Emerging market fundraising has decreased 29% relative to the same quarter last year. Across all asset classes, approximately \$9 billion was raised in the third quarter of this year for developing economies compared to \$12 billion of private capital raised in Q3 2016.

Natural Resources

Hurricane activity in the U.S. impacted several natural resources sectors including upstream energy, agriculture, and timberland.

- As Hurricanes Harvey and Irma made their way through the Gulf of Mexico and the U.S. Gulf Coast, oil and gas companies began to evacuate employees and shut-in hydrocarbon production. Most upstream, midstream, and downstream energy activities were back to normal operations in short order.
- OPEC and other oil exporting nations are expected to extend current cuts to oil production beyond March 2018 in an effort to bolster prices. As the marginal producer, U.S. shale oil producers will likely increase exploration and production activity as a result.
- Oil held in storage within the U.S. fell by 2.6% during the quarter, while prices for West Texas Intermediate oil increased by 10% to approximately \$50 per barrel. Five additional rigs were added bringing the total number of rigs in operation to 752.
- U.S. gasoline prices for regular blend rose to \$2.80 per gallon during the third quarter, representing a 10% increase from the previous quarter and a 20% increase from one year prior.
- Henry Hub natural gas prices were essentially flat and ended the quarter at approximately \$3.0/MM BTU. Relative to one year prior, natural gas prices have also remained relatively flat. The number of U.S. natural gas rigs increased by 3 to 187 in total during the quarter.
- The price of gold increased by 4% during the quarter to \$1,315 per ounce. Relative to one year prior, however, gold prices were down 1%.
- Copper prices rose to \$2.98 per pound during the third quarter, representing a 15% increase from the previous quarter and a 39% increase relative to one year prior. Expanded manufacturing activity in the U.S., China, and the Eurozone has helped drive recent growth in copper prices.

- Hurricane Irma's path through Florida is expected to significantly impact orange and citrus production in the U.S. Relative to the year prior, a decline in domestic corn production is expected due to decreased plantings and yields, whereas increased soybean production is anticipated as a result of increased plantings. The NCREIF Farmland index experienced a 1.0% increase during the quarter with permanent crops returning 1.2% and row crops returning 0.9%.
- During the quarter, a final determination for duties associated with U.S. lumber imports from Canada were postponed to later in the year. Mill closures, fires in Canada, and inventory buildups in anticipation of damage from Hurricanes Harvey and Irma caused an increase in wood product prices. Lumber and paneling prices increased by 7% and 25%, respectively, while the NCREIF Timberland index rose by 0.6% during the third quarter.

Infrastructure

Infrastructure fundraising and transactions

- At the end of 2017's third quarter, a total of 170 unlisted infrastructure funds were in market, according to Preqin, with a combined fundraising target of approximately \$118 billion. Europe-focused funds represented the largest proportion of funds in market (42%), followed by North America (25%) and Asia (9%).
- Seventeen unlisted infrastructure funds closed during the quarter, raising a total of \$12 billion. AMP Capital Infrastructure Debt Fund III accounted for almost 21% of this total, raising \$2.5 billion. Other notable funds closing this quarter included BlackRock Global Renewable Power Fund II (\$1.65 billion) and BlackRock Renewable Income UK Fund (£1.1 billion).
- According to Preqin, 344 deals were completed by unlisted infrastructure fund managers in the third quarter with an estimated aggregate value of \$123 billion and an average deal size of \$358 million. Both deal volume and aggregate values have decreased since the last quarter, and also compared to the third quarter of 2016.

Several notable transactions occurred during the third quarter

- A consortium led by Energy Capital Partners (ECP) agreed to acquire a 100% ownership stake in Calpine Corporation for \$5.6 billion. Calpine, America's largest generator of electricity from natural gas and geothermal resources, will look to strengthen its wholesale power generation footprint with ECP's support.
- I Squared Capital acquired Hutchison Global Communications Limited (HGC), a leading fixed-line service provider in Hong Kong, for HKD14.5 billion. I Squared will look to develop new solutions to meet the increasing demand for high speed information infrastructure.
- Sempra Energy agreed to acquire Energy Future Holdings (EFH), at a \$9.45 billion purchase price, including its 80% ownership in Oncor Electric Delivery, operator of the largest electric transmission and distribution system in Texas. While Oncor is seen as a highly valuable asset, its parent company, EFH, declared bankruptcy in 2014. Oncor has a Texas customer base of 10 million, and posted a \$431 million profit in 2016.

During the third quarter of 2017, roads¹, airports², and seaport³ utilization increased, while electricity generation decreased, as compared to the same period in 2016.

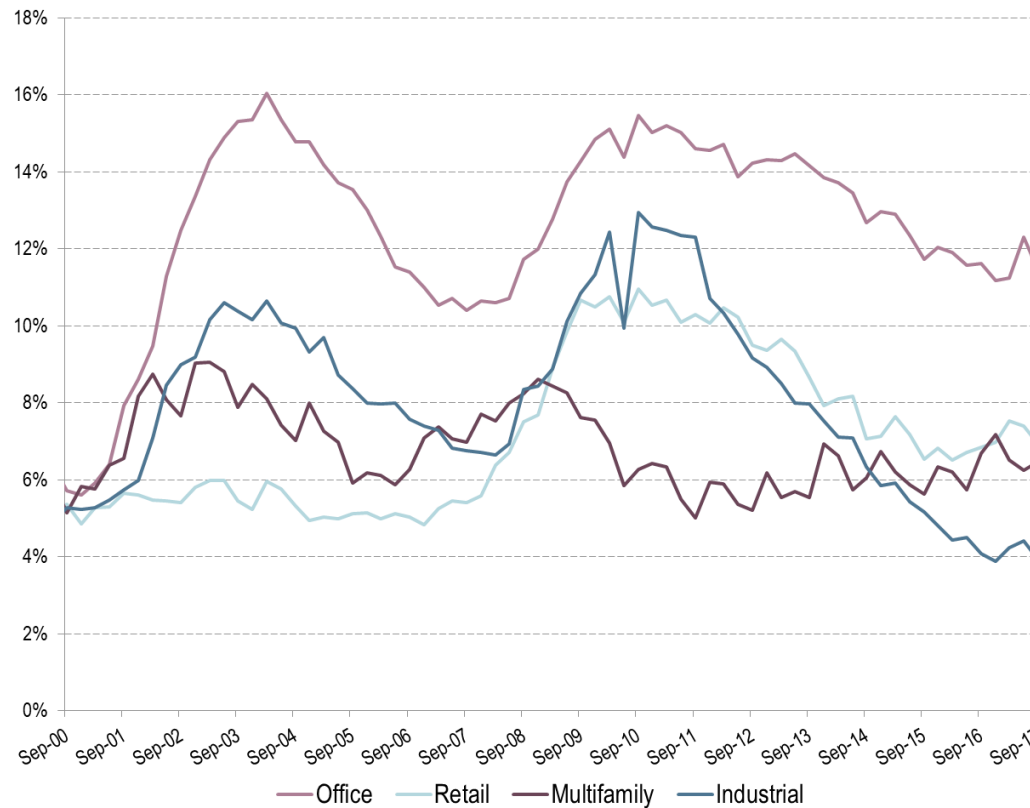
- **Utilities:** Net energy generation decreased 4.8% during the third quarter of 2017 compared to the same quarter of 2016. Both coal-generated and natural gas power decreased over the same period in 2016, while nuclear and hydroelectric saw an uptick. Net generation has been essentially flat for the last decade as increases in energy efficiency balanced against economic demand growth.
- **Transportation:** During the third quarter, approximately 829 billion miles were travelled on U.S. roads, representing a 0.6% increase over the same period in 2016. Container volume at the nation's three largest U.S. ports (Long Beach, Los Angeles, and New York/New Jersey) increased by approximately 10.5% compared to the third quarter of 2016. The number of domestic and international flights during the period was up 0.7% over the same period in 2016.

¹ Aggregate travel on U.S. roads.

² Represent all U.S. domestic and international flights, excluding foreign point-to-point flights.

³ Represents the top three U.S. ports by container volume, as measured by twenty-foot equivalent units (TEU).

Real Estate Fundamentals Vacancy by Property Type



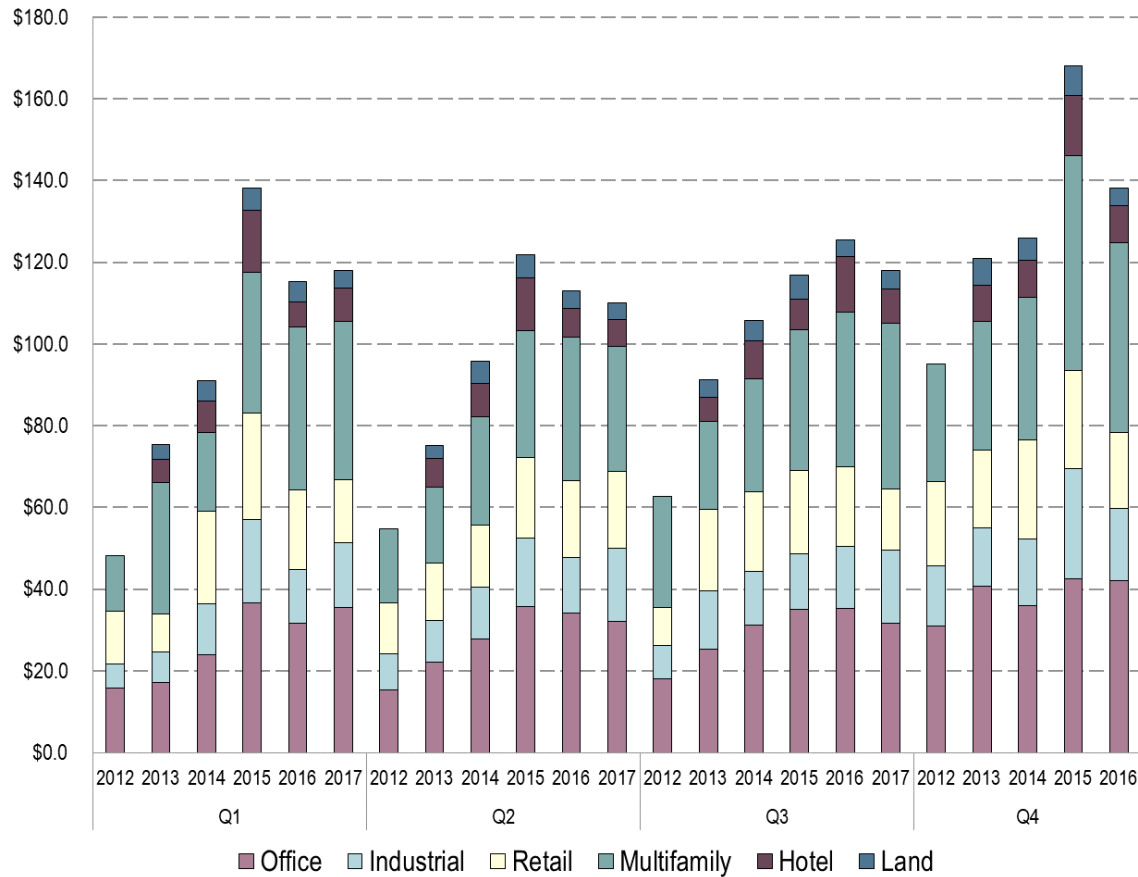
In the third quarter of 2017, vacancy rates across office, retail and industrial properties decreased, while vacancy in multifamily increased slightly. Compared to the same period one year ago, vacancy in multifamily properties dropped by 22 basis points, office by 16 basis points, and industrial by 15 basis points, while retail has remained relatively flat. Overall, total vacancy across all property types decreased 13 basis points from Q3 2016. Industrial properties exhibit the highest occupancy rates at 96%, while office properties continue to have the highest vacancy rate of the major property types at 11%.

NOI Growth



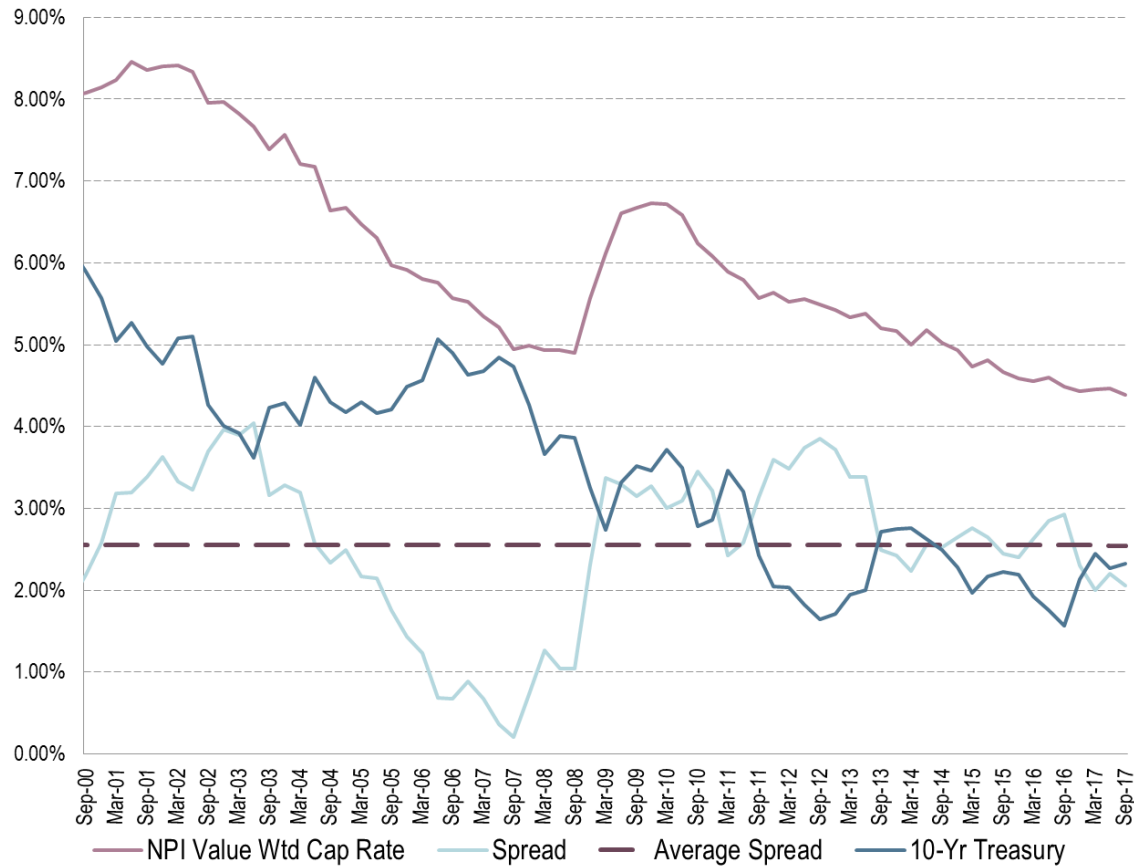
The trailing twelve month rate of NOI growth continued at a strong pace, remaining above 5% through the third quarter of 2017. This is largely due to the continued growth of the U.S. economy coupled with only moderate new construction, allowing property owners to increase rents and lease vacant space. The strongest NOI growth continues to be with industrial properties, which grew at 8.4% year-over-year ending Q3 2017. Retail property NOI growth has dropped off sharply year-over-year end Q3 2017, with a growth rate of only 0.8%.

Transaction Volume (\$bn)



Private real estate transaction volume for properties valued over \$2.5 million decreased 6% in Q3 2017 when compared to Q3 2016. Multifamily volumes increased 32% over the quarter, while retail volumes were down 19%, and office and industrial volumes were relatively flat. Multifamily and office properties made up the largest percentage of total transaction volume, at 34% and 27%, respectively.

Real Estate Capital Markets Cap Rates vs. 10-Year Treasury



The NPI Value Weighted Cap Rate dipped below 4.4%, continuing a declining trend post-GFC. 10-year Treasury yields trended up over the quarter after a slight pullback in Q2 2017. The spread between cap rates and the 10-year Treasury tightened slightly, ending the quarter at 2.0%, 48 basis points below the long term average.

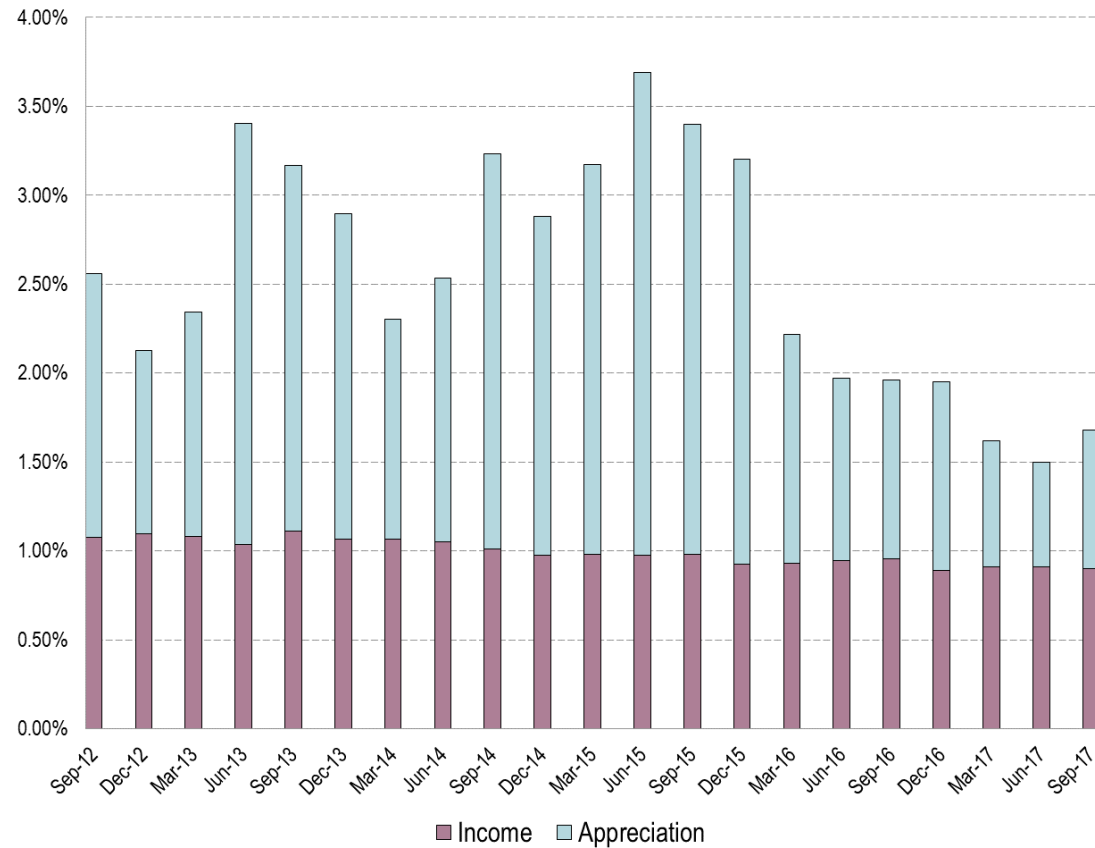


Trailing Period Returns

<i>As of September 30, 2017</i>	1 Year	3 Years	5 Years	10 Years
NFI-ODCE (EW, net)	6.9%	10.1%	10.7%	4.0%
NCREIF Property Index	6.9	9.8	10.4	6.2
NFI-CEVA (EW, net)	9.3	13.0	12.8	4.7
NAREIT Index	2.6	10.2	10.0	6.1

Public and private real estate indices have continued to post positive returns, driven by strong property-level fundamentals and a low interest rate environment. The NFI-CEVA (Closed-End Value Add) Index has outperformed over recent time periods, although the funds included in the index utilize higher leverage and vacancy risk than the comparable indices, which generally include stabilized properties.

ODCE Return Components (Equal Weight, Net)



The NFI-ODCE Equal Weight return for Q3 2017 was 1.7%, up slightly from a 7-year low in the previous quarter. The continuing decline in total return can be almost entirely attributed to a slowdown in appreciation, which has dropped from a peak of 2.7% in Q2 2015 to 0.8% in Q3 2017. Appreciation return is expected to be moderate in the near term due to the stabilization of cap rates. Income return has remained relatively consistent around 1.0%, however has decreased slightly in the trailing year to 0.9%.

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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

If we manage your assets on a discretionary basis, please contact us if there are any changes in your financial situation or investment objectives, or if you want to impose any reasonable restrictions on our management of your account or reasonably modify existing restrictions.

In general, the valuation numbers presented in this report are prepared by the custodian bank for listed securities, and by the fund manager or appropriate General Partner in the case of unlisted securities. The data used in the market comparison sections of this report are sourced from various databases. These data are continuously updated and are subject to change.

This report does not contain all the information necessary to fully evaluate the potential risks of any of the investments described herein. Because of inherent uncertainties involved in the valuations of investments that are not publicly traded, any estimated fair values shown in this report may differ significantly from the values that would have been used had a ready market for the underlying securities existed, and the differences could be material. Note that for unlisted securities the valuations may be lagged by one or more calendar quarters, or may reflect original cost.

This document may contain certain forward-looking statements, forecasts, estimates, projections, and opinions ("Forward Statements"). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. A number of factors, in addition to any risk factors stated in this material, could cause actual future results to vary materially from the Forward Statements. No representation is given that the assumptions disclosed in this document upon which Forward Statements may be based are reasonable. There can be no assurance that the investment strategy or objective of any fund or investment will be achieved, or that the Retirement System will receive a return of the amount invested.

In some cases Meketa Investment Group assists the Retirement System in handling capital calls or asset transfers among investment managers. In these cases we do not make any representations as to the managers' use of the funds, but do confirm that the capital called or transferred is within the amounts authorized by the Retirement System.

The values of companies and partnerships in this review are based on unaudited reports for September 30, 2017, provided by the General Partners, unless otherwise noted.

Because there is no readily accessible market for private markets assets (companies and partnerships), the values placed on private markets assets are calculated by General Partners using conservative and industry standard pricing procedures. Annually, an independent auditor reviews the pricing procedures employed by the General Partner of each partnership.

While all private markets partnerships are audited by an independent entity, there is some discretion as to the method employed to price private companies and, therefore, private markets partnerships. At all times, Meketa Investment Group expects General Partners to utilize conservative and industry standard pricing procedures, and requires the General Partners to disclose those procedures in their reports. However, because of the inherent uncertainty of valuation, these estimated values may differ from the values that would be used if a ready market for the investments existed, and the differences could be significant.

Absorption: The amount of inventory or units of a specific commercial property type that become occupied during a specified time period (usually a year) in a given market, typically reported as the absorption rate.

Advisory Board: Partnerships often establish an advisory board comprised of representatives of the Limited Partners to oversee the on-going work of the General Partners. Advisory boards typically meet once each year to review the partnership's investments. It is important to note that unlike the Board of Directors of a public company, the advisory board has very little power to control the activities of the General Partners.

Angel Investor: Angel investors are individuals who invest their own capital directly in small, early stage companies. Angels are an alternative source of funding for entrepreneurs. Such investments are characterized by high levels of risk and potentially a large return on investment.

Appraisal: An estimate of a property's fair market value that is typically based on replacement cost, discounted cash flow analysis and/or comparable sales price.

Appreciation: An increase in the value or price of a real estate asset.

Appreciation Return: The portion of the total return generated by the change in the value of the real estate assets during the current quarter, as measured by both appraisals and sales of assets.

Asset Management: The various disciplines involved with managing real property assets from the time of investment through the time of disposition, including acquisition, management, leasing, operational/financial reporting, appraisals, audits, market review and asset disposition plans.

Asset Management Fee: A fee charged to investors based on the amount invested into real estate assets for the fund or account.

Barrel: 42 U.S. gallons of oil.

Base Metals: Non-precious, non-ferrous metals that include copper, aluminum, lead, nickel, tin, and zinc.

Base Rent: A set amount used as a minimum rent with provisions for increasing the rent over the term of the lease.

Biofuels: Biofuels are combustible fuels, such as bio-ethanol, that are made and processed from vegetation sources such as corn, sugar cane, barley, or wheat.

Blind Pool: Most Limited Partnerships are organized as blind pools, meaning that Limited Partners commit capital to the partnership before any actual investments are made. At the point of commitment, the Limited Partners do not know specifically how their money will be used (hence the term blind pool), and must therefore rely entirely upon the track record and experience of the General Partner.

BOE/day: A daily production metric equivalent to the energy content of a barrel of oil equivalent often related to natural gas, natural liquids, and condensates.

Broker: A person who acts as an intermediary between two or more parties in connection with a transaction.

Brownfield: A project with an operating history. The initial outlay is entirely to the public entity. Brownfield can be considered an easier starting point for investors, given the shorter J-curve and lower level of risk. Meketa Investment Group categorizes a Fund as brownfield if the Fund's investment strategy calls for over 65% of its underlying investments to be in brownfield (operating) assets.

Buyout Fund: A buyout partnership uses the partners' capital to purchase existing, established businesses. The acquired firms may be family owned prior to purchase, or may be operating divisions of larger companies seeking to restructure their businesses. In a few cases, the buyout partners may purchase all of the outstanding shares of a publicly traded company, effectively taking it private. Buyout funds are not involved in venture capital or startups.

Buyout partnerships own the acquired companies outright, or in combination with other buyout partnerships. In some cases the buyout partners will replace the existing management with a new team, or the acquired firm will be left autonomous. The buyout partners frequently take one or more board seats in order to ensure control of the business.

Capital Appreciation: The change in market value of a property or portfolio adjusted for capital improvements and partial sales.

Capital Call (Contribution): Once a partnership has declared its first close, the General Partners will begin to make portfolio investments. As each investment is made, the capital necessary to fund the investment is "called" from the Limited Partners.

Capitalization Rate: A percentage that relates the value of an income-producing property to its future income, expressed as net operating income divided by purchase price. This is also referred to as cap rate.

Carried Interest: The share of profits that the fund manager is due once it has returned the cost of investment to investors. Carried interest is normally expressed as a percentage of the total profits of the fund. The industry norm is 20%. The fund manager will normally therefore receive 20% of the profits generated by the fund and distribute the remaining 80% of the profits to investors.

Carrying Value: The General Partner must list on the partnership's balance sheet a value for every investment held. These valuations are called carrying values, and in most cases are simply the original cost of the investment. Note that carrying values in most cases are not audited and do not represent actual market values.

Cash Flow Positive: When a company generates more free cash than it consumes in normal operations, it is deemed to be cash flow positive. Such companies may not need extra financing or debt in order to grow.

Cash Leasing Farmland: A low risk/return strategy that shifts the operational risk of farming to a local operator. Farmland investors receive stable lease payments from the local operators who are allowed to farm the land. Cash leasing is typically used for row croplands.

Cash on Cash Return: The simple gross total return earned by the Limited Partners, calculated as the total distributions received divided by the total contributions made. Thus, if an investor supplied a total of \$100 in cash calls and contributions, and received over the life of the partnership \$200 in distributions, the cash on cash return would be 100%. The cash on cash return is typically reported as a multiple. In the example above, the investment returned 2x (two times).

Chip-N-Saw: Produced from mid-sized trees that are cut and chipped to pulpwood chips or small dimension lumber. Chip-N-Saw is typically derived from trees measuring 10-13" DBH.

Claw-Back Provision: A claw-back provision ensures that a General Partner does not receive more than its agreed percentage of carried interest over the life of the fund. So, for example, if a General Partner receives 21% of the partnership's profits instead of the agreed 20%, Limited Partners can claw back the extra one percent.

Cleantech: A broad term used to classify products or services that improve energy productivity, performance, or efficiency while reducing input costs, consumption, waste, or pollution. Common products associated with cleantech are wind farms, photovoltaics, fuel cells, biofuels, and smart grid technologies.

Closed-end Fund: A commingled fund that has a targeted range of investor capital and a finite life.

Closings and Closing Dates: Every partnership must specify the date upon which the General Partners will cease fundraising and begin making actual investments with the Limited Partners' committed capital. That date is called the closing date, and defines the vintage year of the partnership. Most partnerships, however, have several closing dates, and all partnerships must eventually have a final closing. In most cases, the final closing lags six to nine months after the first closing. If a majority of the original Limited Partners consent, a partnership can remain open to new investors after the final closing and while early investments are being made, in order to have time to attract additional investors.

Co-Investment: In some cases, Limited Partners want the right to make additional direct investments in one or more of the underlying companies purchased by the General Partner. If the partnership agreement gives co-investment rights to specific Limited Partners, then they may elect to invest additional monies “along side” the General Partner in various deals. In these cases, the co-investing Limited Partners would have two investments in an underlying property: their share of the partnership’s investment, and their direct additional co-investment on the side. Note that co-investment rights may be available only to the largest Limited Partners.

Co-investment rights are often negotiated by very large Limited Partners when they have strong convictions about the deal finding skills of the General Partners, because co-investment rights permit them to make even larger investments in the underlying properties than would otherwise be possible, without paying carried interest.

Committed Capital: When a Limited Partnership is formed, each Limited Partner agrees to contribute a specific amount of capital to be invested over the life of the partnership. Once the agreement is signed, the Limited Partners are legally bound and committed to supply the agreed upon capital when it is called for by the General Partner.

Concession: A business operated under a contract or license associated with a degree of exclusivity. In the case of a public service concession, a private company (the concessionaire) enters into an agreement with the government to have the exclusive right to operate, maintain and carry out investment in a public asset (such as a utility) for a given number of years.

Concessions: Cash or cash equivalents expended by the landlord in the form of rental abatement, additional tenant finish allowance, moving expenses or other monies expended to influence or persuade a tenant to sign a lease.

Consolidation (Roll Up): Many industries in America are highly fragmented, as the market space is serviced by a large number of locally owned businesses. By consolidating fragmented industries (i.e., purchasing many local businesses), firms can create a single larger company with greater market control, more attractive financial characteristics, and potentially, better pricing flexibility and lower costs.

Construction Loan: Interim financing during the developmental phase of a property.

Convertible Bonds: Some private equity partnerships, generally those that provide mezzanine financing, may take convertible bonds as part of their compensation for providing investment capital. The convertible bond pays interest like other bonds, but can be exchanged for shares of the company stock at a favorable price if certain conditions are met, hence the term convertible.

Core Properties: The major property types - specifically office, retail, industrial and multifamily. Core assets tend to be built within the past five years or recently renovated. They are substantially leased (90% or better) with higher-credit tenants and well-structured long-term leases with the majority fairly early in the term of the lease. Core assets generate good, stable income that, together with potential appreciation, is expected to generate total returns in the 10% to 12% range.

Crude Oil: An unpurified mixture of liquid hydrocarbons derived from rock formations, containing different levels or impurities such as water or sulfur.

DBH: DBH (Diameter at Breast Height) is the most common measure made by a forester to determine the growth, volume, yield, and potential of a tree. DBH is defined as 4.5 ft. above the ground on the uphill side of a tree.

Development Well: A well drilled in a proven area of an oil or gas reservoir to a depth known to be productive.

Direct Investment: Partnerships that invest in companies are said to make direct investments. The alternative is a partnership that invests in other partnerships, a fund of funds.

Direct Operation Farmland: A strategy typically employed with permanent crops to retain complete control over the assets. Farmland investors use farmland management firms to operate the farm and add value through increased quality and output. The primary risks associated with direct operation are operating, weather, and marketing risks.

Diversification: The process of consummating individual investments in a manner that insulates a portfolio against the risk of reduced yield or capital loss, accomplished by allocating individual investments among a variety of asset types, each with different characteristics.

Downstream: Portion of the energy chain that includes oil refineries, petrochemical plants, power generation, and distribution outlets.

Dry Hole: An oil well that fails to find or produce any oil or gas.

Due Diligence: The process of examining a property, related documents, and procedures conducted by or for the potential lender or purchaser to reduce risk. Applying a consistent standard of inspection and investigation one can determine if the actual conditions do or do not reflect the information as represented.

E&P: Acronym for "Exploration and Production" that relates to the exploration, development, and production of crude oil or natural gas reserves. E&P is also referred to as the upstream sector.

EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization): The "top line" profits of a private company are the monies earned before paying interest and taxes, and adding back depreciation and amortization. Unlike public companies, which are valued as the multiple of bottom line earnings to the stock price (P/E or price to earnings), private companies are valued as the multiple of EBITDA to the price of the stock.

There is no simple conversion factor that will convert an EBITDA multiple to a P/E for all companies, but in general, a factor of 2 is appropriate. Thus, a private company selling for an EBITDA multiple of 6 is priced about as richly as a public company with a P/E of 12.

EBITDA Multiples: The ratio of a private company's top line earnings to the price of its shares. See EBITDA above.

Enterprise Value: A measure of a company's value, often used as an alternative to straightforward market capitalization. Enterprise Value is calculated as market cap plus debt, minority interest and preferred shares, minus total cash and cash equivalents.

Exploratory Well: A well drilled to find and produce oil or gas in an unproven area or expand production of a previously known reservoir.

Fee Income: The General Partners in a private markets partnership generally receive two types of compensation: fee income as payment for their portfolio management services, and a share of any profits (carried interest) as incentive compensation.

Fuel Cell: A device that captures the electricity generated from a chemical reaction between a fuel and an oxidant. An example is a hydrogen fuel cell, which uses hydrogen as the fuel and oxygen as the oxidant to produce electricity and water.

Fund of Funds: A private markets partnership that consists primarily of investments in other partnerships, as opposed to direct investments in individual companies and deals. The General Partners of a fund of funds thus act as a manager of managers to create a diversified portfolio of partnerships, each of which in turn consists of a portfolio of direct investment deals.

Although a fund of funds is a collection of partnerships, the fund of funds itself is a partnership, and therefore has a vintage year, a commitment period, a distribution phase, and a final end. Thus, fund of funds have finite lifetimes, just like their underlying partnerships.

The advantages of a fund of funds are high diversification and "one stop shopping," i.e., the client has a single relationship with the fund of funds manager.

The disadvantages of fund of funds are higher costs (another entire layer of management fees and carried interest), an additional loss of liquidity, and an additional loss of control by the Limited Partners. Just as with direct private markets funds, a fund of funds is organized as a blind pool. That is, when a new fund of funds is announced, and a subscription target set, early investors do not know what specific sub-funds will be selected by the manager. Generally, the Private Placement Memorandum gives the General Partner almost unlimited latitude in making subsequent investments.

General Partner: The control partner in private equity partnerships, analogous to the portfolio manager in a public stock portfolio. Under the IRS code, the General Partner must commit some personal capital to the partnership (a minimum of 1% of the partnership's committed capital), and unlike the Limited Partners, is liable for leverage and other losses generated by the partnership.

Geothermal Energy: Energy extracted from the earth's interior to produce heat and electricity. Applications of geothermal energy include conventional geothermal (use of steam to drive turbines), geothermal heat pumps (pipes sunk beneath the earth's surface to act as a heat exchanger during the warmer and colder seasons), and direct heat (hot water pumped from the earth for use as a heat source).

Greenfield: A project without an operating history. Some of the initial outlay may be to the public entity, but the majority is used for construction. Greenfield opportunities may take an exceptionally long time to come to fruition. Meketa Investment Group categorizes a Fund as Greenfield if the Fund's investment strategy calls for over 65% of its underlying investments to be in greenfield assets.

Growth (Expansion Capital): A strategy that entails providing capital to a private company with the intention that the capital be used to expand operations. Generally, expansion capital strategies result in minority equity positions in companies, but with some degree of control over how the expansion capital is spent.

Hedging: Strategy used to limit or offset exposure to pricing risk of an underlying commodity. A common way to execute this strategy is through the use of futures contracts, a financial derivative that allows for the sale of a commodity at a pre-specified price in the future, whether or not the market price increases or decreases at the time. Counterparties to the futures contracts are speculators who are willing to accept the risk of price fluctuations in exchange for the potential upside.

High-rise: In the central business district, this could mean a building higher than 25 stories above ground level, but in suburban markets, it generally refers to buildings higher than seven or eight stories.

Hurdle Rate: The minimum rate of return that the Limited Partners must receive before the General Partners have a right to a share of any additional profits (carried interest) produced by the partnership's investments. For example, the partnership may specify that once the Limited Partners have received distributions representing an 8% total return on their commitment (the hurdle rate), the General Partner will share in all future distributions until they have been allocated 80% to the Limited Partners, and 20% to the General Partners (their carried interest).

Hydro Energy: Energy derived from the natural movement of falling or flowing water. The most common form of hydro energy comes from dammed water driving a turbine and generator to produce electricity. Once a hydroelectric complex is built, no direct waste is produced.

Hydrocarbon: A hydrogen and carbon compound created from the decomposition of organic material over time. Most hydrocarbons are found naturally in fossil fuels such as crude oil, natural gas, and coal.

Improvements: In the context of leasing, the term typically refers to the improvements made to or inside a building but may include any permanent structure or other development, such as a street, sidewalk, utilities, etc.

Independent Oil Company: A company involved in the exploration, production, and development of oil and natural gas that is not a Major Oil Company.

In-Kind Distribution: Most distributions from private equity partnerships are in cash. However, in some cases, a private deal will be taken public through an initial public offering (IPO), or through a trade sale for stock to a public company. In these cases, the Limited Partners will receive their distributions in the form of publicly traded common stocks and/or rights and warrants.

Investment Period: The period of time after the first closing during which the General Partner will call capital from the Limited Partners and make partnership investments. Legally, the investment period is usually six years. Practically, it is three to four years. Not to be confused with the term of the partnership, generally ten to twelve years.

IPO (Initial Public Offering): When a private company issues publicly traded stock, it becomes known as a public company. The initial sale of publicly available stock is called the initial public offering, or IPO.

IRR (Internal Rate of Return): The annualized rate of return on capital that is generated or capable of being generated within an investment or portfolio over a period of time, assuming all cash flows can be reinvested at the same rate. Mathematically, the IRR of an investment is the discount rate applied to that investment such that the net present value of the investment is zero. IRR is commonly used to measure profitability by applying the calculation to the after-tax cash flows to arrive at an after-tax equity yield rate.

J-Curve: Many private markets partnerships have small negative returns in their first years of operation as capital is invested. The negative returns result because the partnership's investments have not matured and turned a profit, but the partnership has nevertheless experienced various operating costs. When early deals begin to mature and are liquidated at a profit, the partnership's returns should become positive. Thus, the graph of the partnership's returns versus time can resemble the capital letter "J."

Landfill Methane: Landfill methane is generated from the decomposition of waste in landfills. Bacteria break down the organic matter, releasing a gas that is rich in methane. By capturing the methane, greenhouse gases released into the atmosphere are reduced, and the gases can be used as an energy source.

Later Stage Fund: A venture capital partnership that specializes in investing in startup companies that have already achieved at least some actual revenues, or a venture fund that provides subsequent rounds of venture financing after all of the capital provided in the first rounds has been consumed.

Lead Investor: Describes a General Partner who is the “lead” investor in a deal, as opposed to co-investors or follow-on investors. The term implies that the lead investor has taken the lead in sourcing, evaluating, and executing the deal.

Lease: An agreement whereby the owner of real property gives the right of possession to another for a specified period of time and for a specified consideration.

Lease Rate: The period rental payment to a lessor for the use of assets. It may also be considered as the implicit interest rate in minimum lease payments.

Leverage: Many General Partners use both equity capital provided by the Limited Partners and money borrowed from banks or other lenders to finance their investments. Any borrowed money is called leverage. If a deal is successful, leverage can often enhance the returns of the Limited Partners substantially. On the other hand, too much leverage can cripple an investment with interest and financing costs. It is important to note that the Limited Partners are not responsible for the repayment of any borrowed money.

Leveraged Buyouts: The purchase of a private or public company wherein the bulk of the purchase price is paid using borrowed money.

Lifecycle: The various developmental stages of a property: pre-development, development, leasing, operating and redevelopment (or rehab).

Limited Partner: All investors in a Limited Partnership other than the named General Partner are defined under the IRS code as Limited Partners. Limited Partners have only the control rights defined for them in the Private Placement Memorandum, and are generally passive investors in the partnership's deals.

A very important point is that Limited Partner's total liability for all deals made by the partnership are limited strictly by law to the Limited Partner's committed capital. Thus, even if the General Partners borrow a great deal of money (leverage), and lose it all, the lenders have no recourse to the assets of the Limited Partners. In effect, a Limited Partner can lose no more than the amount of money invested.

Look-Back Provision: See Claw-Back Provision above.

Low-rise: A building with fewer than four stories above ground level.

Major Oil Company: One of the original "Seven Sisters" consisting initially of Exxon, British Petroleum, Chevron, Gulf, Mobil, Texaco, and Royal Dutch Shell.

Market Strategy: A course of action defined with respect to a particular real estate market phase. For example, consider the market strategy of avoiding real estate transactions when there is an oversupply of space available in the market.

Market Value: The most probable price that a property would bring in a competitive and open market under fair sale conditions. Market value also refers to an estimate of this price.

Mezzanine Financing: An additional level of financing provided to a private company to expand sales, market share, or develop new products. Most mezzanine financing is structured as a package of high coupon bonds with equity “kickers,” i.e., rights to acquire the company's stock at a favorable price at a future point. Companies seeking mezzanine financing often have substantial revenues, and if not actual profits, the expectation of imminent profitability.

Midstream: Portion of the energy chain that transports and stores commodities such as oil and natural gas.

MMCF: One million cubic feet.

Multiples and Multiple Expansion: Managers purchasing public common stocks often buy companies with low price to earnings multiples when they believe some factor will induce other investors to bid up the price of the stock without an increase in actual earnings, thus causing the price multiple to expand. In the same fashion, a General Partner may purchase a private company with a low EBITDA multiple, expecting to profit through an expansion of that multiple. A typical example of a multiple expansion plan is consolidation. Many small companies, operating independently, may each be priced at relatively low multiples. But if purchased and combined into a larger, cohesive entity, investors might be willing to pay a higher multiple for the aggregate than for any individual component.

Natural Gas: A gaseous fossil fuel consisting primarily of methane and other heavier hydrocarbons. Natural gas burns cleaner than oil and coal and is a major source of electricity generation through the use of gas and steam turbines.

Net Metering: An arrangement that allows a facility to sell any excess energy it generates back to the electrical grid to offset its consumption.

Net Operating Income (NOI): The potential rental income plus other income, less vacancy, credit losses, and operating expenses.

Oil Sands: Naturally occurring mixtures of a very dense, tar-like form of petroleum called bitumen and sand or clay. Because of the high production and refining costs associated with oil sands, economic feasibility only occurs with high oil prices.

OPEC: OPEC (Organization of Petroleum Exporting Countries) is an oil cartel comprising twelve countries around the world.

Open-end Fund: A commingled fund that does not have a finite life, it continually accepts new investor capital and makes new property investments.

Operator: The party responsible for managing the asset; may be (and usually is) different than the owner/lessee of the asset.

Opportunistic: A phrase generally used by advisers and managers to describe investments in underperforming and/or undermanaged assets that hold the expectation of near-term increases in cash flow and value. Total return objectives for opportunistic strategies tend to be 20% or higher. Opportunistic investments typically involve a high degree of leverage - typically 60% to 100% on an asset basis and 60% to 80% on a portfolio basis.

Permanent Crops: Permanent crops include those grown on a tree or vine such as almonds, wine grapes, apples, and oranges. They are usually directly operated to produce higher income returns from crop sales but can carry a higher level of risk.

PFI: The Private Finance Initiative specifies a method, developed initially by the U.K. government, to provide financial support for Public-Private Partnerships. This has since been adopted as part of a wider reform program for the delivery of public services which is driven by the WTO, IMF & World Bank as a part of their "deregulation" and privatization drive. In return for their services, the private sector receives payment linked to its performance.

Pipeline: A system made of steel piping used to transport oil, gas, and other liquids from one location to another.

Placement Agent: Unlike public stock management companies, most of whom utilize an in-house sales force to market their services, private equity partnerships are generally marketed by third-party placement agents. These outside marketing firms and individuals are paid a commission by the General Partner.

Platform Company: Some private equity buyout funds attempt to add value by merging companies into larger, more cost efficient enterprises. This strategy generally begins with the acquisition of a platform company, often a market leader, to which other companies are added.

Possible Reserves: Reserves of oil or natural gas that have a less likely chance of being recovered than probable reserves. These reserves are often claimed as having a 10% certainty of being produced and are also known as P10 or 3P.

PPM (Private Placement Memorandum): Because Limited Partnership interests are not registered with the SEC, private equity managers must distribute a comprehensive document to prospective investors that describes the broad investment thesis of the partnership, and highlights any risks involved in the partnership. This document is called a Private Placement Memorandum.

PPP: A Public Private Partnership (or P3) is a system in which a government service or private business venture is funded and operated through a partnership of government and one or more private sector companies. Also referred to as Collective Development Agreements or Alternative Finance Procurement.

Precious Metals: Precious metals include gold, silver, palladium, and platinum. These metals have wide industrial uses but are better known for their usage in jewelry, art, and store of value.

Pre-merch (merchantable): Logs that do not meet the minimum size, quality, or usable volume required for the commercial sale of timber.

Privatization: The transfer of property or control of assets used to provide public services from the public sector to the private sector.

Probable Reserves: Probable reserves are those reserves based on median estimates and claim a 50% confidence of recoverability. These reserves are also known as P50 or 2P.

Producing Well: A well that produces oil and gas in sufficient quantities such that the revenue generated exceeds the associated production costs and taxes.

Property Type: The classification of commercial real estate based on its primary use. The four primary property types are: retail, industrial, office, and multi-family residential.

Proved Reserves: Reserves of oil or natural gas that are claimed to have a 90% certainty of being recovered using existing technology. The SEC only allows oil companies to report proved reserves to investors. Proved reserves are also known as P90 or 1P.

Public to Private: If a private partnership (or group of private partnerships) purchases all of the outstanding shares of a publicly traded company, the company's shares may be de-listed from the stock exchange. The company is then said to have been "taken private." For example, in June 1989, the private partnership Wings Holdings acquired the public stock of Northwest Airlines in a \$3.65 billion-dollar leveraged buyout. Following this acquisition, Northwest became a privately held corporation for the first time since 1941.

Pulpwood: Wood cut and chipped for the manufacturing of paper and paper related products. Pulpwood is typically too small or of insufficient quality for sawtimber and is classified as 6-9" DBH.

Real Estate Cycles (phases): The regularly repeating sequence of economic downturns and upturns and associated changes in real estate market transactions tied to market dynamics and changing macroeconomic conditions, whose phases include (in order) recession, recovery, expansion, and oversupply.

Real Estate Investment Trust (REIT): An investment vehicle in which investors purchase certificates of ownership in the trust, which in turn invests the money in real property and then distributes any profits to the investors. The trust is not subject to corporate income tax as long as it complies with the tax requirements for a REIT.

Shareholders must include their share of the REIT's income in their personal tax returns. (Barron's Dictionary of Real Estate Terms and Encyclopedia of Real Estate Terms 2nd Edition, Damien Abbott)

Real Estate Trends: Long-term movements or tendencies in the demand for commercial real estate (which can typically last for years or decades), usually tied to macro-economic or business cycles.

Renewable Energy: Energy derived from natural resources such as solar, wind, geothermal, or biofuels. Unlike oil, natural gas, or coal, these sources of energy are naturally replenished, providing a potential source of cleaner and more sustainable energy.

Row Crops: Row crops are those that are planted and harvested annually from the soil, as opposed to trees or vines, and include corn, cotton, rice, soybeans, and vegetables. Row crops are often eligible to receive federal subsidies.

Sawtimber: Timber of sufficient size and quality to be cut and harvested for lumber or other solid wood products. Sawtimber is usually derived from trees measuring 14" + DBH.

Secondary Fund: Occasionally, a Limited Partner will wish to sell his interest in a partnership before the term of the partnership is completed. Any such sale is termed a secondary market sale. A secondary fund creates a portfolio of partnership interests from earlier partnerships purchased in the secondary market. The advantage of a secondary fund is that it gives investors an opportunity to invest in seasoned partnerships from closed funds of prior vintage years.

Shadow Tolls: Payments made by government to the private sector operator of a road based, at least in part, on the number of vehicles using the road. They are currently in operation on some roads in the U.K., and they have also been adopted in other countries.

Solar Energy: Source of energy derived from the sun's light and heat. Common solar technologies include photovoltaics (PV) and solar thermal.

Sponsor: Every private equity opportunity that Meketa Investment Group evaluates is assigned to a sponsor. This individual, who is a member of Meketa Investment Group's Private Equity Investment Committee, is responsible for the collection of information and the evaluation of the opportunity.

Submarket: A segment or portion of a larger geographic market defined and identified on the basis of one or more attributes that distinguish it from other submarkets or locations.

Take Down/Draw Down: A take down or a draw down is the same as a capital call.

Term: The term of a private partnership is its expected lifetime, and is specified in the Private Placement Memorandum. Most partnerships have a term of ten years, with the option to extend the term once or twice by an additional year if the Limited Partners approve.

The term of a partnership consists of several phases. After the final closing, no new commitments are accepted and the partnership enters the commitment phase or investment phase, legally lasting up to six years, but generally lasting three to four years, during which the individual investments are made. A distribution phase follows, during which mature investments are realized and profits distributed to the partners. The final phase is the liquidation phase, during which all remaining properties and assets are sold in order to terminate the partnership.

Trade Sale: The most prevalent exit strategy for many private equity managers involves selling a company in the private markets, usually through an auction process, to other private equity investors or to larger companies. This type of exit is termed a trade sale.

Turnaround: A turnaround strategy involves buying a troubled company, usually for a relatively low price, and making significant managerial or organizational changes to better the company's operations and enhance profitability.

Upstream: Portion of the energy industry engaged in the exploration, production, and development of crude oil and natural gas reserves.

Vacancy: The number of units or space (of a specific commercial type) that are vacant and available for occupancy at a particular point in time within a given market (usually expressed as a vacancy rate).

Vacancy Rate: The percentage of the total supply of units or space of a specific commercial type that is vacant and available for occupancy at a particular point in time within a given market.

Value-added: A phrase generally used by advisers and managers to describe investments in underperforming and/or undermanaged assets. The objective is to generate 13 % to 18% returns.

VCOC (Venture Capital Operating Company): The IRS code defines one category of private partnerships to be venture capital operating companies for tax purposes. The General Partners of VCOCs are not required to register with the SEC as investment advisors. The name venture capital operating company relates only to the partnership's legal and tax structure, and does not imply that the partnership will invest in venture capital deals. For example, a middle market buyout fund, which invests only in mature companies with enterprise values of between \$200 million and \$1 billion, may be structured as a venture capital operating company.

Veneer: Continuous sheets of thin wood cut from trees measuring at least 16" + DBH. Veneer is commonly used in the manufacture of furniture and plywood.

Venture Capital: Money supplied to entrepreneurs to create new businesses is called venture capital. It is the first stage of financing for any new venture.

Traditionally, the recipient of the venture capital was a small group of entrepreneurs with an idea and a business plan, but no management team, corporate structure, revenues or profits. In the 1990s, however, venture capital was often used to seed established teams of entrepreneurs with well-defined products and in-place corporate structures. Thus, there is great variability in the meaning of venture capital and in the types of deals financed with venture capital money.

Vintage Year: The calendar year in which the first cash flow to a partnership occurred. This cash flow can be intended for management fees or investment capital. Vintage year can be used to differentiate the partnerships established over time by a General Partner, to track portfolio commitment pacing, and to benchmark portfolio performance.

Warrants: Just like publicly traded companies, private companies may issue warrants to their shareholders or to other groups providing some form of financing. A warrant is the right to purchase shares of the company's stock at a future date at a predetermined price, called the exercise price. Warrants become valuable if the exercise price is below the market price of the stock.

Wind Energy: Source of energy derived from wind motion that can be converted to electricity by turning a turbine and generator.

Disclaimer, Glossary, and Notes

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Meketa Investment Group has prepared this report on the basis of sources believed to be reliable. The data are based on matters as they are known as of the date of preparation of the report, and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available.

In general, the valuation numbers presented in this report are prepared by the custodian bank for listed securities, and by the fund manager or appropriate General Partner in the case of unlisted securities. The data used in the market comparison sections of this report are sourced from various databases. These data are continuously updated and are subject to change.

This report does not contain all the information necessary to fully evaluate the potential risks of any of the investments described herein. Because of inherent uncertainties involved in the valuations of investments that are not publicly traded, any estimated fair values shown in this report may differ significantly from the values that would have been used had a ready market for the underlying securities existed, and the differences could be material. Note that for unlisted securities the valuations may be lagged by one or more calendar quarters, or may reflect original cost.

This document may contain certain forward-looking statements, forecasts, estimates, projections, and opinions (“Forward Statements”). No representation is made or will be made that any Forward Statements will be achieved or will prove to be correct. A number of factors, in addition to any risk factors stated in this material, could cause actual future results to vary materially from the Forward Statements. No representation is given that the assumptions disclosed in this document upon which Forward Statements may be based are reasonable. There can be no assurance that the investment strategy or objective of any fund or investment will be achieved, or that the Fund will receive a return of the amount invested.

In some cases, Meketa Investment Group assists the Trustees in handling capital calls or asset transfers among investment managers. In these cases, we do not make any representations as to the managers’ use of the funds, but do confirm that the capital called or transferred is within the amounts authorized by the Trustees.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991.

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.