

# FUND EVALUATION REPORT

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## Plymouth County Retirement Association

Investment Review  
April 25, 2017



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# **Private Equity Manager Finalist Overview**

## Background

- At last month's meeting, Meketa Investment Group reviewed proposals from private equity managers for consideration from within the Retirement Association's private equity allocation.
  - For private equity, Meketa recommends two to three investments per year with an approximate commitment of \$10 million to each manager.
- LLR Partners was selected as the finalist and invited to present at this meeting.

### LLR Equity Partners V Overview

LLR Partners	
Firm Location (Headquarters)	Philadelphia, PA
Firm Inception	1999
Strategy Inception	1999
Firm AUM (As of 9/30/2016)	\$2.4B
Strategy AUM	\$2.4B
Ownership Structure	Equally owned by Partners

- LLR Partners was founded in 1999 by Seth Lehr, Ira Lubert, and Howard Ross. LLR is affiliated with six other alternative investment firms housed under Independence Capital Partners (“ICP”), where Mr. Lubert was an original founder. LLR is an established firm that has invested in the lower middle market for the past 17 years.

## LLR Equity Partners V Investment Team

- LLR Partners currently has 45 professionals, of which 26 are investment professionals. The firm is led by nine Partners, who have an average tenure at LLR of 14 years. Eight of the nine Partners have worked together at LLR for at least the past 12 years with several having worked together prior to joining LLR.
- The investment team is structured by sector with each sector overseen by at least two Partners. Seth Lehr, Scott Perricelli, and Jack Slye co-manage the Healthcare/Education team; Mitchell Hollin and David Reuter co-manage the Software/Financial Services team; and Howard Ross and David Stienes co-manage the Security team.
- In the history of the firm, there has been only one departure, Greg Case, at the Partner level. Mr. Case was hired laterally from Apax Partners 2008 and left in 2013 to pursue establishing his own private equity firm.

## LLR Equity Partners V Investment Teams

LLR Equity Partners V	
Partnership Name	LLR Equity Partners V
Partnership Type	Delaware Limited Partnership
Investment Strategy/Focus	Lower Middle-Market Buyout
Geographic Focus	United States
Vintage Year	2017
Fund Size	\$950 million target; \$1.1 billion hard-cap
Anticipated Final Closing	September 30, 2017
Total Term	Ten years, subject to an extension with consent of LPAC
<b>Fees / Expenses:</b>	
Management Fee	2.0% on committed capital during investment period; thereafter, 1.75% on invested capital
Preferred Return	8%
Carried Interest / Performance Fee	20% carried interest on a whole-fund basis with 100% GP Catch-Up



## LLR Equity Partners V Investment Strategy

- LLR V will continue the firm's strategy of investing in lower middle market growth oriented companies in the U.S. through a flexible investment approach of buyout or minority control. The fund will look to make equity investments between \$20 million and \$75 million. As the fund size has increased, the number of investments has grown as well; LLR III completed 23 deals and LLR IV is targeting 24 to 28 investments, which is also the expected target portfolio size for LLR V.
- Fund V will continue to focus on the same sectors as in prior funds: B2B, healthcare, education, financial services, and security (digital and physical). Within each of these sectors, LLR seeks companies that fit a preferred set of criteria, including organic growth of at least 10%, gross margins of at least 40%, and have an addressable market of at least \$500 million.
- LLR has built strong brand awareness in the Mid-Atlantic region, having been an investor in companies in the region since 1999. The firm continues to expand its geographic focus to include the eastern half of the U.S. and the Midwest and in aggregate has achieved similar success in these regions, although on a limited basis relative to its track record in the Mid-Atlantic region.

**LLR Equity Partners V  
Historical Track Record**  
(as of December 31, 2016)

	Year of First Investment	Number of Investments	Invested Capital (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)
LLR Equity Partners I	1999	23	233.5	642.6	0.0	642.6	29.8	21.8
LLR Equity Partners II	2004	16	358.0	687.7	71.2	759.0	17.5	12.2
LLR Equity Partners III	2008	22	731.8	860.1	586.5	1,446.6	21.3	13.5
LLR Equity Partners IV	2013	23	703.5	220.6	790.6	1,011.2	22.8	18.6
<b>Total LLR</b>		<b>82</b>	<b>2,026.8</b>	<b>2,411.0</b>	<b>1,448.3</b>	<b>3,859.3</b>	<b>24.7</b>	<b>16.6</b>

## **LLR Equity Partners V Status Update**

- LLR Equity Partners V anticipates holding a final closing in early summer 2017. The Fund has not yet called capital and anticipates making its first investment in late 2017 or early 2018.

### Relative Strengths & Potential Weakness

LLR Partners	
<b>Relative Strengths</b>	<ul style="list-style-type: none"> <li>• The firm has built a cohesive culture and is led by a stable team of Partners, who have an average tenure at LLR of 14 years.</li> <li>• LLR has consistently invested and exited growth equity and buyout deals in the lower middle market since the firm's founding in 1999.</li> <li>• The firm has built a strong brand and an extensive sourcing network in the Mid-Atlantic region.</li> <li>• Performance has been strong so far with an aggregate 24.7% gross IRR and a 1.9x gross multiple as of 12/31/16.</li> </ul>
<b>Potential Weaknesses</b>	<ul style="list-style-type: none"> <li>• High loss ratios in the earlier funds, although trending downward.</li> <li>• Performance of LLR II and LLR III are attractive on an absolute basis but rank in the second and third quartiles, respectively, compared to the Cambridge Associates benchmark.</li> <li>• Sourcing outside of the Mid-Atlantic region has shown success, but is still not as proven.</li> <li>• There are 34 unrealized portfolio companies between LLR III and LLR IV.</li> </ul>

# **Infrastructure Manager Finalist Overview**

## Background

- At last month's meeting, Meketa Investment Group reviewed a number of proposals from Infrastructure managers for consideration within the real assets allocation.
- To reach and maintain the System's target allocation, Meketa Investment Group recommends the System consider interviewing managers of both open- and closed-end funds.
  - Consider a \$10 million closed-end commitment
  - Consider a \$20 million open-end commitment
- Of the respondents, three managers were ranked as "highly advantageous" and are evaluated in the pages that follow.
  - IFM Global Infrastructure Fund
  - I Squared Global Infrastructure Fund II
  - Basalt Infrastructure Partners Fund II

### IFM Global Infrastructure Fund Overview

Industry Funds Management	
Firm Location (Headquarters)	Melbourne, Australia
Firm Inception	1995
Strategy Inception	2009
Firm AUM (As of 12/31/2016)	\$54.5B
Strategy AUM	\$11.4B
Ownership Structure	Owned by Australian Pension Funds

- IFM is a global private funds manager headquartered in Melbourne, Australia. IFM was established by four Australian Super funds in 1995, and today it is owned by 30 Australian pension funds. IFM’s two equity infrastructure offerings have approximately \$24.0 billion under management.

### **IFM Global Infrastructure Fund Investment Team**

- The Infrastructure Team at IFM Investors comprises 60 investment professionals with extensive operational, deal structuring, project finance and portfolio management expertise. They are based in New York, Melbourne, London and Berlin.
- The Global Head of Infrastructure, Kyle Mangini, is based in Melbourne and has responsibility for the team and all infrastructure equity investments. The heads of infrastructure in North America, Australia and Europe are Julio Garcia, Michael Hanna and Christian Seymour and they manage the teams in New York, Melbourne and Europe, respectively.
- The team has been largely stable; however, three investment directors have left in the last five years.



## IFM Global Infrastructure Fund Investment Terms

Global Infrastructure Fund	
Partnership Name	Global Infrastructure Fund
Partnership Type	Limited Partnership (Open-Ended)
Investment Strategy/Focus	Infrastructure
Geographic Focus	Global (ex-Australia)
Vintage Year	2009
NAV (\$ Millions)	11,441 (as of 12/31/2016)
Initial Closing	Quarterly queues to invest or redeem
Total Term	Perpetual
<b>Fees / Expenses:</b>	
Management Fee	0.77% pa of the LP's share of NAV for first \$300 million
Preferred Return	8%
Carried Interest / Performance Fee	Performance fee is 10% on returns above the preferred return, with a 33/67 catch-up. 50% of IFM's performance fee is held back each year to cover future potential underperformance.
Estimated Impact on Performance Assuming 10% Gross Return (assumption of \$10m commitment)	-164 bps gross to net IRR spread

### **IFM Global Infrastructure Fund Investment Strategy**

- The IFM Global Infrastructure Fund (“IFM GIF” or “the Fund”) invests in brownfield, core infrastructure assets in North America, the United Kingdom, and Europe. The Fund targets essential assets with defensive characteristics across a diverse range of asset-types, including: electricity generation, transmission, and distribution; gas transmission, distribution and storage; water and wastewater; transportation (toll roads, airports, sea ports); communications; and other infrastructure sub-sectors. Equity commitments per asset can range from \$300 million to \$900 million or more, although the average position in existing investments is \$400 million. The Fund invests in both majority and minority positions, yet requires a board seat for each investment.
- The Fund’s target net IRR is 10%, calculated over a three year rolling period, of which 6% to 8% is expected to come in the form of cash yield. The Fund’s target geographic markets all have well established infrastructure markets, regulatory regimes, and access to credit. While IFM’s open-ended structure reduces the need to exit investments at a specific point in time, the Fund maintains a target investment horizon of at least 15 years.

**IFM Global Infrastructure Fund  
Historical Track Record  
(as of September 30, 2016)**

	Year of First Investment	Number of Investments	Invested Capital (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)
IFM Global Infrastructure Fund	2009	12	11,297	3,438	11,895	15,333	9.0	n.a. <sup>1</sup>

**Open-Ended Fund's Time Weighted Returns (Net of Fees):**

	Currency Strategy	Six months (%)	One Year (%)	Three Years (%)	Five Years (%)	Since Inception (%)
IFM US Class A <sup>2</sup>	USD hedged	3.9	n.a.	n.a.	n.a.	4.0
IFM II <sup>3</sup>	AUD hedged	5.4	12.9	11.5	10.6	8.1

<sup>1</sup> Net IRR is not available because no fees are charged at the Master Fund level, but rather at the feeder fund level.

<sup>2</sup> IFM US Class A interests of the IFM Global Infrastructure Fund commenced investing in the Master Fund on June 1, 2016 on a currency hedged basis. Returns are based on the seven months since the inception of the fund at June 1, 2016.

<sup>3</sup> IFM II has been provided to show the longest track record of the Master Fund. IFM II is not available to invest in for non-Australian clients. IFM II is hedged from currency risk, and is denominated in Australian dollars and therefore not directly comparable to the US feeder fund.



### **IFM Global Infrastructure Fund Status Update**

- As of December 31, 2016, the Global Infrastructure Fund had actual undrawn commitments of approximately \$3 billion. The undrawn commitment amount includes commitments of \$675 million for Freeport, \$450 million for Conmex addition and \$575 million for VTTI.
  - Given the Master Fund’s commitments to Freeport LNG, IFM Investors has established a fundraising target for the Master Fund of \$3 billion.
  - New commitments will likely be drawn down in 18 months, based on investment opportunities.

### I Squared Global Infrastructure Fund II Overview

ISQ	
Firm Location (Headquarters)	New York City
Firm Inception	2012
Strategy Inception	2012
Firm AUM (As of 9/30/2016)	\$3.0B
Strategy AUM	\$3.0B
Ownership Structure	85% owned by senior management

- ISQ was founded in 2012 by Sadek Wahba, its Managing Partner, and is led by Mr. Wahba, Gautam Bhandari, and Adil Rahmathulla. Messrs. Wahba, Bhandari, and Rahmathulla have known or worked together for over ten years. Prior to ISQ, Mr. Wahba led the establishment, investment and management of Morgan Stanley Infrastructure Partners, a core infrastructure fund focused on global investment opportunities.
- The firm is managed from offices in New York, Houston, London, New Delhi, Singapore, and Hong Kong.

## **I Squared Global Infrastructure Fund II Investment Team**

- The ISQ team currently stands at 48 professionals, including 15 focusing on investments, 12 operating partners, 12 senior advisors and 9 working on fund management and administration.
- ISQ also established three joint ventures with engineering and consulting firms to jointly source, evaluate, and invest in infrastructure assets in specified sectors and regions: Easen International, V R Techniche, and GTD Engineering.
- There have been no departures by senior and mid-level investment professionals since inception of ISQ.

## I Squared Global Infrastructure Fund II Investment Teams

I Squared Global Infrastructure Fund II	
Partnership Name	I Squared Global Infrastructure Fund II
Partnership Type	Limited Partnership (Closed-Ended)
Investment Strategy/Focus	Infrastructure
Geographic Focus	North America, Western Europe, and Emerging Markets
Vintage Year	2017
Fund Size	\$5.0 billion target
Initial Closing	Q2 2017
Total Term	10 years from final close
<b>Fees / Expenses:</b>	
Management Fee	1.60% pa on commitments during the investment period; thereafter 1.60% per annum on invested capital
Preferred Return	8%
Carried Interest / Performance Fee	Performance fee is 20% above the preferred return, calculated on whole-fund basis, with an 80/20 catch-up
Estimated Impact on Performance Assuming 10% Gross Return	-400 bps gross to net IRR spread

## **I Squared Global Infrastructure Fund II Investment Strategy**

- ISQ is a value added manager seeking middle market investments in energy, utilities (including water and waste management), and transportation infrastructure assets in North America, Europe, and selected emerging markets. ISQ expects to deploy approximately two-thirds of the fund's capital in assets located in North America and Europe and not more than one-third in emerging markets in Latin America and Asia, with a particular focus on China and India.
- The team will largely target brownfield opportunities. However, the fund can invest up to 25% of commitments in greenfield projects that accept construction risk, but not development risk. The fund expects to make commitments between \$150 million and \$250 million. The fund expects the vast majority of investments to be made in equity.
- ISQ expects the fund to acquire controlling or co-controlling stakes with compatible partners. Additionally, the team expects to utilize conservative leverage at the asset level with expected debt-to-capitalization ratios of no more than 60% and weighted average duration of debt of at least seven years.
- The fund will seek to deliver an overall gross IRR of 15% to 20% and an annual cash yield of 6% by the end of the fund's commitment period.



**I Squared Global Infrastructure Fund II  
Historical Track Record  
(as of December 31, 2016)**

	Year of First Investment	Number of Investments	Invested Capital <sup>1</sup> (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)	Gross MOIC
<b>I Squared Global Infrastructure Fund</b>	2014	15	1,925	8,556	2,385	2,394	32.2	19.1	1.2x

<sup>1</sup> Net of post-closing equity syndications.



## **I Squared Global Infrastructure Fund II Status Update**

- Fund I is 78% committed across nineteen portfolio investments as of December 31, 2016.
- ISQ has had strong appetite from existing investors looking to re-up to Fund II as well as new investors that have indicated they would like to commit at first close. They anticipate a first close in early summer (end of June) and expect capital commitments of no less than half of the target fund size of \$5 billion.

## Basalt Infrastructure Partners Fund II Overview

Basalt Infrastructure Partners, LLP	
Firm Location (Headquarters)	London, UK
Firm Inception	2011
Strategy Inception	2011
Firm AUM (As of 9/30/2016)	\$618M
Strategy AUM	\$618M
Ownership Structure	100% owned by 3 Partners

- Basalt Infrastructure Partners, LLP (“Basalt”) was formed in 2011, originally as Balfour Beatty Infrastructure Partners, LLP, part of Balfour Beatty Plc, a British multinational infrastructure company. In 2016, Balfour Beatty exited the business with the team’s three partners acquiring full ownership of the management company and rebranding as Basalt.
- Basalt invests in in core and core-plus infrastructure assets, or asset-backed companies operating essential energy, transportation and utilities infrastructure assets in North America and Western Europe. As of September 30, 2016, through Basalt Infrastructure Partners Fund I, the firm had \$618 million in funds under management.

## Basalt Infrastructure Partners Fund II Investment Team

- The investment team comprises the three partners and twelve further dedicated investment professionals in London, New York and Munich.
- Basalt is led by the three partners, Rob Gregor, Steven Lowry, Jeff Neil, and COO Michael Cowell. These key members of the management team have worked together for over 10 years, committing \$1.3 billion across 14 investments.
- The investment committee (“IC”) is comprised of the three partners and Andy Friend, a Basalt non-exec and chairman of the IC. Andy Friend was formerly CEO and Managing Director of Infrastructure at John Laing Group plc, an investor, and manager of large infrastructure projects. The IC decides by majority vote with the Managing Partner, Rob Gregor, holding a casting vote.

## Basalt Infrastructure Partners Fund II Investment Terms

Basalt Infrastructure Partners Fund II	
Partnership Name	Basalt Infrastructure Partners Fund II
Partnership Type	English Limited Partnership
Investment Strategy/Focus	Infrastructure
Geographic Focus	North America and Western Europe
Vintage Year	2017
Fund Size	\$1.0 billion target, \$1.3 billion hard cap
Final Closing	1H 2017
Total Term	Ten years from final close
<b>Fees / Expenses:</b>	
Management Fee	1.50% pa on commitments during the investment period; thereafter 1.50% per annum on invested capital
Preferred Return	8%
Carried Interest / Performance Fee <sup>1</sup>	Performance fee is 20% above the preferred return, calculated on whole-fund basis, with an 80/20 catch-up
Estimated Impact on Performance Assuming 10% Gross Return	-350 bps gross to net IRR spread

<sup>1</sup> If Meketa's clients commit \$75m to \$150m to the Fund in aggregate, management fees are discounted to 1.3% and carried interest is discounted to 17.5%.



## Basalt Infrastructure Partners Fund II Investment Strategy

- Basalt executes investments in core and core-plus infrastructure assets, or asset-backed companies operating essential energy, transportation and utilities infrastructure assets in North America (40-60%), Western Europe (20-30%), and the UK (20-30%).
- Basalt Infrastructure Partners Fund II (the “Fund”) will seek to make eight to ten investments primarily in mature, operational, infrastructure businesses with no more than 25% of Fund commitments invested in pre-operational projects.
- The Fund will target control investments of \$75 to \$200 million in middle-market transactions with enterprise values of up to \$1 billion, seeking to avoid the larger and more heavily-contested transactions that the Manager believes typically attract large private equity funds and passive investors with lower return requirements.
- Basalt intends to add value through “hands-on” operational expertise, carefully assessing and managing risk while focusing on the development of essential assets with downside protection underpinned by long term contracts.
- Basalt will seek to apply its value-enhancing strategy to build de-risked, core infrastructure assets that are attractive to a broad group of institutional investors.
- The Fund is targeting a gross IRR of 15% and a gross ROI of 2.0x with an annual average cash yield of 7%.

**Basalt Infrastructure Partners Fund II  
Historical Track Record  
(as of December 31, 2016)**

	Year of First Investment	Number of Investments	Invested Capital <sup>1</sup> (\$ mm)	Realized Value (\$ mm)	Unrealized Value (\$ mm)	Total Value (\$ mm)	Gross IRR (%)	Net IRR (%)	Gross MOIC
SITE Portfolio <sup>2</sup>	2005	8	754.9	545.5	1307.6	1,853.1	14.2	NA	2.5
Basalt I <sup>3</sup>	2013	8	466.3	112.1	465.6	577.6	15.1	9.1	1.2
<b>Total</b>		<b>16</b>	<b>1,221.2</b>	<b>657.6</b>	<b>1,773.2</b>	<b>2,430.7</b>			<b>2.0x</b>

<sup>1</sup> Net of post-closing equity syndications.

<sup>2</sup> The SITE Portfolio consists of eight investments (approximately \$875.0 million), however the information presented only reflects the four investments that have publicly available information as of December 31, 2015.

<sup>3</sup> Fund I was renamed "Basalt Infrastructure Partners Fund I" following the firm rebranding in June 2016. All dollar values, multiples, and returns include Basalt's foreign exchange hedging instruments.



## **Basalt Infrastructure Partners Fund II Status Update**

- Fund I has committed \$574 million to date across eight assets in Western Europe and North America, with an additional \$191 million of co-investments with LPs.
- Basalt Infrastructure Partners Fund II has reached just over \$500 million of commitments to date with a further \$140 million of commitments expected in an April 2017 closing and \$200 million of commitments circled to close shortly after. The Fund expects to reach the target size at the end of Q2 2017 with a final close expected thereafter.



### Relative Strengths & Potential Weakness

	IFM	ISQ	Basalt
<b>Relative Strengths</b>	<ul style="list-style-type: none"> <li>• New investors acquire units of a portfolio of operational assets, which helps to mitigate blind pool risk and J-curve effect.</li> <li>• The fund's ownership by pension funds offers great alignment with investors.</li> <li>• The platform has been investing in infrastructure for institutional investors for 20 years.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides access to a diversified set of middle market value-added infrastructure opportunities across North America, Europe, and select developing countries.</li> <li>• The investment team has significant experience sourcing, investing in, and managing infrastructure assets across targeted regions and sectors.</li> <li>• Fund I track record is off to a strong start as returns are in line with a value-added strategy.</li> </ul>	<ul style="list-style-type: none"> <li>• Proven in its ability to source, structure, and execute middle-market infrastructure investments in Western Europe and North America.</li> <li>• Senior team has worked together for more than a decade and previously invested and managed a European infrastructure portfolio at AMP Capital.</li> <li>• Investments in Fund II are expected to be diversified by sector as well as geography.</li> <li>• Strategy is predicated on acquiring assets where it can use its own expertise to drive additional value through operational value-add capabilities.</li> </ul>
<b>Potential Weaknesses</b>	<ul style="list-style-type: none"> <li>• Queue timing for new investors has been between 18-24 months.</li> <li>• Operational capabilities within the investment team have improved but are not in line with similarly sized strategies in the marketplace.</li> <li>• Terms of the fund may be modified without the approval of the Investment Advisory Committee.</li> </ul>	<ul style="list-style-type: none"> <li>• Fund I is still largely unrealized, though performing strong.</li> <li>• ISQ is targeting \$5.0 billion of committed capital for the Fund, which would be approximately 60% larger than Fund I.</li> <li>• Small team of investment professionals focused on Europe.</li> </ul>	<ul style="list-style-type: none"> <li>• Fund I, which held its final close with \$617.8 million in July 2014, is relatively immature and has yet to realize any exits.</li> <li>• It is expected that up to 25.0% of Fund II will be invested in greenfield assets, which are inherently more risky than operational assets.</li> <li>• Basalt is targeting \$1.0 billion of committed capital for the Fund, which would be approximately 60% larger than Fund I.</li> </ul>

## **General Investment Issues**

## **Investment Policy Statement Recommendations**

## Investment Policy Statement

An Investment Policy Statement (“IPS”) represents one of the most important governance tools for an asset pool. The written policy serves to identify and formalize the objectives and constraints governing the fund and to establish guidelines for the implementation of investment strategy.

A well-developed IPS thoughtfully merges client-specific goals with the realities of the capital markets. The IPS should be long term and stable in nature, and should focus on core fund-level policy issues. Once established, permanent changes to the IPS should take place only in response to significant changes in the objectives and constraints of the fund. Among other items, the documents should include the fund’s long-term strategic Asset Allocation Policies.

**Recommendation:**

Meketa Investment Group has reviewed the Association's current Investment Policy Statement and recommends the Trustees consider the following changes as shown below. The Investment Policy Statement should be reviewed periodically by the Trustees to ensure that the objectives and constraints remain relevant.

Generally speaking, Meketa Investment Group believes that elements of the IPS that are subject to change due to varying market and business circumstances (e.g., asset allocation targets and manager specific issues) should be moved to an appendix. This would help to streamline the document to focus on core fund-level policy issues.

Specifically, we believe the Association's IPS could be improved with the following changes:

- Moving the asset allocation components, weights, and ranges to the appendix.
- Moving the Policy Index components and weights to the appendix.
- Updating and moving the list of Fund-level permissible and prohibited investments to the appendix.
- Updating and moving the Assignment of Responsibilities to the appendix.
- Including a set of assumptions guiding the asset allocation decision in the appendix. This exhibit would include expected return, volatility, and correlations for each asset class.
- Changing the Fund's rebalancing policies to state the rebalancing policy should allow for assets to be rebalanced within target ranges.
- Update the Watch List policy and move to the appendix.
- Removing the regulatory language that is subject to change.
- Additional proposed changes include updating the asset class benchmarks, moving manager guidelines to a separate document, and adding a Crisis Response Plan.
- Consider adding GASB language per auditor.

**- FINAL -**

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**PLYMOUTH COUNTY  
RETIREMENT ASSOCIATION**

**INVESTMENT POLICY  
STATEMENT**

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**Plymouth County Retirement Association**  
10 Cordage Park Circle, Suite 34  
Plymouth, MA 02360  
(508) 830-1803  
[www.pcr-ma.org](http://www.pcr-ma.org)

**August 2010**



### I. Overview & Purpose

This Investment Policy Statement has been developed to provide a framework around which to manage and monitor the assets of the Plymouth County Retirement Association (the "System"). The purpose of the Investment Policy Statement is to define policies to guide the implementation of the System's investment goals and objectives in addition to establishing delegations of authority and responsibility, with the end result being effective management and control of the investment process.

This Investment Policy Statement shall:

- Document the System's objectives and set forth appropriate and prudent policies and guidelines to assist in the achievement of those objectives.
- Provide an investment framework for the System that sets parameters to ensure prudence and care in the execution of the investment program.
- Establish criteria to evaluate the System's investment performance.
- Communicate investment policies, objectives, guidelines, and performance criteria to the Board, staff, external investment managers, advisors, consultants, custodians and all other interested parties.
- Serve as a document to guide ongoing oversight of the System's investments.
- Comply with regulations established by the Public Employee Retirement Administration Committee ("PERAC").
- Document the fulfillment of the overall fiduciary responsibilities of the Board.

This Investment Policy Statement may, from time to time and in writing, be modified as appropriate.

### II. Fiduciaries & Standard of Prudence

The Board members are Trustees of the System and are, therefore, fiduciaries. In addition, Consultants, the Board's Executive Director and staff are also fiduciaries of the System. All fiduciaries shall:

1. Discharge all of his/her duties solely in the interest of members and their beneficiaries for the exclusive purpose of providing benefits to members and their beneficiaries.
2. Defray expenses of administering the system.
3. Act with the care, skill, prudence and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of like character and with like aims.



4. Diversify the investments of the system so as to minimize the risk of large losses, unless it is clearly prudent not to do so.
5. Adhere to the Massachusetts General Laws and the rules and regulations promulgated by PERAC.

These standards of prudence also apply to other fiduciaries, which include the employees of the System who exercise discretionary authority or control over the management or administration of the System or its assets as well as persons designated by the Board to carry out fiduciary responsibilities including the external investment managers, the general investment consultant, specialized investment consultants, and the custodian.

### III. Duties & Responsibilities

The Board is responsible for the general administration and proper operation of the System, including investment of the System's assets. Specific duties and responsibilities of the Trustees, consultants, investment managers and custodians are outlined below in tabular format. However, it should be noted that the Trustees are responsible for all aspects of the System's investments. Trustees may not absolve themselves of this responsibility by assigning specific duties to one or more of these parties.

	Board	Consultant	Investment Manager	Custodian
Asset Allocation Investment Policy	X	X		
Formation of Investment Policy	X	X		
Manager Guidelines	X	X	X	
Manager Selection	X	X		
Performance Evaluation	X	X		
Compliance with Manager Guidelines	X	X	X	
Execution of Trades			X	X
Collection of Dividends & Interest			X	X
Cash Sweeps			X	X
Recapture Programs	X		X	X
Securities Lending	X			X
Proxy Voting			X	X
Trading Verification			X	X
Valuation of Securities			X	X
Performance Calculation			X	X

### IV. Investment Objectives

The investment objective of the System is to fully fund the plan by generating sufficient long-term inflation adjusted capital appreciation while providing sufficient liquidity to meet short-term withdrawal requirements. The Board desires to balance the goal of higher long-term returns with the goal of





minimizing contribution volatility, recognizing that these are often competing goals. This requires taking both assets and liabilities into account when setting investment strategy. Therefore, the investment objectives over extended periods of time are to achieve an annualized investment return that:

1. In nominal terms, equals or exceeds the actuarial investment return assumption of the System adopted by the Board. As of this writing, the actuarial rate of return for the System was 8.25%. The Board acknowledges the investment portfolio may achieve higher returns in some years and lower returns in other years.
2. Meets or exceeds the System's total fund policy index benchmark, which equals the weighted average of the benchmarks for each asset class and the target weightings for each asset class. The policy benchmark enables comparison of the System's actual performance to a passively managed proxy, and it measures the contribution of active investment management and policy implementation.
3. Over the short-term, generates sufficient income to make monthly payroll payments.

The Board members of the System recognize the long-term return requirements of the System and, therefore, short-term fluctuations in value are secondary to the long-term objective.

#### V. Investment Restrictions

The System is a Massachusetts Contributory Retirement System and is, therefore, governed by Chapter 32 of the Massachusetts General Laws. The System will comply with PERAC guidelines as they refer to prohibited investments under sections 840 CMR 21.00: M.G.L. c. 7, § 50; M.G.L. c. 32, §§ 21 and 23. Except for private equity partnerships, real estate/real asset partnerships and hedge fund of funds, which are approved investments per PERAC regulations, no investment made by the System or by any bank pooled fund, mutual fund, group trust, limited partnership, insurance company separate account or other form of pooled investment of any board shall consist of any of the following:

1. Purchases of securities by partial payment of their cost (purchases on margin).
2. Sale of securities not owned by the System at the time of sale (short sales).
3. Future contracts other than as follows:
  - a. Forward currency contracts may be written against securities in the international portfolio by an investment advisor registered under the Investment Advisors Act of 1940 and who has been the subject of an exemption for international investment.
  - b. Forward currency contracts may be written against securities in an international portfolio to a maximum 25% of the international portfolio non-dollar holdings at market value. Speculative currency positions unrelated to underlying portfolio holdings are strictly prohibited.

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4. Call options written against securities in the portfolio other than as follows:
  - a. Call options may be written against equity securities (excluding international equities) in the portfolio by a qualified investment adviser registered under the Investment Advisers Act of 1940.
  - b. Call options may be written against equity securities (excluding international equities) in the portfolio to a maximum of 25% of the market value of the equity portfolio (excluding international equities).
  - c. Only options listed on a U.S. registered exchange may be written.
5. Purchases of options other than as required to close out options positions.
6. Lettered or restricted stock (with the exception of those investments that are venture capital investments).
7. Direct investment in mortgages.
8. Collateral loans (with the exception of those investments that are leveraged buyout investments), provided, however that boards may participate in so-called "securities lending" programs through a custodian and provided, further, that the lending of securities is limited to brokers, dealers, and financial institutions and that the loan is collateralized by cash or United States Government securities according to applicable regulatory requirements.
9. Loans to employees or individuals.
10. Direct purchase or lease of real estate.

In addition, the System's portfolio must also adhere to the following allocations measured as a percentage of the total fund assets:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Max Alloc. Per PERAC</u>
Hedge Fund of Funds <sup>(1)</sup>	4.0%	8.0%
Private Equity/Venture Capital <sup>(2)</sup>	7.5%	7.5%
Real Estate <sup>(2)</sup>	10.0%	15.0%
Real Assets <sup>(3)</sup>	3.0%	--

- (1) The System is permitted to invest up to 4% in a hedge fund of funds manager(s) of its choice while the remaining 4% must be invested with the PRIT fund.
- (2) As a result of a supplementary regulation the System was granted approval on July 7, 2009 to increase its target exposures to private equity/venture capital and real estate to 7.5% and 15.0% of the overall portfolio respectively.
- (3) The System has adopted a target allocation to real assets of 3%, however, as of this writing PERAC does mandate a maximum allocation to real assets.



**VI. Asset Allocation**

The Fiduciaries of the System believe that the return objective can be best achieved by constructing a fully diversified portfolio and maintaining target asset class weights over long holding periods and through all market environments. It is expected that over long holding periods, a diversified strategy will play a critical role in balancing the risks of different markets in which the System will invest and help generate superior risk adjusted returns.

Asset allocation studies will be conducted using an optimization process when there is a change in the investment policy that will not be satisfied by the current allocation. Such a change may be, but not limited to a change in liquidity needs, a fully funded status or the introduction of an asset class in which the System does not currently invest. While the Board acknowledges the limitations and assumptions inherent in conducting an asset allocation study, they will be performed in order to illustrate how changes to the existing allocation will affect the long-term risk and return profile of the Plan.

When conducting an asset allocation study, the Board members will first conduct an analysis of the current portfolio, which entails analyzing the structure of the current portfolio and classifying each security held by each manager according to style, capitalization, duration and sector. The existing allocation will then be used to assess the expected future return, volatility and yield. Then the allocation will be optimized to assess whether there is a more efficient portfolio in which the Plan could invest to reach its objectives.

On an annual basis, the Board reviews its asset allocation policy. At this time, the Board determines whether there have been significant changes with regard to (1) the economic environment, (2) the Board's objectives, and/or (3) other considerations affecting the asset allocation policy, including liquidity needs. If deemed appropriate, the Board will commission an asset allocation study to reassess and possibly change its asset allocation policy. Adoption of the asset allocation recommendation requires a vote of the majority of the Board.

Effective January 1, 2010, the System's portfolio target weights at the broad asset class level are as follows:

<u>Asset Class</u>	<u>Portfolio Target Weight</u>	<u>Policy Range</u>
Domestic Equity	33.0%	28.0% - 38.0%
Foreign Equity	16.0%	11.0% - 21.0%
Total Fixed Income	25.5%	20.5% - 30.5%
Real Estate/Real Assets	13.0%	10.0% - 15.0%
Private Equity	7.5%	5.0% - 10.0%
Hedge Fund of Funds	4.0%	2.0% - 6.0%
Cash	1.0%	0.0% - 3.0%

The portfolio will be allowed to fluctuate at the broad asset class level within the policy ranges noted above. The System will diversify within each of the broad asset classes according to the target weight on the following page. In an effort to minimize the J-curve effect associated with real estate/real assets and private equity limited partnership investments, the System will over commit to these investments by an amount equal to 25-50% more than what is called for by the target weights.

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## Detailed Target Weights

Asset Class	Portfolio Target Weight	Asset Class Assumptions			
		Expected Return	Expected Risk	Expected Yield	Index Proxy
Large Cap Value	5.50%	9.43%	16.92%	2.65%	Russell 1000 Value
Large Cap Growth	4.50%	8.64%	18.16%	1.72%	Russell 1000 Growth
Mid Cap Value	6.00%	10.70%	17.55%	2.25%	Russell Midcap Value
Mid Cap Growth	5.00%	9.80%	18.90%	1.40%	Russell Midcap Growth
Small Cap Value	6.50%	11.80%	18.77%	1.10%	Russell 2000 Value
Small Cap Growth	5.50%	10.90%	19.44%	0.00%	Russell 2000 Growth
Int'l Equity: Dev Markets	13.00%	9.80%	17.99%	0.00%	MSCI EAFE Index-\$
Int'l Equity: Emerg Markets	3.00%	12.10%	29.11%	0.00%	MSCI Emerg Free-\$
Intermediate Gov/Corp	14.50%	6.50%	6.20%	6.00%	Barclays Int Gov't/Credit
High Yield Bonds	4.00%	9.00%	11.76%	8.00%	Barclays High Yield
Int'l Bonds: Dev/Emerg Mkts	7.00%	8.30%	10.90%	7.00%	CITI Non-US WGBI-All\$
Real Estate/Real Assets	13.00%	9.30%	5.61%	0.00%	NCREIF Property Index
Private Equity	7.50%	14.60%	21.40%	0.00%	CAMB US Private Equity
Hedge FOF	4.00%	8.70%	6.55%	0.00%	HFRI Fund of Funds Comp
Cash	1.00%	3.97%	1.80%	4.75%	MERL Ready Assets

## VII. Rebalancing Policy

The Trustees will review the current portfolio weightings relative to the target weighting on a monthly basis or whenever performance reports are disseminated and rebalance as they see appropriate. The decision to rebalance will depend on the timing and size of the benefit payments, market conditions and the portfolio weightings relative to the policy ranges. Forced scheduled rebalancing to target weights can create unnecessary transaction costs and it is, therefore, not advisable.

## VIII. Revenue Enhancing Programs

If deemed appropriate, The Trustees will engage in two revenue enhancing programs to increase the annual cash flows to the System: commission recapture and securities lending.

### 1. Commission Recapture

The Trustees acknowledge that brokerage commissions are an asset of the System. Further, Trustees recognize that commissions costs are only one component of execution costs and that managers should follow a best execution strategy; trading style, transaction order flow, broker selection decisions and research requirements of the managers should not be adversely affected by the commission recapture program.

Eligible investment managers are encouraged to participate in the commission recapture program, should there be one in place, and provided commissions are competitive. Investment managers are not precluded from using brokerage firms with whom they have a "soft dollar" arrangement, provided said firms offer competitive execution services.



2. Securities Lending

The securities lending program actively lends securities through a single securities lending program to qualified borrowers in order to provide incremental income to the System. Borrowers in return provide liquid collateral in exchange for the right to borrow securities. Securities shall be fully collateralized at all times. Cash collateral shall be invested in a pool vehicle selected by the Trustees on which interest is paid. A negotiated portion of this interest shall be paid to the borrower while the balance shall be kept by the lending agent and the System.

IX. **Performance Benchmarks**

To facilitate the periodic reporting and to provide a relative measure to gauge success, performance benchmarks will be utilized at the broad asset class level and at the manager level. Customized benchmarks will be utilized at the broad asset class level and will be computed as a weighted average of the underlying asset classes in the portfolio. A summary of approved benchmarks is provided below:

<u>Broad Asset Class</u>	<u>Benchmark</u>
Total Portfolio	Customized *
Domestic Equity, International Equity, Fixed Income	Customized *
Real Estate	NCREIF
Private Equity/Venture Capital	State Street Private Equity
Hedge Funds	HFRI Fund of Funds Composite
Cash	Three Month T-Bill

*\* This index is a weighted average of the underlying asset classes comprising the broad asset class*

In addition to benchmarks for asset classes, the System employs benchmarks for each one of its investment managers. The individual investment manager benchmarks are approved by the Board and set forth in the investment manager guidelines.

X. **Investment Manager Selection**

The selection and hiring of investment managers, commission recapture brokers and securities lending managers shall be subject to a competitive process that satisfies the Boards' fiduciary duty and meets the requirements of M.G.L. c. 32 and 840 CMR.

- The investment consultant creates a detailed Request for Proposal ("RFP") questionnaire covering all pertinent quantitative and qualitative issues. All investment managers submitting a bid or proposal to provide services to the Board shall certify, in writing, on the bid or proposal, as follows: "The undersigned certifies under penalties of perjury that this bid or proposal has been submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, club, or other organization, entity or group of individuals."



- The investment consultant will be asked to send the Board the names of investment managers who responded to the RFP and qualify based upon the minimum criteria established by the Board.
- The Board and the investment consultant will review responses to the RFP and eliminate those firms that are not likely to be hired based on the screening criteria. The Board may revise or reaffirm the screening criteria in light of the data gathered.
- The investment manager must be a "qualified investment manager" as defined in 840 CMR 16.01. No person who is not a qualified investment manager as defined by 840 CMR 16.01 shall advise the Board on the purchase and sale of investments or manage the funds of the System.
- The investment consultant will provide a written report as specified by the Board to assist them in reviewing the data.
- The Board will select finalists and conduct investment manager interviews.
- The Board approves the hiring of one or more of the finalists.
- The Staff and the Consultant will complete a checklist to ensure that the transition is completed and effective on the official book of record with the Custodian.
- Prior to retention of the investment manager, the Board shall notify PERAC that a competitive process that satisfies the Boards' fiduciary duty and meets the requirements of M.G.L. c. 32 and 840 CMR were adhered to.
- Prior to the delegation of investment authority to the investment manager, the investment manager must execute a written contract.
- The contract must state all terms and conditions of employment including, but not limited to, investment objectives, brokerage practices, proxy voting and tender offer exercise procedures, term of employment, fees and termination provisions.
- No contract shall contain a provision that requires the indemnification of the investment manager by the retirement board.
- A copy of every contract shall be retained by the board and be subject to audit.
- The contract must state that the investment manager is a fiduciary with respect to the fund in which the Board invests pursuant to the investment manager's advice regarding the purchase and sale of investments or the funds that the investment manager manages, as the case may be.
- Each investment manager is selected to meet specific investment objectives and/or performance standards.
- The investment manager has full discretion to prudently execute investment transactions on behalf of the Plan in accordance with the Board approval of the delegation and guidelines.



- Procurement file for each such competitive process and selection shall be maintained by the Board and be subject to audit. The file shall contain the request for proposals, selection process, selection criteria and other information relative to the Board meeting its fiduciary responsibility with respect to the selection.

This policy statement should make clear that the Trustees are solely responsible for selection, monitoring, evaluation and removal of all investment alternatives made available to the Plan participants. The System may hire consultants and advisors to assist it in these activities; however, nothing changes the ultimate responsibility of the Trustees. While a consultant or advisor may make recommendations for action by the Trustees, the Trustees are free to act in any regard within the scope of its responsibilities with or without prior advice or recommendation from a consultant or advisor. A recommendation from such advisors is not a prerequisite for action by the Trustees.

#### **XI. Portfolio Monitoring Procedures**

The Trustees will meet with the Consultant no less frequently than quarterly to review portfolio performance, review portfolio weights relative to target weights and manager's performance. Further, the Board will endeavor to meet with each of its Investment Managers at least once per year in accordance with PERAC requirements.

The Investment Managers managing separate accounts on behalf of the System will be issued investment manager guidelines and they will be monitored at two levels of contract review: Watchlist and Probation, the latter being a more heightened level of review.

The Consultant will recommend to the Board members when a manager should be placed on or removed from Watchlist or Probation. When an investment manager is placed on the Watchlist/Probation, it is effective immediately. There is no minimum time requirement on the Watchlist/Probation before a termination may be made. An investment manager's contract may be terminated for any reason at any time, whether on Watchlist/Probation or not.

Reasons an investment manager may be added to Watchlist/Probation include but are not limited to:

- a. Organizational Issues (People)
  - Change in ownership or control of the company
  - Significant change in team composition or responsibilities
  - Material change in the business organization of the investment manager
  - Departure of significant personnel
- b. Performance
  - 1, 3 and 5-year performance net of fees below benchmark
  - 1, 3 and 5-year performance net of fees below peers (below median of relevant peer universe)
  - Performance inconsistent with the investment manager's style and risk control
- c. Deviation from style



- d. Other
- Material guideline violation not brought to our attention by the investment manager
  - Failure to comply with terms of contract that is not corrected within 60 days
  - Any extraordinary regulatory action or other proceeding affecting the investment manager's ability to perform its duties under the contract
  - Unsatisfactory client service

During an investment manager's tenure on the Watchlist/Probation, investment consultant will provide the Board with regular reports, including background information and support, about the progress the investment manager is making. An investment manager may be removed from heightened alert if the Board believes the issues that placed the firm on the Watchlist/Probation are resolved.

Should the manager's performance not improve over a reasonable time period, the Consultant will recommend further action and possible termination after a careful review of the manager's performance, portfolio structure and the market environment. Before a manager is officially dismissed, the Consultant will recommend to the Board a plan of action for managing (internally, externally, or in combination) or liquidating the assets.

Circumstances may warrant that the Trustees take immediate action to terminate a manager. Therefore, the Trustees reserve the right to bypass the course of action outlined above and remove a manager immediately if deemed prudent and in the best interests of the Plan participants.

## **XII. Proxy Voting Policy & Corporate Governance**

The Board has determined that the investment managers will vote all proxy votes on behalf of the System.



## **Disclaimer, Glossary, and Notes**

The material contained in this report is confidential and may not be reproduced, disclosed, or distributed, in whole or in part, to any person or entity other than the intended recipient. The data are provided for informational purposes only, may not be complete, and cannot be relied upon for any purpose other than for discussion.

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.