City of Hartford Pension Commission
City Conference Room
260 Constitution Plaza
Hartford, Connecticut
Friday, July 24, 2015
9:00 a.m.

# AGENDA

## INVESTMENT PROGRAM

I. Review of Meeting Minutes

- Minutes of June 26, 2015

II. Status of the MERF Portfolio

- Inventory of Assets as of June 30, 2015
- MERF's Overall Performance

III. PCA Update

- Private Equity Performance Report

IV. Longevity Swap Product Presentation

V. Report on Annual Performance Review Meeting with Parametric Eaton Vance

VI. Securities Lending Report

VII. Other Business

- Manager Updates
- 36 Edwards Street—Proposal to maintain the property owned by Pension Commission

INVESTMENTS:
AGENDA ITEM I

# CITY OF HARTFORD

PENSION COMMISSION

**MEMORANDUM**

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Review of Minutes from the Meeting of June 26, 2015**

Enclosed for your review are the minutes of the investment portion of the Pension Commission meeting of Friday, June 26, 2015.

**City of Hartford Pension Commission**
**City Conference Room**
**260 Constitution Plaza**
**Hartford, CT 06103**
**Friday, June 26, 2015**
**9:00 a.m.**

# MINUTES

## INVESTMENT PROGRAM

**MEMBERS PRESENT:** Peter Stevens, Chairman; Frank Lord, Commissioner; Gene Goldman, Commissioner; Nicholas Trigila, Employee Representative; Adam M. Cloud, Secretary and Carmen I. Sierra, Assistant Secretary

**STAFF PRESENT:** Gary B. Draghi, Director of Investments; P. Wayne Moore, Assistant Director of Investments and J. Sean Antoine, Principal Administrative Analyst

**OTHERS PRESENT:** Lisa Silvestri, Corp. Council; George Zoltowski, Management and Budget; Terry Williams, Senior Administrative Assistant; Chelsea Mott, City of Hartford Accountant; Doug Moseley, Kristin Finney-Cooke and Will Forde, of NEPC, the MERF's general consultant.

## I. Review of Minutes as of May 29, 2015

Chairman Stevens introduced the item and asked for questions, comments or corrections. There were none.

**A motion was made, seconded and unanimously adopted to accept the minutes as presented.**

## II. Status of the MERF Portfolio as of May 31, 2015

Chairman Stevens introduced the item and asked the Investment Unit to report. P. Wayne Moore, the MERF's Assistant Director of Investments, reported that, at May 31, 2015, the MERF portfolio had a market value of $1.04 billion and had generated a positive 0.3% net of fees return for the month, which outperformed the benchmark return of -0.4%, by 70 basis points.

Mr. Moore then reported that the MERF's equity portfolio posted a flat return for the month, outperforming the benchmark return of -0.1%, by 10 basis points. He also reported that the MERF's global tactical allocation portfolio posted a 0.6% net return for the month, outperforming the benchmark return of -0.7%, by 130 basis points.

Mr. Moore went on to report that the MERF's fixed income portfolio posted a -0.6% net return for the month, outperforming the custom benchmark return of -0.9%, by 30 basis points. He noted that the MERF's hedge fund portfolio posted a return of 1.4%, outperforming its benchmark return of 1.1%, by 30 basis points. Mr. Moore also reported that the MERF's real estate, private debt and private equity all outperformed their custom benchmarks. Discussion ensued.

Lastly, Mr. Moore reviewed the MERF's asset allocation positioning relative to its targets and target ranges.

**The Commission accepted the report for advice.**

## III. Update from MERF's General Investment Consultant-NEPC

### Domestic Equity Structure Review

Chairman Stevens introduced the item. Secretary Cloud asked Kristin Finney-Cooke of NEPC, the MERF's general consultant, to report to the Commission. Ms. Finney-Cooke began by recapping that, as a result of a comprehensive asset allocation review of the MERF's portfolio, NEPC had recommended that adjustments be made to the MERF's portfolio, including adding a 3% target allocation to real assets to replace the allocation to commodities, a 5% target allocation to unconstrained fixed income and rebalancing within the underlying equity and fixed income asset classes. Ms. Finney-Cooke added that the MERF's investment program presently meets the plan's liquidity needs.

She then moved on to discuss the MERF's domestic equity portfolio noting that NEPC was comfortable with the MERF's current mix of the portfolios sectors and weightings. As a point of emphasis, Ms. Finney-Cooke noted the importance of using high conviction active managers in the large cap space explaining that it is a highly efficient sector where it is difficult to generate excess returns. Discussion ensued.

Ms. Finney-Cooke went on to note that NEPC was also comfortable with the MERF's existing use of both active value and growth managers noting that this mix of styles was capable of adding value over time. She added that NEPC did not recommend active "core" managers as historical evidence has shown that these managers have difficulty providing excess returns over time. Discussion ensued.

With regard to specific actions, NEPC recommended conducting a search for a large cap growth manager and a review of the large cap value portfolio commitment. Discussion ensued.

**The Commission accepted the report for advice.**

**International Equity Structure Review**

Ms. Finney Cooke reported that NEPC was comfortable with the MERF's existing structure of and manager line up for its international equities portfolio. She added that, while some of the MERF's managers have struggled recently, NEPC continues to have confidence in each manager and recommends no changes at this time.

**The Commission accepted the report for advice.**

**Fixed income Structure Review**

Ms. Finney-Cooke reported on NEPC's review of the MERF's fixed income portfolio noting that NEPC recommended reducing the long duration fixed income mandate and revising it by removing its duration reducing underlay. The reduction would serve to limit the MERF's exposure to this asset class while removing the underlay would revert it back to a traditional long duration portfolio. She highlighted the fact that the implementation of the unconstrained mandate would eliminate the need for the underlay as this new mandate would serve to protect the portfolio as interest rates rise. She added that the removal of the underlay would reduce costs. Discussion ensued.

Ms. Finney-Cooke then noted that, consistent with the recently revised asset allocation, the MERF was eliminating its global bond allocation. As a result, the MERF's current mandate would be liquidated and the proceeds used to help fund the recently adopted unconstrained fixed income mandate. She noted that this mandate would provide more tactical flexibility for the portfolio while still allowing for the inclusion of global bonds based on the manager's relative value determination.

Regarding emerging markets debt, NEPC recommended that the MERF consider moving to a blended currency approach noting that the MERF's current emerging markets debt manager offered a blended strategy that could be used to implement this change. Discussion ensued.

**The Commission accepted the report for advice.**

In closing, Ms. Finney-Cooke stated that, given the MERF's need to retain liquidity as cash needs arise, NEPC was recommending retaining the SSGA Russell 3000 index fund, SSGA U.S. Treasury Inflation Protected Securities index and the SSGA Commodities index funds. Discussion ensued.

**The Commission accepted the report for advice.**

**IV. Real Estate and Private Debt Investment Recommendations**

- **Tristan European Property Investors Special Opportunities 4**
- **Monroe Capital Private Capital Fund II**

Chairman Stevens introduced the item and asked staff to address the reports. Secretary Cloud reported that the materials included recommendations for potential real estate and private debt investment commitments. He then asked the Commission to enter executive session to discuss the opportunities.

**A motion was made, seconded and unanimously adopted to enter executive session to discuss potential investment commitments in real estate and private debt.**

**A motion was made, seconded and unanimously adopted to exit from executive session.**

As the result of the presentations, deliberations and related discussions, Secretary Cloud recommended that the MERF commit $4 million to Tristan Capital Partners European Property Investors Special Opportunities 4 and $16 million to Monroe Capital Private Capital Fund II.

**A motion was made, seconded and unanimously adopted to authorize the Treasurer to execute agreements with Tristan Capital Partners European Property Investors Special Opportunities 4 for a $4 million commitment and Monroe Capital Private Capital Fund II for a $16 million commitment, pending successful contract negotiations.**

## V. Securities Class Action Monitoring Services Recommendation

Chairman Stevens introduced the item and asked staff to address the topic. Secretary Cloud began by reminding the Commission of his presentation describing the class action securities monitoring services of Kessler Topaz Meltzer and Check ("Kessler"), at the last Pension Commission meeting. He noted that these services would be provided free of cost to the MERF, with any Kessler compensation expressly limited to a share of results achieved from any potential securities litigation cases. He concluded by noting that, since no action had been taken previously, he was now recommending that the Commission approve the addition of Kessler Topaz Meltzer and Check ("Kessler") to the MERF's securities class action monitoring services line-up. Discussion ensued.

**A motion was made, seconded and unanimously adopted to authorize the Treasurer to execute an agreement with Kessler Topaz Meltzer and Check for class action securities monitoring services, pending successful contract negotiations.**

## VI. Other Business

Chairman Stevens introduced the item. Secretary Cloud asked Mr. Draghi to address the Commission. Mr. Draghi updated the Commission on the status of the Institutional Shareholder Services ("ISS") contract noting that it had been signed by Secretary Cloud and was awaiting execution by ISS.

Mr. Draghi then closed by stating that the MERF's recently adopted asset allocation targets would be effective July 1 and that the investment staff would be working with the Secretary and NEPC on a rebalancing of the overall portfolio in the coming weeks in order to fund the unconstrained fixed income mandate. Discussion ensued.

**The Commission accepted the report for advice.**

In closing, Treasurer Cloud stated that there was not any further business.

There being no further business, Chairman Stevens adjourned the meeting.

ATTEST: ______________________
Adam M. Cloud, Secretary

INVESTMENTS:
AGENDA ITEM II

# CITY OF HARTFORD

PENSION COMMISSION

## MEMORANDUM

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Status of MERF Portfolio as of June 30, 2015**

Enclosed for your review is the portfolio report for the month of June 2015.

**INTEROFFICE MEMORANDUM**

**TO:** Adam M. Cloud, City Treasurer
Carmen I. Sierra, Assistant City Treasurer

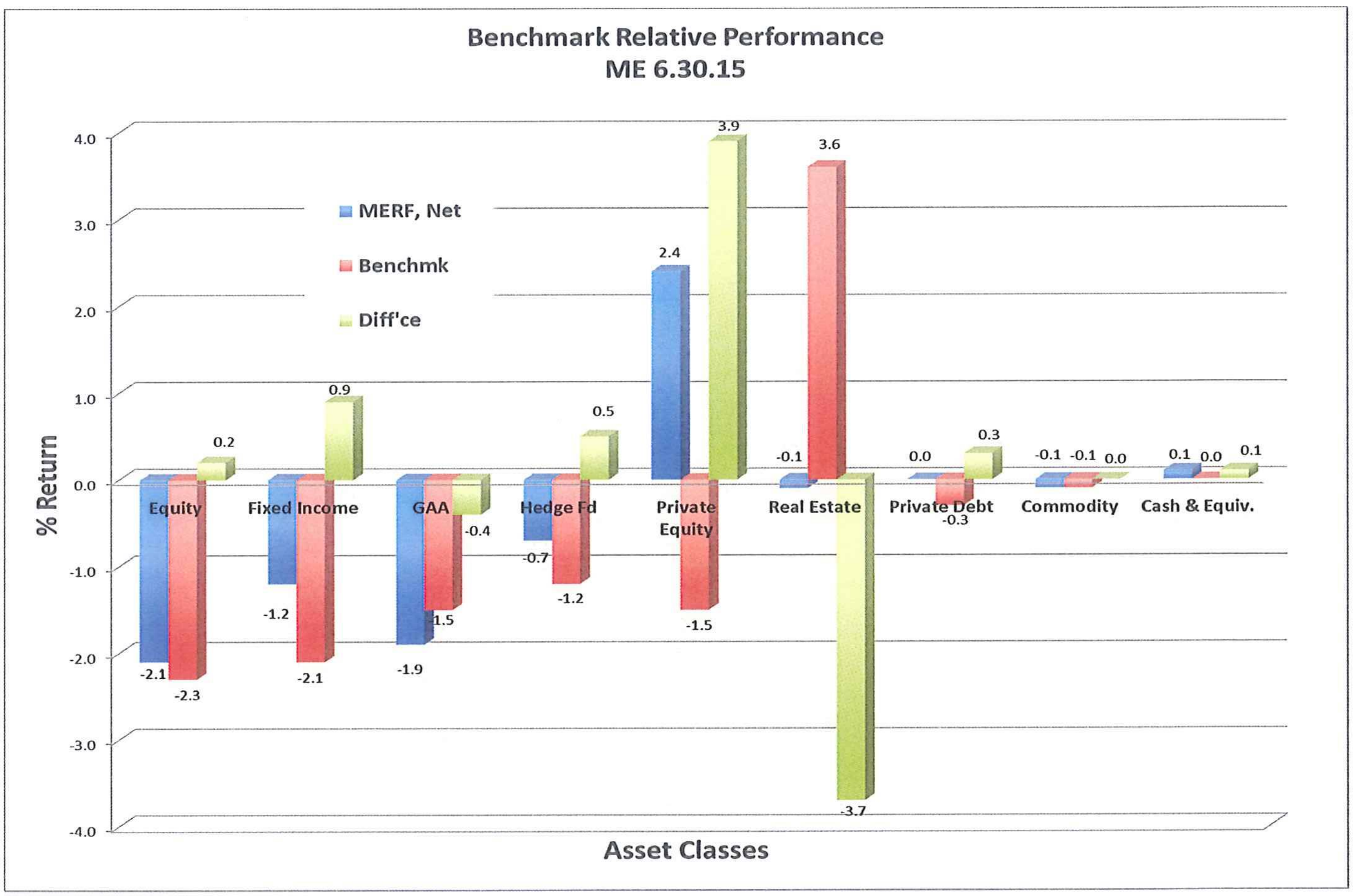
**FROM:** Gary B. Draghi, Director of Investments,
P. Wayne Moore, Assistant Director of Investments
J. Sean Antoine, Principal Investment Analyst

**DATE:** July 16, 2015

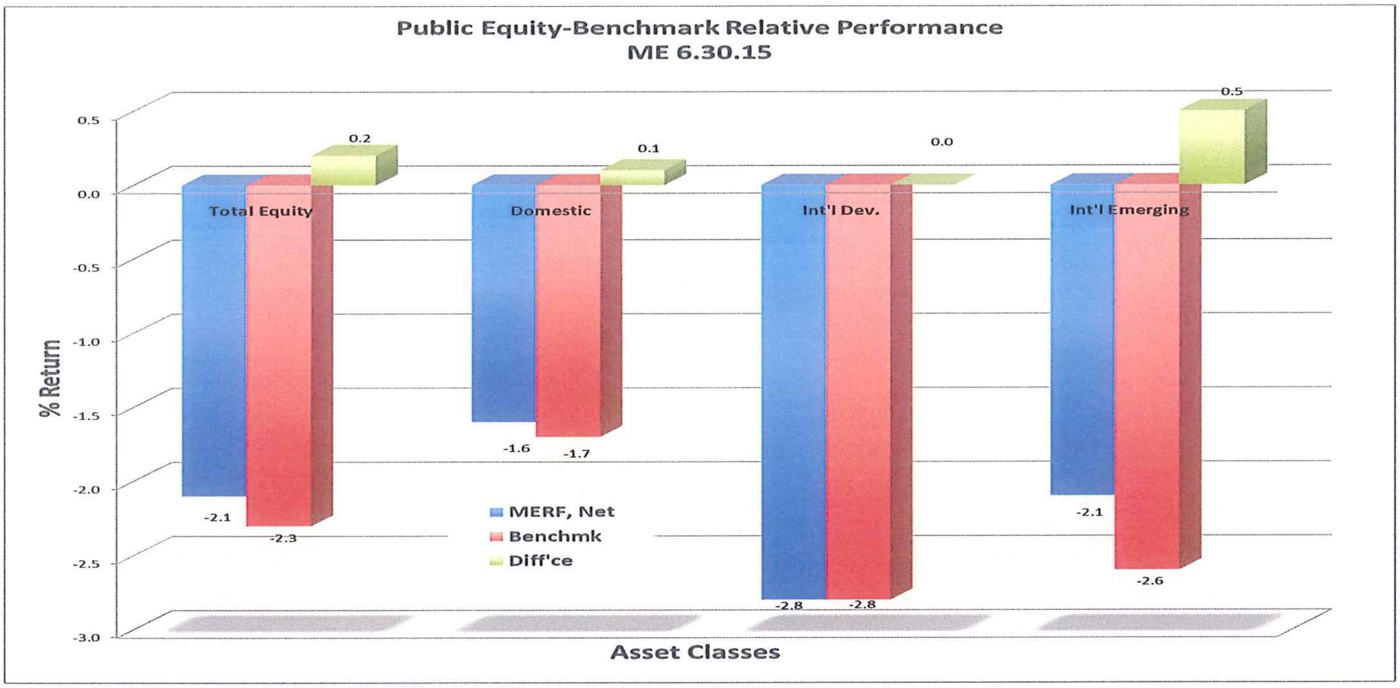
**SUBJECT:** ***Preliminary*** **MERF Investment Portfolio Status, as of June 30, 2015**

**PERFORMANCE:**

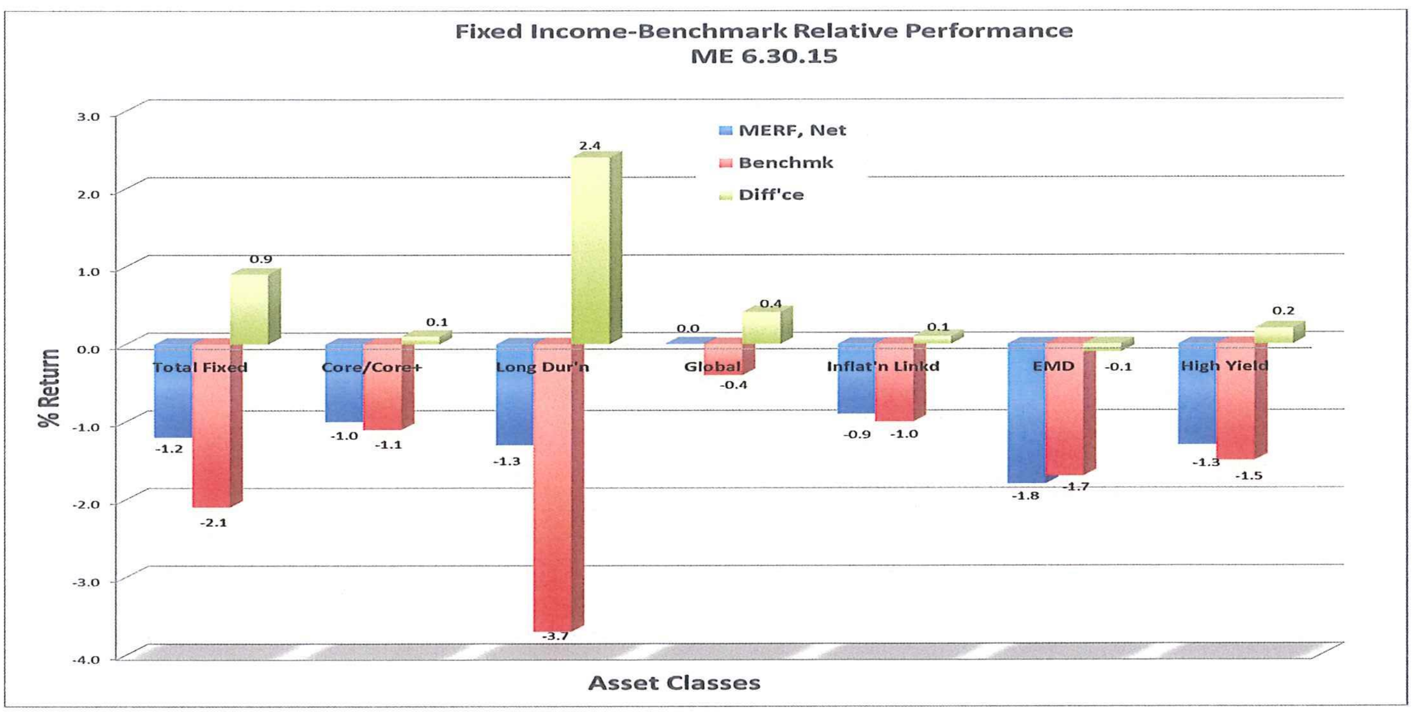
As of June 30, 2015, the MERF's net asset value totaled $1.03 billion. Total fund performance for the month of June, net of fees, was -1.2%, which outperformed the MERF benchmark return of -1.5%, by 30 basis points. The components of monthly performance are illustrated below.



The MERF's public equity portfolio posted a -2.1% return, for the month, outperforming the benchmark return of -2.3%, by 20 basis points. Domestic and emerging markets equities both outperformed for the month, while international equities matched its benchmark.

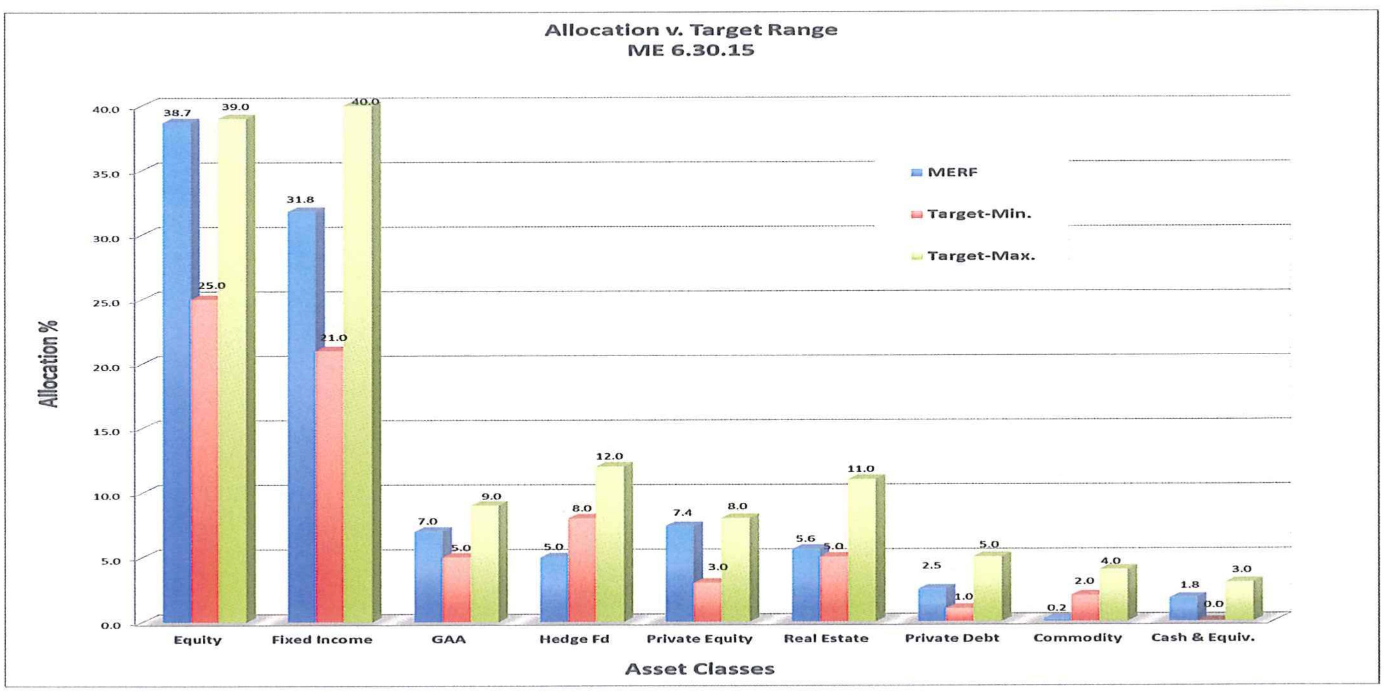



The MERF's overall fixed income performance of -1.2%, net of fees, outperformed the benchmark by 90 basis points, driven by positive benchmark relative results in the face of negative absolute returns. Notably, long duration significantly outperformed for the month.



**ASSET ALLOCATION:**
As of June 2015, the MERF continues to be overweight its custom benchmark targets in equity, fixed income, private equity and cash while hedge funds, real estate, private debt and commodities are below target allocations.


The MERF was within target ranges for all asset classes except hedge funds and commodities. The underweight to commodities remains a tactical position.



# City of Hartford MERF

Net of Fees - Prelim
Performance Page
Period Ending June 30, 2015

| | | | | | | | | Annualized | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Market Value | % of Total Fund | June | Quarter | Fiscal YTD | YTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | Inception to Date | Inception Date |
| **Total Plan Consolidation** | | $1026.0 | 100.0 % | (1.2) % | 0.7 % | 1.5 % | 2.2 % | 1.5 % | 7.8 % | 8.5 % | 5.3 % | 5.8 % | 8.3 % | 1/31/1986 |
| *Policy Benchmark* | (1) | | | (1.5) | 0.0 | 0.5 | 1.9 | 0.5 | 7.6 | 9.0 | 6.2 | 6.4 | 8.3 | 2/28/1990 |
| *Total Plan Wgtd Benchmark* | (2) | | | (1.6) | (0.2) | 0.7 | 1.6 | 0.7 | 8.4 | 8.7 | 6.0 | 6.5 | 7.0 | 9/30/2004 |
| *Policy-Capitalization Based* | (3) | | | (1.4) | (0.5) | 4.1 | 1.8 | 4.1 | 10.7 | 11.2 | 7.4 | 6.8 | 7.1 | 12/31/1996 |
| **Liquidity Portfolio** | (5) | 76.2 | 7.4 | (1.6) | (1.1) | (1.0) | 0.2 | (1.0) | 6.6 | 6.4 | --- | --- | 6.1 | 5/31/2009 |
| **Asset Allocation Fund** | (6) | 59.1 | 5.8 | (2.0) | (1.5) | (1.3) | 0.1 | (1.3) | 8.0 | 8.0 | --- | --- | 8.1 | 4/30/2009 |
| *Asset Allocation Benchmark* | (7) | | | (1.5) | 0.0 | (0.2) | 1.9 | (0.2) | 6.7 | 7.5 | --- | --- | 9.5 | 4/30/2009 |
| **Benefits Payment Fund** | | 17.1 | 1.7 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 1.5 | 1.9 | 10/31/1996 |
| *90 Day T-Bills* | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 1.3 | 2.4 | 12/31/1996 |
| **Global Public Equity** | | 396.8 | 38.7 | (2.1) | 0.4 | (0.3) | 2.5 | (0.3) | 11.3 | 11.5 | 5.1 | --- | 3.7 | 2/28/2007 |
| *Comb Equity Wgtd Benchmark* | (8) | | | (2.3) | 0.9 | 0.1 | 3.8 | 0.1 | 13.9 | 13.3 | 6.5 | 7.2 | 7.9 | 9/30/2004 |
| **US Public Equity** | | 193.6 | 18.9 | (1.6) | 0.4 | 6.1 | 2.7 | 6.1 | 17.4 | 17.5 | 9.3 | --- | 6.5 | 2/28/2007 |
| *Russell 3000 Index* | | | | (1.7) | 0.1 | 7.3 | 1.9 | 7.3 | 17.7 | 17.5 | 9.7 | 8.2 | 6.7 | 10/31/1997 |
| *US Equity Policy-Cap Based* | (9) | | | (1.4) | 0.2 | 7.3 | 2.3 | 7.3 | 17.8 | 17.5 | 9.8 | 8.2 | 8.0 | 12/31/1996 |
| **US Public Equity Active** | | 178.3 | 17.4 | (1.6) | 0.5 | 6.1 | 2.8 | 6.1 | 17.4 | 17.5 | 9.4 | 7.6 | 8.2 | 8/31/1996 |
| *Russell 3000 Index* | | | | (1.7) | 0.1 | 7.3 | 1.9 | 7.3 | 17.7 | 17.5 | 9.7 | 8.2 | 6.7 | 10/31/1997 |
| Atlanta Capital Mgmt Large Cap Growth | | 59.0 | 5.8 | (1.4) | 0.3 | 7.5 | 1.0 | 7.5 | 15.8 | 16.5 | 8.7 | 8.2 | 4.8 | 5/31/1999 |
| *Russell 1000 Growth* | | | | (1.8) | 0.1 | 10.6 | 4.0 | 10.6 | 18.0 | 18.6 | 10.5 | 9.1 | 3.7 | 8/31/1999 |
| Eagle Capital Management Large Cap Value | | 61.1 | 6.0 | (2.4) | 1.4 | 9.5 | 2.1 | 9.5 | 18.3 | 18.2 | 11.2 | 10.1 | 11.0 | 10/31/2003 |
| *Russell 1000 Value* | | | | (2.0) | 0.1 | 4.1 | (0.6) | 4.1 | 17.3 | 16.5 | 8.6 | 7.0 | 8.7 | 10/31/2003 |
| ING Investment Management Small Cap Growth | | 24.5 | 2.4 | 1.6 | 2.3 | 10.9 | 7.7 | 10.9 | --- | --- | --- | --- | 18.3 | 8/31/2012 |
| *Russell 2000 Growth Index* | | | | 1.3 | 2.0 | 12.3 | 8.7 | 12.3 | --- | --- | --- | --- | 21.5 | 8/31/2012 |
| SouthernSun Asset Management | | 33.6 | 3.3 | (2.9) | (2.2) | (4.7) | 3.8 | (4.7) | 19.5 | --- | --- | --- | 18.2 | 9/30/2010 |
| *Russell 2500 Value Index* | | | | (1.0) | (1.3) | 1.0 | 1.7 | 1.0 | 17.0 | --- | --- | --- | 16.5 | 9/30/2010 |
| **US Public Equity Passive** | | 15.2 | 1.5 | (1.7) | 0.1 | --- | 1.8 | --- | --- | --- | --- | --- | --- | 10/31/1997 |
| SSGA Russell 3000 Index | | 15.2 | 1.5 | (1.7) | 0.1 | --- | 1.8 | --- | --- | --- | --- | --- | --- | 10/31/2002 |
| **International Equity** | | 203.2 | 19.8 | (2.5) | 0.4 | (5.9) | 2.4 | (5.9) | 6.1 | 6.5 | 1.4 | 5.0 | 5.5 | 9/30/1997 |
| *Russell Global ex U.S. Equity Index* | (10) | | | (2.6) | 1.3 | (4.4) | 5.0 | (4.4) | 10.7 | 8.8 | 2.6 | 6.0 | 4.9 | 7/31/1999 |
| **Intl Equity Developed Mkts** | | 112.8 | 11.0 | (2.8) | 0.8 | (2.2) | 4.9 | (2.2) | 8.6 | 8.4 | 2.7 | --- | 2.3 | 2/28/2007 |
| **Intl Developed Markets Active** | | 106.4 | 10.4 | (2.8) | 0.8 | (1.9) | 5.0 | (1.9) | 8.7 | 8.4 | 3.1 | 5.8 | 5.8 | 6/30/1999 |
| *MSCI EAFE Composite* | | | | (2.8) | 0.8 | (3.8) | 5.9 | (3.8) | 12.5 | 10.0 | 2.5 | 5.6 | 4.7 | 6/30/1999 |
| First Eagle Invest Mgmt Intl All Cap | | 49.2 | 4.8 | (1.6) | 1.0 | (1.7) | 6.0 | (1.7) | 10.0 | 9.2 | 6.5 | 8.7 | 13.2 | 10/31/2002 |
| *First Eagle Custom Benchmark* | (11) | | | (2.8) | 0.6 | (4.2) | 5.5 | (4.2) | 12.0 | 9.8 | 3.0 | 6.1 | 12.1 | 10/31/2002 |
| Walter Scott International Ltd Intl Large Growth | | 57.2 | 5.6 | (3.8) | 0.6 | (2.1) | 4.1 | (2.1) | 7.6 | 7.8 | 3.4 | --- | 3.9 | 5/31/2006 |
| *MSCI EAFE Net Dividend* | | | | (2.8) | 0.6 | (4.2) | 5.5 | (4.2) | 12.0 | 9.5 | 2.0 | --- | 2.5 | 5/31/2006 |
| **Intl Developed Markets Passive** | | 6.3 | 0.6 | (2.9) | 0.6 | --- | 4.6 | --- | --- | --- | --- | --- | --- | 7/31/2014 |
| SSGA EAFE Index Fund | | 5.8 | 0.6 | (2.9) | 0.7 | (2.5) | 5.7 | (2.5) | --- | --- | --- | --- | (2.5) | 7/31/2014 |
| SSGA Daily MSCI CAD Index | | 0.5 | 0.1 | (2.9) | (0.7) | --- | (6.6) | --- | --- | --- | --- | --- | (14.8) | 7/31/2014 |
| **Intl Emerging Markets** | | 90.5 | 8.8 | (2.1) | (0.1) | (10.2) | (0.6) | (10.2) | 2.1 | --- | --- | --- | --- | 2/28/2007 |
| *MSCI Emerging Net Dividend* | | | | (2.6) | 0.7 | (5.2) | 2.9 | (5.2) | 3.7 | 3.7 | 0.8 | 8.1 | 10.3 | 1/31/2001 |
| **Intl Emerging Active** | | 84.6 | 8.2 | (2.0) | (0.1) | (10.5) | (0.9) | (10.5) | 2.0 | 2.6 | (1.6) | 6.8 | 7.1 | 4/30/2000 |
| *MSCI Emerging Net Dividend* | | | | (2.6) | 0.7 | (5.2) | 2.9 | (5.2) | 3.7 | 3.7 | 0.8 | 8.1 | 10.3 | 1/31/2001 |
| Mondrian Inv Partners - EME | | 34.6 | 3.4 | (1.9) | (1.4) | (10.8) | (2.6) | (10.8) | 0.6 | --- | --- | --- | 1.9 | 6/30/2012 |
| Parametric EV | | 50.0 | 4.9 | (2.2) | 0.8 | (10.3) | 0.3 | (10.3) | 3.0 | --- | --- | --- | 4.1 | 6/30/2012 |
| **Intl Emerging Passive** | | 5.9 | 0.6 | (2.7) | 0.7 | --- | 3.3 | --- | --- | --- | --- | --- | (6.5) | 8/31/2014 |
| SSGA Daily MSCI EM Index | | 5.9 | 0.6 | (2.7) | 0.7 | --- | 3.3 | --- | --- | --- | --- | --- | (6.5) | 8/31/2014 |

# City of Hartford MERF

Net of Fees - Prelim
Performance Page
Period Ending June 30, 2015

| | | Market Value | % of Total Fund | June | Quarter | Fiscal YTD | YTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | Inception to Date | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Annualized | | | | | | |
| **Total Fixed Income** | | **$325.9** | **31.8 %** | **(1.2) %** | **(1.1) %** | **(0.7) %** | **0.2 %** | **(0.7) %** | **2.2 %** | **5.0 %** | **5.6 %** | **5.2 %** | **6.0 %** | **7/31/1997** |
| *Custom Fixed Benchmark* | (14) | | | *(2.1)* | *(2.9)* | *0.0* | *(0.7)* | *0.0* | *2.5* | *5.6* | *6.3* | --- | *6.2* | *1/31/2007* |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *5.5* | *7/31/1997* |
| *Comb Fixed Income Wgtd Bmk* | (15) | | | *(0.9)* | *(1.5)* | *(0.9)* | *(1.0)* | *(0.9)* | *1.0* | *3.1* | *3.9* | *4.1* | *4.2* | *9/30/2004* |
| **US Core/Core Plus** | | **52.7** | **5.1** | **(1.0)** | **(1.5)** | **1.7** | **0.1** | **1.7** | **2.4** | **3.8** | **4.1** | **3.6** | **5.3** | **7/31/1996** |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *5.5* | *12/31/1996* |
| **US Core/Core Plus Fixed Income Active** | | **43.7** | **4.3** | **(1.0)** | **(1.4)** | **1.6** | **0.2** | **1.6** | **2.9** | **4.4** | **4.9** | **4.2** | **5.5** | **7/31/1996** |
| AETNA (AD) GICS | | 0.4 | 0.0 | 0.2 | 0.8 | 3.7 | 1.7 | 3.7 | 3.7 | 5.4 | 5.3 | 4.6 | 5.6 | 8/31/1996 |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *5.5* | *12/31/1996* |
| Columbia Asset Management Co. | | 0.8 | 0.1 | 0.2 | 2.9 | 9.0 | 3.8 | 9.0 | 12.9 | 11.5 | 10.1 | 7.3 | 7.3 | 1/31/1992 |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *5.5* | *12/31/1996* |
| HIMCO Core Plus Fixed Income | | 42.5 | 4.1 | (1.0) | (1.5) | 1.4 | 0.1 | 1.4 | 2.8 | 4.3 | 5.2 | 4.7 | 4.9 | 10/31/2002 |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *4.5* | *10/31/2002* |
| **US Core/Core Plus Passive** | | **9.0** | **0.9** | **(1.1)** | **(1.7)** | **1.9** | **(0.1)** | **1.9** | **1.4** | **2.2** | **2.4** | **2.9** | **4.4** | **5/31/1998** |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | *3.3* | *4.6* | *4.4* | *5.3* | *5/31/1998* |
| SSGA Barclays Agg. IDX AAF | | 9.0 | 0.9 | (1.1) | (1.7) | 1.8 | (0.1) | 1.8 | 1.7 | --- | --- | --- | 3.1 | 5/31/2011 |
| *Barclays Capital Aggregate Bond* | | | | *(1.1)* | *(1.7)* | *1.9* | *(0.1)* | *1.9* | *1.8* | --- | --- | --- | *3.3* | *5/31/2011* |
| **Total Long Duration** | | **72.4** | **7.1** | **(1.3)** | **(3.5)** | **(1.2)** | **(2.4)** | **(1.2)** | **1.3** | **5.9** | **8.4** | --- | **7.8** | **3/31/2008** |
| *Barclays Capital Long Govt/Credit* | | | | *(3.7)* | *(7.6)* | *1.9* | *(4.5)* | *1.9* | *2.5* | *6.7* | *7.9* | --- | *7.3* | *3/31/2008* |
| **Long Duration Active** | | **67.3** | **6.6** | **(1.1)** | **(3.2)** | **(1.7)** | **(2.3)** | **(1.7)** | **1.4** | **5.9** | **8.3** | --- | **8.2** | **6/30/2008** |
| PIMCO Long Duration Fixed | | 67.3 | 6.6 | (1.1) | (3.2) | (1.7) | (2.3) | (1.7) | 1.4 | 5.9 | 7.8 | --- | 7.7 | 6/30/2008 |
| *Barclays Capital Long Govt/Credit* | | | | *(3.7)* | *(7.6)* | *1.9* | *(4.5)* | *1.9* | *2.5* | *6.7* | *7.9* | --- | *7.8* | *6/30/2008* |
| **Long Duration Passive** | | **5.1** | **0.5** | **(3.7)** | **(7.5)** | **2.4** | **(4.3)** | **2.4** | **(0.4)** | **5.4** | **6.8** | --- | **6.5** | **3/31/2008** |
| SSGA Long US Gov/Credit | | 5.1 | 0.5 | (3.7) | (7.5) | --- | (4.3) | --- | --- | --- | --- | --- | 1.7 | 8/31/2014 |
| *Barclays Capital Long Govt/Credit* | | | | *(3.7)* | *(7.6)* | *1.9* | *(4.5)* | *1.9* | *2.5* | *6.7* | *7.9* | --- | *7.3* | *3/31/2008* |
| **Global Fixed** | | **34.0** | **3.3** | **0.1** | **(0.5)** | **(5.6)** | **(2.3)** | **(5.6)** | **(1.6)** | **1.4** | **2.5** | --- | **3.8** | **2/28/2007** |
| Barclays Capital Aggregate Global Un-Hedged | | | | (0.4) | (1.2) | (7.1) | (3.1) | (7.1) | (0.8) | 2.1 | 2.6 | --- | 3.8 | 2/28/2007 |
| **Global Fixed - Active** | | **31.3** | **3.0** | **0.1** | **(0.4)** | **(4.7)** | **(1.9)** | **(4.7)** | **(1.3)** | **1.5** | **3.4** | --- | **4.5** | **2/28/2007** |
| Mondrian | | 31.3 | 3.0 | 0.1 | (0.4) | (4.7) | (1.9) | (4.7) | (1.3) | 1.5 | --- | --- | 1.7 | 1/31/2010 |
| *Mondrian Custom Benchmark* | | | | *(0.4)* | *(1.2)* | *(7.1)* | *(3.1)* | *(7.1)* | *(0.8)* | *2.1* | --- | --- | *1.8* | *1/31/2010* |
| **Global Fixed - Passive** | | **2.7** | **0.3** | **0.1** | **(1.6)** | --- | **(5.9)** | --- | --- | --- | --- | --- | --- | **7/31/2014** |
| SSGA World Government Bond AAF | | 2.7 | 0.3 | 0.1 | (1.6) | --- | (5.9) | --- | --- | --- | --- | --- | --- | 7/31/2014 |
| **Inflation Linked Composite** | | **49.8** | **4.9** | **(0.9)** | **(0.9)** | **(1.2)** | **0.6** | **(1.2)** | **(0.4)** | **3.5** | **3.8** | --- | **5.0** | **2/28/2007** |
| *Barclays Capital Treasury US TIPS Index* | | | | *(1.0)* | *(1.1)* | *(1.7)* | *0.3* | *(1.7)* | *(0.8)* | *3.3* | *3.5* | *4.1* | *4.3* | *4/30/2005* |
| Brown Brothers Harriman & Co. TIPS | | 47.4 | 4.6 | (0.9) | (0.9) | (1.2) | 0.7 | (1.2) | (0.4) | 3.5 | 3.8 | 4.3 | 4.4 | 4/30/2005 |
| SSGA US Tips Index | | 2.4 | 0.2 | (1.0) | (1.1) | --- | 0.3 | --- | --- | --- | --- | --- | (1.9) | 8/31/2014 |
| **Emerging Mkts Debt** | | **74.6** | **7.3** | **(1.8)** | **0.6** | **(0.4)** | **2.2** | **(0.4)** | **5.6** | **8.0** | **9.0** | --- | **8.0** | **2/28/2007** |
| *JPM EMBI Global* | | | | *(1.7)* | *(0.3)* | *(1.6)* | *1.8* | *(1.6)* | *3.4* | *6.5* | *7.4* | --- | *7.4* | *8/31/2005* |
| Prudential Emerging Markets Debt | | 71.1 | 6.9 | (1.8) | 0.7 | 0.7 | 2.6 | 0.7 | 6.0 | 8.2 | 9.1 | --- | 9.0 | 8/31/2005 |
| SSGA Passive EM Loc Curr | | 3.6 | 0.3 | (1.3) | (1.1) | --- | (5.1) | --- | --- | --- | --- | --- | (14.8) | 8/31/2014 |
| **High Yield** | | **42.4** | **4.1** | **(1.3)** | **0.3** | **0.9** | **3.3** | **0.9** | **5.5** | **6.4** | --- | --- | **6.4** | **7/31/2010** |
| *Citigroup High Yield Market Index* | | | | *(1.5)* | *0.2* | *(0.9)* | *2.6* | *(0.9)* | *6.4* | *8.4* | --- | --- | *8.4* | *7/31/2010* |
| Shenkman Capital | | 40.1 | 3.9 | (1.3) | 0.3 | 0.9 | 3.3 | 0.9 | 5.5 | 6.5 | --- | --- | 6.5 | 7/31/2010 |
| SSGA High Yield Bond | | 2.4 | 0.2 | (1.8) | (0.4) | --- | 2.3 | --- | --- | --- | --- | --- | 1.3 | 8/31/2014 |
| **Cash - Active** | (16) | **18.6** | **1.8** | **0.1** | **0.2** | **0.8** | **0.4** | **0.8** | **0.5** | **0.5** | **0.9** | **1.9** | **2.4** | **7/31/1997** |
| *U.S. Treasury 3 Month T-bills* | (17) | | | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.1* | *0.1* | *0.1* | *1.3* | *2.4* | *12/31/1996* |

# City of Hartford MERF

Net of Fees - Prelim

Performance Page

Period Ending June 30, 2015

| | | Market Value | % of Total Fund | June | Quarter | Fiscal YTD | YTD | 1 Year | 3 Years | 5 Years | 7 Years | 10 Years | Inception to Date | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Annualized | | | | | | |
| **Global Asset Allocation** | | $72.2 | 7.0 % | (1.9) % | 0.8 % | 0.9 % | 4.1 % | 0.9 % | 8.5 % | --- % | --- % | --- % | 7.1 % | 4/30/2012 |
| *60 MSCI World 40 Citi WGBI* | | | | *(1.5)* | *(0.3)* | *(2.5)* | *0.2* | *(2.5)* | *7.7* | --- | --- | --- | *6.3* | *4/30/2012* |
| Wellington Management Co LLP | (12) | 35.6 | 3.5 | (2.0) | 1.4 | 0.4 | 5.3 | 0.4 | 8.2 | --- | --- | --- | 6.6 | 4/30/2012 |
| *Wellington Benchmark* | | | | *(1.9)* | *(0.2)* | *1.5* | *2.0* | *1.5* | *9.4* | --- | --- | --- | *7.8* | *4/30/2012* |
| Blackrock Global Allocation Fd | (13) | 36.6 | 3.6 | (1.9) | 0.2 | 1.4 | 3.0 | 1.4 | 8.8 | --- | --- | --- | 7.4 | 4/30/2012 |
| *Blackrock Benchmark* | | | | *(1.5)* | *(0.1)* | *(0.4)* | *0.9* | *(0.4)* | *8.1* | --- | --- | --- | *6.8* | *4/30/2012* |
| **Commodities** | | 1.8 | 0.2 | (0.1) | 8.7 | --- | (0.1) | --- | --- | --- | --- | --- | (32.9) | 8/31/2014 |
| SSGA S&P GSCI NL QP CTF | | 1.8 | 0.2 | (0.1) | 8.7 | --- | (0.1) | --- | --- | --- | --- | --- | (32.9) | 8/31/2014 |
| *S&P GSCI* | | | | *(0.1)* | *8.7* | *(36.8)* | *(0.2)* | *(36.8)* | *(10.7)* | *(4.3)* | *(15.6)* | *(6.2)* | --- | |
| **Alternatives** | | 210.7 | 20.5 | 0.7 | 4.0 | 10.1 | 4.1 | 10.1 | 12.3 | 12.5 | 7.8 | --- | 9.3 | 2/28/2007 |
| *Alternatives Benchmark* | (18) | | | *0.3* | *1.4* | *7.7* | *4.1* | *7.7* | *10.5* | *10.1* | *5.2* | --- | *5.4* | *2/28/2007* |
| **Private Equity** | | 76.4 | 7.4 | 2.4 | 9.2 | 17.8 | 8.8 | 17.8 | 17.0 | 15.6 | 10.1 | 13.7 | 13.8 | 12/31/2002 |
| *Russell 3000 + 300 bps* | | | | *(1.5)* | *0.7* | *10.3* | *3.4* | *10.3* | *20.7* | *20.5* | *12.7* | *11.2* | *12.3* | *12/31/2002* |
| **Real Estate** | | 57.4 | 5.6 | (0.1) | 1.6 | 7.7 | 1.6 | 7.7 | 6.8 | 5.4 | (3.5) | (4.1) | (4.2) | 7/31/1998 |
| *NCREIF Property(1qtr/Arrears)* | | | | *3.6* | *3.6* | *12.7* | *6.7* | *12.7* | *11.5* | *12.8* | *5.0* | *8.4* | *9.4* | *7/31/1998* |
| **Private Debt** | | 25.4 | 2.5 | 0.0 | 1.8 | 7.5 | (0.6) | 7.5 | --- | --- | --- | --- | 10.4 | 1/31/2013 |
| *Credit Suisse Leveraged Loan Index* | | | | *(0.3)* | *0.8* | *2.2* | *2.9* | *2.2* | *5.3* | *5.8* | *5.3* | *4.7* | --- | |
| **Hedge Fund Composite** | | 51.6 | 5.0 | (0.7) | 0.2 | 3.2 | 2.1 | 3.2 | --- | --- | --- | --- | 2.7 | 5/31/2014 |
| *HFRI Fund of Funds Index* | | | | *(1.2)* | *0.1* | *3.9* | *2.6* | *3.9* | *6.2* | *4.1* | *1.2* | *3.2* | --- | |

## City of Hartford MERF

Net of Fees - Prelim

Performance Page

Period Ending June 30, 2015

| | | Market Value | % of Total Fund | June | Quarter | Fiscal YTD | YTD | 1 Year (Annualized) | 3 Years (Annualized) | 5 Years (Annualized) | 7 Years (Annualized) | 10 Years (Annualized) | Inception to Date (Annualized) | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Plan Consolidation** | | $1026.0 | 100.0 % | (1.2) % | 0.7 % | 1.5 % | 2.2 % | 1.5 % | 7.8 % | 8.5 % | 5.3 % | 5.8 % | 8.3 % | 1/31/1986 |
| *Policy Benchmark* | (1) | | | (1.5) | 0.0 | 0.5 | 1.9 | 0.5 | 7.6 | 9.0 | 6.2 | 6.4 | 8.3 | 2/28/1990 |
| *Total Plan Wgtd Benchmark* | (2) | | | (1.6) | (0.2) | 0.7 | 1.6 | 0.7 | 8.4 | 8.7 | 6.0 | 6.5 | 7.0 | 9/30/2004 |
| *Policy-Capitalization Based* | (3) | | | (1.4) | (0.5) | 4.1 | 1.8 | 4.1 | 10.7 | 11.2 | 7.4 | 6.8 | 7.1 | 12/31/1996 |
| **Liquidity Portfolio** | (5) | 76.2 | 7.4 | (1.6) | (1.1) | (1.0) | 0.2 | (1.0) | 6.6 | 6.4 | --- | --- | 6.1 | 5/31/2009 |
| **Asset Allocation Fund** | (6) | 59.1 | 5.8 | (2.0) | (1.5) | (1.3) | 0.1 | (1.3) | 8.0 | 8.0 | --- | --- | 8.1 | 4/30/2009 |
| *Asset Allocation Benchmark* | (7) | | | (1.5) | 0.0 | (0.2) | 1.9 | (0.2) | 6.7 | 7.5 | --- | --- | 9.5 | 4/30/2009 |
| **Benefits Payment Fund** | | 17.1 | 1.7 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 | 1.5 | 1.9 | 10/31/1996 |
| *U.S. Treasury 3 Month T-bills* | | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 1.3 | 2.4 | 12/31/1996 |
| **Global Public Equity** | | 396.8 | 38.7 | (2.1) | 0.4 | (0.3) | 2.5 | (0.3) | 11.3 | 11.5 | 5.1 | --- | 3.7 | 2/28/2007 |
| *Comb Equity Wgtd Benchmark* | (8) | | | (2.3) | 0.9 | 0.1 | 3.8 | 0.1 | 13.9 | 13.3 | 6.5 | 7.2 | 7.9 | 9/30/2004 |
| **US Public Equity** | | 193.6 | 18.9 | (1.6) | 0.4 | 6.1 | 2.7 | 6.1 | 17.4 | 17.5 | 9.3 | --- | 6.5 | 2/28/2007 |
| *Russell 3000 Index* | | | | (1.7) | 0.1 | 7.3 | 1.9 | 7.3 | 17.7 | 17.5 | 9.7 | 8.2 | 8.3 | 7/31/1996 |
| *US Equity Policy-Cap Based* | (9) | | | (1.4) | 0.2 | 7.3 | 2.3 | 7.3 | 17.8 | 17.5 | 9.8 | 8.2 | 8.0 | 12/31/1996 |
| **US Public Equity Active** | | 178.3 | 17.4 | (1.6) | 0.5 | 6.1 | 2.8 | 6.1 | 17.4 | 17.5 | 9.4 | 7.6 | 8.2 | 8/31/1996 |
| **US Public Equity Passive** | | 15.2 | 1.5 | (1.7) | 0.1 | --- | 1.8 | --- | --- | --- | --- | --- | --- | 10/31/1997 |
| **International Equity** | | 203.2 | 19.8 | (2.5) | 0.4 | (5.9) | 2.4 | (5.9) | 6.1 | 6.5 | 1.4 | 5.0 | 5.5 | 9/30/1997 |
| *Russell Global Ex-US Equity* | (10) | | | (2.6) | 1.3 | (4.4) | 5.0 | (4.4) | 10.7 | 8.8 | 2.6 | 6.0 | 4.9 | 7/31/1999 |
| Intl Equity Developed Mkts | | 112.8 | 11.0 | (2.8) | 0.8 | (2.2) | 4.9 | (2.2) | 8.6 | 8.4 | 2.7 | --- | 2.3 | 2/28/2007 |
| Intl Emerging Markets | | 90.5 | 8.8 | (2.1) | (0.1) | (10.2) | (0.6) | (10.2) | 2.1 | --- | --- | --- | --- | 2/28/2007 |
| **Global Asset Allocation** | | 72.2 | 7.0 | (1.9) | 0.8 | 0.9 | 4.1 | 0.9 | 8.5 | --- | --- | --- | 7.1 | 4/30/2012 |
| *60 MSCI World 40 Citi WGBI* | | | | (1.5) | (0.3) | (2.5) | 0.2 | (2.5) | 7.7 | --- | --- | --- | 6.3 | 4/30/2012 |
| **Commodities** | | 1.8 | 0.2 | (0.1) | 8.7 | --- | (0.1) | --- | --- | --- | --- | --- | (32.9) | 8/31/2014 |
| *S&P GSCI* | | | | (0.1) | 8.7 | (36.8) | (0.2) | (36.8) | (10.7) | (4.3) | (15.6) | (6.2) | --- | |
| **Total Fixed Income** | | 325.9 | 31.8 | (1.2) | (1.1) | (0.7) | 0.2 | (0.7) | 2.2 | 5.0 | 5.6 | 5.2 | 6.0 | 7/31/1997 |
| *Custom Fixed Benchmark* | (11) | | | (2.1) | (2.9) | 0.0 | (0.7) | 0.0 | 2.5 | 5.6 | 6.3 | --- | 6.2 | 1/31/2007 |
| *Barclays Capital Aggregate Bond* | | | | (1.1) | (1.7) | 1.9 | (0.1) | 1.9 | 1.8 | 3.3 | 4.6 | 4.4 | 5.5 | 7/31/1997 |
| *Comb Fixed Income Wgtd Bmk* | (12) | | | (0.9) | (1.5) | (0.9) | (1.0) | (0.9) | 1.0 | 3.1 | 3.9 | 4.1 | 4.2 | 9/30/2004 |
| US Core/Core Plus | | 52.7 | 5.1 | (1.0) | (1.5) | 1.7 | 0.1 | 1.7 | 2.4 | 3.8 | 4.1 | 3.6 | 5.3 | 7/31/1996 |
| Total Long Duration | | 72.4 | 7.1 | (1.3) | (3.5) | (1.2) | (2.4) | (1.2) | 1.3 | 5.9 | 8.4 | --- | 7.8 | 3/31/2008 |
| Global Fixed | | 34.0 | 3.3 | 0.1 | (0.5) | (5.6) | (2.3) | (5.6) | (1.6) | 1.4 | 2.5 | --- | 3.8 | 2/28/2007 |
| Inflation Linked Composite | | 49.8 | 4.9 | (0.9) | (0.9) | (1.2) | 0.6 | (1.2) | (0.4) | 3.5 | 3.8 | --- | 5.0 | 2/28/2007 |
| Emerging Mkts Debt | | 74.6 | 7.3 | (1.8) | 0.6 | (0.4) | 2.2 | (0.4) | 5.6 | 8.0 | 9.0 | --- | 8.0 | 2/28/2007 |
| High Yield | | 42.4 | 4.1 | (1.3) | 0.3 | 0.9 | 3.3 | 0.9 | 5.5 | 6.4 | --- | --- | 6.4 | 7/31/2010 |
| **Alternatives** | | 210.7 | 20.5 | 0.7 | 4.0 | 10.1 | 4.1 | 10.1 | 12.3 | 12.5 | 7.8 | --- | 9.3 | 2/28/2007 |
| *Alternatives Benchmark* | (14) | | | 0.3 | 1.4 | 7.7 | 4.1 | 7.7 | 10.5 | 10.1 | 5.2 | --- | 5.4 | 2/28/2007 |
| Private Equity | | 76.4 | 7.4 | 2.4 | 9.2 | 17.8 | 8.8 | 17.8 | 17.0 | 15.6 | 10.1 | 13.7 | 13.8 | 12/31/2002 |
| Real Estate | | 57.4 | 5.6 | (0.1) | 1.6 | 7.7 | 1.6 | 7.7 | 6.8 | 5.4 | (3.5) | (4.1) | (4.2) | 7/31/1998 |
| Private Debt | | 25.4 | 2.5 | 0.0 | 1.8 | 7.5 | (0.6) | 7.5 | --- | --- | --- | --- | 10.4 | 1/31/2013 |
| Hedge Fund | | 51.6 | 5.0 | (0.7) | 0.2 | 3.2 | 2.1 | 3.2 | --- | --- | --- | --- | 2.7 | 5/31/2014 |
| **Cash - Active** | | 18.6 | 1.8 | 0.1 | 0.2 | 0.8 | 0.4 | 0.8 | 0.5 | 0.5 | 0.9 | 1.9 | 2.4 | 7/31/1997 |
| *90 Day T-Bills* | (13) | | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 1.3 | 2.4 | 12/31/1996 |

DATA INPUT SHEET June 2015

= Input required

| | Return % | | | Allocation Percentage | | | | | Asset Value ($ millions) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MERF | Benchmark | Diff'ce | MERF | Target | Diff'ce | Target-Min | Target-Max | MERF | Benchmark |
| **Total Fund** | -1.2 | -1.5 | 0.3 | | | | | | | |
| **Equity** | -2.1 | -2.3 | 0.2 | 38.7 | 32.0 | 6.7 | 25.0 | 39.0 | 396.8 | |
| **Fixed Income** | -1.2 | -2.1 | 0.9 | 31.8 | 30.5 | 1.3 | 21.0 | 40.0 | 325.9 | |
| **GAA** | -1.9 | -1.5 | -0.4 | 7.0 | 7.0 | 0.0 | 5.0 | 9.0 | 72.2 | |
| **Hedge Fd** | -0.7 | -1.2 | 0.5 | 5.0 | 10.0 | -5.0 | 8.0 | 12.0 | 51.6 | |
| **Private Equity** | 2.4 | -1.5 | 3.9 | 7.4 | 5.0 | 2.4 | 3.0 | 8.0 | 76.4 | |
| **Real Estate** | -0.1 | 3.6 | -3.7 | 5.6 | 8.0 | -2.4 | 5.0 | 11.0 | 57.4 | |
| **Private Debt** | 0.0 | -0.3 | 0.3 | 2.5 | 3.0 | -0.5 | 1.0 | 5.0 | 25.4 | |
| **Commodity** | -0.1 | -0.1 | 0.0 | 0.2 | 3.0 | -2.8 | 2.0 | 4.0 | 1.8 | |
| **Cash & Equiv.** | 0.1 | 0.0 | 0.1 | 1.8 | 1.5 | 0.3 | 0.0 | 3.0 | 18.6 | |
| ***CHECK TOTAL*** | | | | 100.0 | 100.0 | 0.0 | 70.0 | 131.0 | 1026.1 | |

| | MERF | Benchmark | Diff'ce |
|---|---|---|---|
| Total Equity | -2.1 | -2.3 | 0.2 |
| Domestic | -1.6 | -1.7 | 0.1 |
| Int'l Dev. | -2.8 | -2.8 | 0.0 |
| Int'l Emerging | -2.1 | -2.6 | 0.5 |
| Total Fixed | -1.2 | -2.1 | 0.9 |
| Core/Core+ | -1.0 | -1.1 | 0.1 |
| Long Dur'n | -1.3 | -3.7 | 2.4 |
| Global | 0.0 | -0.4 | 0.4 |
| Inflat'n Linkd | 0.9 | -1.0 | 1.9 |
| EMD | -1.8 | -1.7 | -0.1 |
| High Yield | -1.3 | -1.5 | 0.2 |

INVESTMENTS:
AGENDA ITEM III

# CITY OF HARTFORD

PENSION COMMISSION

**MEMORANDUM**

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Private Equity Performance Report as of December 31, 2014—With Presentation by Pension Consulting Alliance**

Attached for your review is a presentation booklet prepared by Pension Consulting Alliance ("PCA"), the MERF's private equity consultant, regarding the MERF's private equity portfolio as of December 31, 2014.

PCA's representative will attend the Pension Commission meeting on July 24 to discuss this report with you and receive the benefit of your thinking.

PENSION CONSULTING ALLIANCE

# 4Q 2014

# CITY OF HARTFORD MUNICIPAL EMPLOYEES RETIREMENT FUND (MERF)

## PRIVATE EQUITY PERFORMANCE REPORT

# TABLE OF CONTENTS

## 1.0 INTRODUCTION

Private equity is a long-term asset class with performance results influenced by various factors. This report concentrates on several key exposures that contribute to performance results, including sector, geography, structure and vintage year. In addition, the broad industry trends highlighted herein may affect future performance results.

## 1.1 EXECUTIVE SUMMARY

**Portfolio Highlights**

- As of December 31, 2014, MERF's Private Equity Program (the Program) had $138.5 million in active commitments across 17 partnerships. Approximately 17% of total commitments remain unfunded, with $103.9 million returned in the form of distributions and transferred assets with a remaining market value of $82.4 million as of yearend 2014. This resulted in a net since inception internal rate of return (IRR) of 12.5% and an investment multiple of 1.4x.
- The Program's reported value represents 8.1% of total Plan assets as of the end of the fourth quarter 2014. A longer-term target of 5% for private equity was adopted in 2013, with the creation of new allocations to private debt and real estate. Continued appreciation in 2014 contributed to the current overweighting.
- Cash flows have been net positive (distributions exceeding contributions) over the last four calendar years. The Program is relatively mature and expected to continue to be cash flow positive over the next several years as distribution activity normalizes and the allocation trends towards the 5% target.
- The MERF private equity portfolio has underperformed the policy benchmark (Russell 3000 Index plus 300 basis points) over the latest one-year, three-year, and five-year periods while outperforming over the ten-year period and since inception. The strong rebound of the public equity markets after the finanical crisis (well above return expectations) contributed to the underperformance as private markets appreciation did not keep pace with the public markets.
- As of December 31, 2014, the Program had developed a diversified portfolio of underlying private equity investments. Based on market value, the Program is diversified as follows:
  - By structure- 63% fund of funds, 37% direct partnerships
  - By sector- 52% buyout, 30% venture capital, 17% opportunistic, and 1% mezzanine.
  - By geography- 80% North America, 13% Europe, and 7% ROW

## Industry Trends

- **Fundraising activity in 2014 exceeded 2013 levels and continued with recent year-over-year increases.** Approximately $266 billion of commitments were raised domestically in 2014, with buyouts continuing to represent the largest proportion of capital raised. Fundraising slowed slightly in the first quarter of 2015 as $56.1 billion was raised, on pace to lag 2014.

- **Announced U.S. buyout deal volume exhibited an increase in 2014 from the prior year and 2015 remains steady.** Total announced U.S. buyout deal volume was $207 billion in 2014, up from $167 billion in 2013. At $50 billion in Q1 2015, activity is about on pace to match last year's level.

- **Risk metrics in the leveraged buyout market continued to increase in 2014** as both purchase price multiples and debt multiples rose. The average purchase price multiple in 2014, at 9.8x, increased from 8.8x in 2013 and was well above the ten-year average of 8.8x. Debt multiples in 2014 were at 5.7x, above the 5.3x level for the 2013 calendar year. Purchase price multiples in the first quarter of 2015 continued to increase to 9.9x while debt multiples declined to 5.4x.

- **Venture capital investment activity remained strong in 2014**. Approximately $49.7 billion was invested across 4,399 companies during 2014 which exceeded the $30.1 billion invested across 4,268 companies in 2013.

- **Exit activity for venture capital investments continued to show strength in 2014.** The number of merger and acquisition (M&A) transactions and initial public offerings (IPOs) increased in 2014 and exceeded 2013 levels. The market exhibited a slight decline in the third quarter of 2014, but is on pace to exceed 2013 levels.

- **The outlook for distressed debt investment strategies continues to be mixed.** Debt pricing remains near par (according to the Leveraged Loan Index produced by the Loan Syndications and Trading Association), minimizing the near-term opportunity set for trading strategies. The high yield and leveraged loan markets are large, but default rates have remained low dampening the opportunity set for distressed-for-control opportunities.

## 1.2 OVERVIEW

As of December 31, 2014, the Program had $138.5 million in commitments across 17 partnerships. In aggregate, including the history of transferred partnerships, the Program has drawn down $129.2 million in contributions, received $103.9 million in distributions (including the market value of transferred partnerships), and had a reported value of $82.4 million as of December 31, 2014. The net since inception IRR increased to 12.5% in the fourth quarter of 2014, up from 12.2% one year prior.

**MERF Private Equity Program – one-year change, as of December 31, 2014**
**($ Millions)**

| | Committed | Contributed | Distributed | Market Value | % of Total Assets | Target PE Allocation | Multiple | Since Inception IRR* |
|---|---|---|---|---|---|---|---|---|
| Beginning of Period | $133.5 | $121.3 | $90.2 | $77.3 | 7.7% | 5.0% | 1.4x | 12.2% |
| End of Period | $138.5 | $129.2 | $103.9 | $82.4 | 8.1% | 5.0% | 1.4x | 12.5% |
| ***One-Year Change*** | ***$5.0*** | ***$7.9*** | ***$13.7*** | ***$5.1*** | ***0.4%*** | --- | --- | ***0.3%*** |

* initial capital call on December 13, 2002

The MERF private equity portfolio has underperformed the cash flow adjusted performance of the policy benchmark (Russell 3000 Index plus 300 basis points) over the latest one-year, three-year, and five-year periods while outperforming over the latest ten-year and since inception time periods. The strong rebound of the public equity markets after the financial crisis contributed to the underperformance as public equity has generated returns well above long-term expectations and private markets' appreciation did not keep pace. MERF's experience is similar to other institutional investors with a policy benchmark of a public equity index plus a premium. Overall, MERF's private equity returns have been above long-term expectations for the asset class.

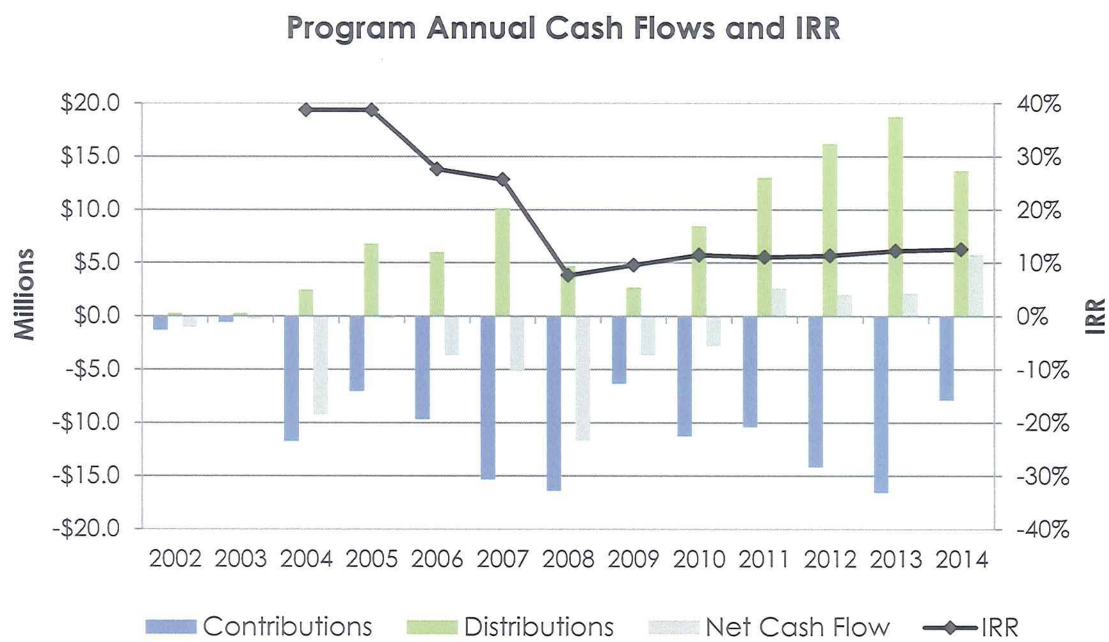
**MERF Private Equity Program Performance**
**vs.**
**Russell 3000 + 300 bps (Benchmark)**

| | One-Year | Three-Year | Five-Year | Ten-Year | Since Inception* |
|---|---|---|---|---|---|
| MERF | 14.7% | 15.2% | 14.8% | 11.8% | 12.5% |
| Russell 3000 + 300 bps | 15.4% | 22.3% | 17.3% | 11.3% | 11.5% |
| ***Difference*** | ***(0.7%)*** | ***(7.1%)*** | ***(2.5%)*** | ***0.5%*** | ***1.0%*** |

* initial capital call on December 13, 2002

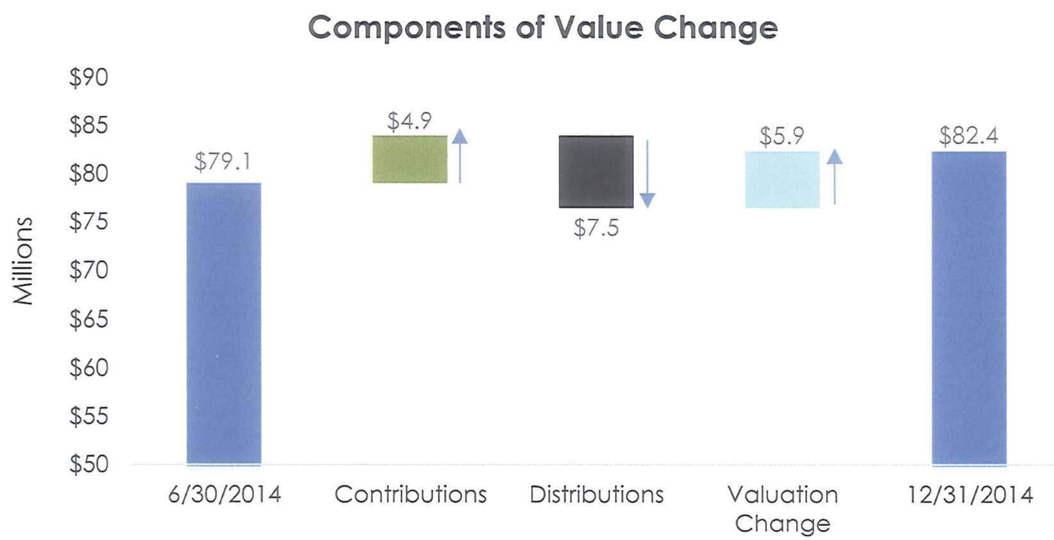
## 1.3 PROGRAM EVOLUTION

The chart below highlights the evolution of the Program in terms of annual cash flows and net since inception IRRs at each year-end. The Program is relatively mature as distributions (green bars) represent a significant proportion of cash flows with material distribution activity beginning in 2004/2005 and the Program has been cash flow positive since 2011. The utilization of secondary fund of funds contributed to the high initial IRR and return of distributions. The decline in the IRR in 2008 highlights the material valuation declines due to the financial crisis. Investment activity and distribution activity declined in 2009 across the private equity markets and is reflected in the Program's cash flows. Investment and liquidation activity returned in 2010 with distributions exhibiting year-over-year increases reaching $18.8 million in 2013. The 2014 calendar year lagged the prior year both in terms of contributions and distributions, but the Program provided material net cash flows of $5.8 million during year.



## 1.4 SIX-MONTH VALUATION CHANGE

During the second half of 2014, the Program increased in value by $3.3 million as contributions to the Program and appreciation outpaced distributions. Approximately $4.9 million of capital was contributed to the Program during the second half of 2014 while $7.5 million was returned to the Program in the form of distributions. The underlying partnerships appreciated by approximately $5.9 million, resulting in an aggregate valuation of $82.4 million as of yearend 2014.




Ares Corporate Opportunities IV ($2.2 million) and Vista Equity Partners V ($1.6 million) drew down the largest amount of capital over the second half of 2014 while Fairview Capital III ($1.5 million), Pioneer Capital Partners II ($1.2 million), and Lexington Capital Partners VII ($1.0 Million) were the largest distributors of capital.

## 2.0 REVIEW OF INVESTMENT PERFORMANCE

This section examines the Program's performance results by partnership type and by investment multiple.

### 2.1 HORIZON PERFORMANCE: By Partnership Type

MERF's private equity commitments are categorized into four partnership types: buyout, opportunistic/special situations, fund of funds and secondaries. The table below shows the horizon returns (i.e. one-year, three-year, etc) for each of these partnership types versus their corresponding peer universes. The opportunistic/special situations category is compared to the buyout universe as these are essentially control-oriented investment strategies that utilize a differentiated approach, thus the opportunistic/special situations naming convention. Overall the Program and the four partnership types have performed well, across time periods, relative to their respective peer universes. Only the secondaries category underperformed its peer universe over the latest one-year and five-year periods, and by a relatively modest amount.

**Partnership Type vs. Peer Benchmark* (as of December 31, 2014)**

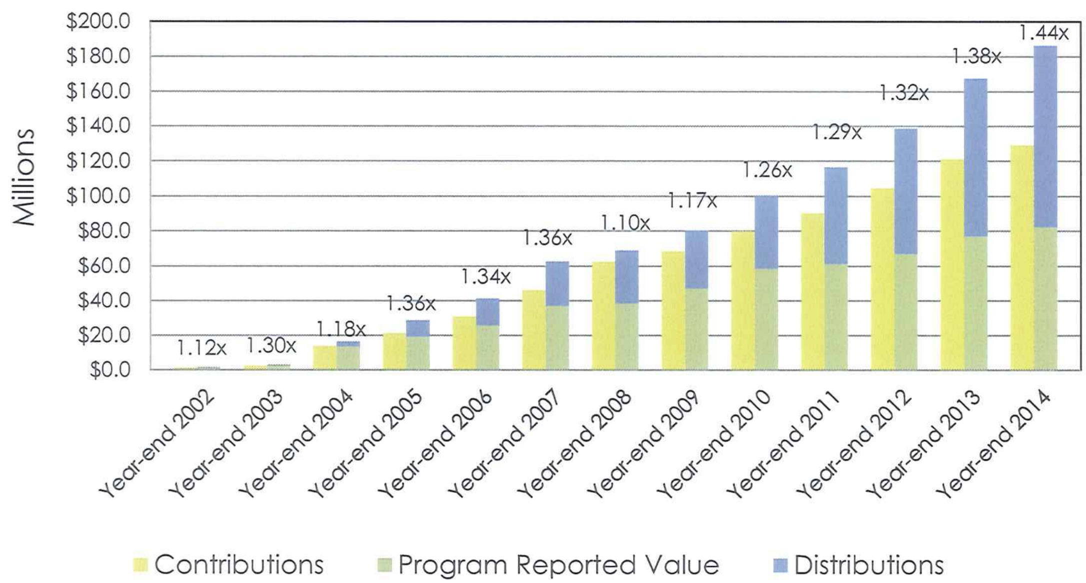
| Partnership Type | Committed Capital (M) | One Year | Three Year | Five Year | Ten Year | Since Inception Net IRR |
|---|---|---|---|---|---|---|
| Buyout | $20.0 | 15.0% | NA | NA | NA | 14.6% |
| Buyout Universe | --- | 9.6% | 15.2% | 14.4% | 12.7% | --- |
| Opportunistic/Special Situations | $26.0 | 13.1% | 16.6% | 18.2% | 16.4% | 15.3% |
| Buyout Universe | --- | 9.6% | 15.2% | 14.4% | 12.7% | --- |
| Fund of Funds | $25.0 | 22.4% | 18.6% | 16.4% | NA | 10.4% |
| Fund of Funds Universe | --- | 12.1% | 12.6% | 12.3% | 9.6% | --- |
| Secondaries | $67.5 | 9.0% | 12.9% | 13.2% | 11.9% | 14.0% |
| Secondary Funds Universe | --- | 10.2% | 12.4% | 13.5% | 11.8% | --- |
| Active Program | $138.5 | 14.7% | 15.5% | 15.2% | 12.5% | 13.2% |
| All Private Equity Universe | --- | 11.0% | 14.0% | 13.6% | 10.9% | --- |

* Cambridge Associates Horizon Summary Report

## 2.2 INVESTMENT MULTIPLE: Contributed Capital vs. Total Value

Another way to view a program's progress is to examine the contributions, distributions, and the fair market value of a portfolio. The Fund's Program has maintained attractive results, as distributions through December 31, 2014 combined with fair market value of investments at that date exceeded contributions. Current results reflect the benefit of the rapid cash payback provided to the Fund, largely, by secondary market fund of funds; in addition to the overall maturation of the Program. In aggregate, the Program has a 1.44x investment multiple (reported value plus distributions divided by contributed capital). The following chart graphically portrays the historical trend of these components.

**Program Investment Multiple**




## 2.4 INVESTMENT PERFORMANCE SUMMARY

The net since inception IRR was 12.5% as of yearend 2014, up from 12.2% at yearend 2013 and up from a low of 7.6% as of year-end 2008. The Program has underperformed the public market proxy over the latest one-year, three-year and five-year periods but has outperformed over the longer ten-year and since inception periods. Public markets exhibited a strong rebound from the depths of the financial crisis, exceeding long-term expectations, while private market valuations did not keep pace. The Program's investment multiple improved to 1.44x, up from 1.10x as of year-end 2008.

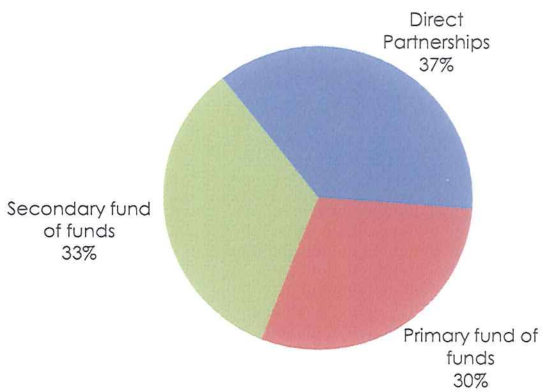
## 3.0 REVIEW OF PORTFOLIO STRUCTURE

This section examines the Program's portfolio structure and diversification from a variety of viewpoints, including: investment structures, sector, geography, industry, vintage year, and firm diversification.

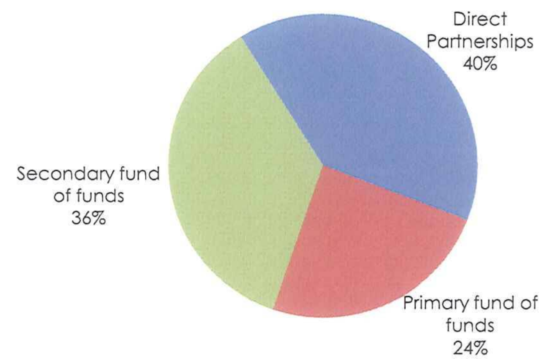
### 3.1 INVESTMENT STRUCTURE EXPOSURES

As of December 31, 2014, the Program was invested across fund of funds (63%) and direct partnerships (37%). On a market value basis, secondary fund of funds represented 33% of the Program while primary fund of funds represented 30%.

**Investment Structure Diversification: market value**




**Investment Structure Diversification: total exposure**




Including unfunded commitments the total exposures (market value plus unfunded commitments) changed slightly. Fund of funds exposure declined to 60% while exposure to directs increased to 40%. Secondary fund of funds comprised 36% of the total exposure while primary fund of funds represented 24%. This evolution of exposures is in-line with the investment plan to opportunistically commit to additional direct partnerships as the program matures, by building upon the already highly diversified portfolio.

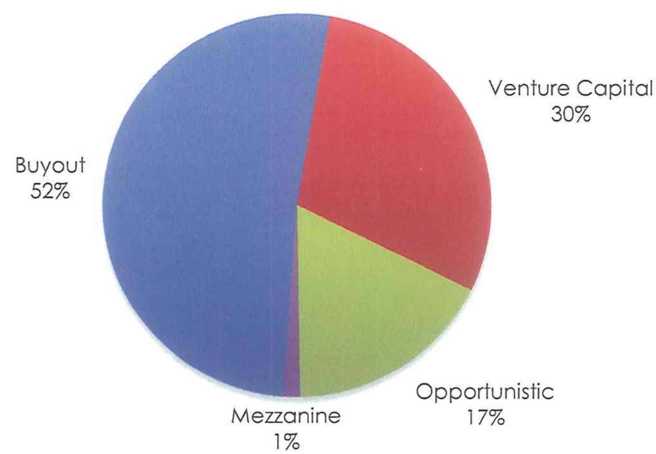
One year ago, secondary fund of funds were the largest proportion of investment structure on a market value basis at 38%, followed by both primary fund of funds and direct partnerships at 31%. On a total exposure basis, direct partnerships increased from 34% one year ago while secondary fund of funds decreased from 41% and primary fund of funds decreased from 25%. A commitment to Vista Equity Partners V over the past year increased the direct partnership exposure, while distribution activity from the secondary fund of funds reduced total exposure.

Compared to three years ago, the market value and total exposure for direct partnerships increased by 9% and 13% respectively, highlighting the evolution towards direct partnership investing. Over the same time period, secondary fund of funds market value and total exposure declined by 9% each while the market value allocation for primary fund of funds remained unchanged and the total exposure declined by 4%.

## 3.2 SECTOR EXPOSURES

Based on reported value provided by the partnerships, the Program is diversified across buyout (52%), venture capital (30%), opportunistic (17%), and mezzanine (1%). The exposure to buyouts may appear high at 52%, but this is actually well below "market" as commitments to buyout funds have represented approximately 72% of domestic commitments raised in the marketplace over the last five-year period. In addition, MERF's opportunistic exposure could also be considered buyout thereby increasing the exposure to 69%. Sector diversification is expected to be maintained as the Fund's current partnerships continue to invest capital and additional partnerships are added to the Program.

**Sector Diversification: market value**

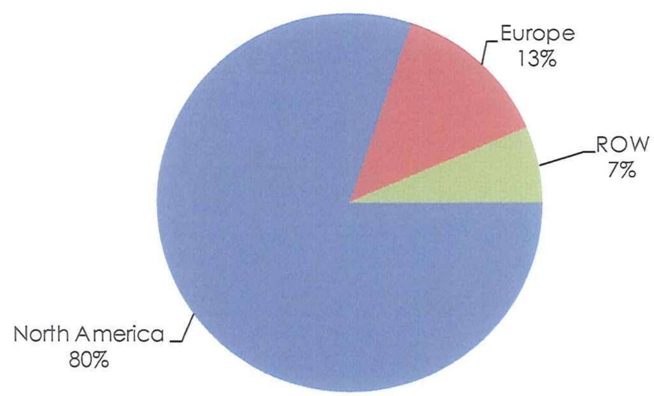



Sector exposures remain in-line with exposures from one year ago, as buyout represented 52% of the Program's market value followed by venture capital at 32%, opportunistic at 16% and mezzanine at 1%.

### 3.3 GEOGRAPHIC DIVERSIFICATION

Based on reported value, the Program is diversified across geographies, including North America (80%), Europe (13%), and "Rest of World" (ROW) at 7%.

**Geographic Diversification: market value**



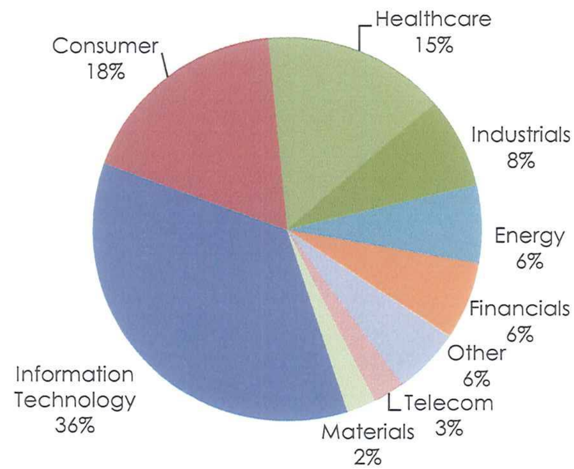

The geographic classification is primarily based on the location of the underlying partnership and therefore the exposure to North America may be somewhat overstated. For example, a fund may be classified as North America since the fund is located in the U.S. and emphasizes U.S. transactions, but may also have some transactions outside of the U.S.

The Program's Non-U.S. exposure remained the same over the past year.

### 3.4 INDUSTRY DIVERSIFICATION

Based on reported value, the Plan's portfolio is diversified across industries. The largest exposures are to information technology (36%), followed by consumer (18%), healthcare (15%), and industrials (8%). The large exposure to information technology is due primarily to Vista Equity Partners, Fairview and Parish, with underlying exposures diversified by sub-sector and investment stage (i.e. buyout and venture capital).

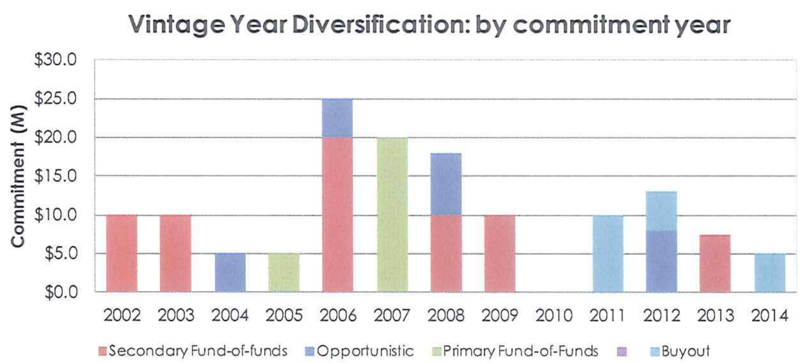
**Industry Diversification: market value**

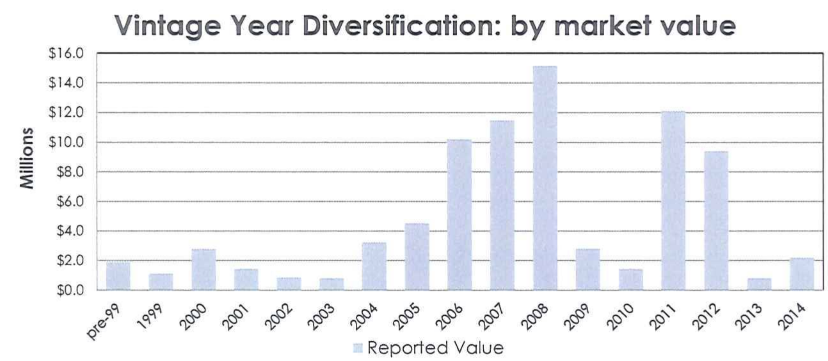



The Russell 3000 Index has the five largest sectors being consumer staples/discretionary (22%), financial services (20%), information technology (16%), healthcare (14%) and producer durables (11%).

## 3.5 VINTAGE YEAR DIVERSIFICATION

In addition, the Program is diversified across vintage years. Exposure to vintage years since 2004 has been gained through a combination of direct partnership commitments, primary market fund of funds, and secondary market fund of funds. No commitments were made in 2010, highlighting the opportunistic nature of the investment program where if no suitable opportunities present themselves, none are made.



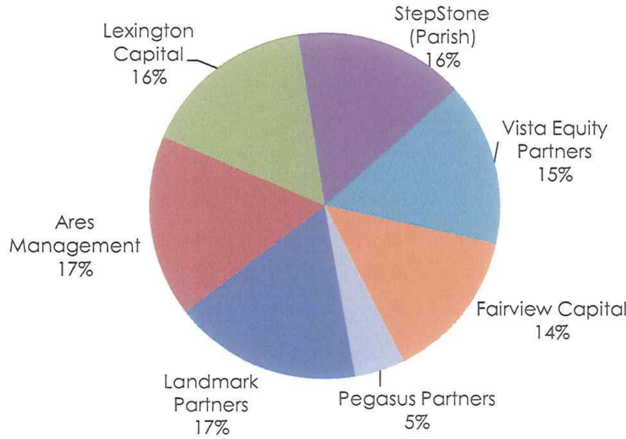




Due to the Program's material commitments to secondary fund of funds, the Program is diversified across vintage years with meaningful exposures beginning in the 2004 vintage year. Going forward, commitments are expected to continue to be diversified across vintage years to gain exposure to investments made at varying points of an economic cycle. As the Program matures and evolves there are expected to be variations in vintage year exposure, but the primary goal is to gain exposure across multiple years and the Program has successfully achieved this diversification to date. Given the combination of MERF's overweight exposure to the private equity asset class relative to target and the high priced environment, increased selectivity is being employed and very limited commitment activity is expected for 2015.

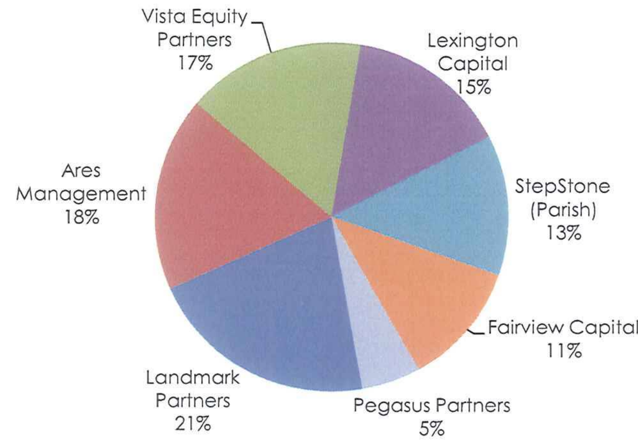
### 3.6 FIRM DIVERSIFICATION

As of December 31, 2014, the Program was invested across seven different management firms. The largest exposures, on a market value basis, are to Landmark Partners and Ares Management at 17% each.

**Firm Diversification: market value**




**Firm Diversification: total exposure**




Including unfunded commitments, the total exposure (market value plus unfunded commitments) changes, due in large part, to the more recent commitments to Landmark XV and ACOF IV. The exposure to Landmark Partners becomes the largest exposure at 21% with Ares Management becoming the second largest exposure at 18%.

### 3.7 PORTFOLIO STRUCTURE SUMMARY

As of December 31, 2014, the Program has developed a diversified portfolio of private equity investments and approximately 17% of the Fund's committed capital remained un-invested. The secondary commitments continue to provide the desired diversification benefits (including sector, manager, and particularly vintage year) and are expected to continue to provide these attractive exposures as the remaining commitments are drawn down and invested. These positions represent attractive core holdings that have allowed the Program to opportunistically commit capital to attractive direct partnerships.

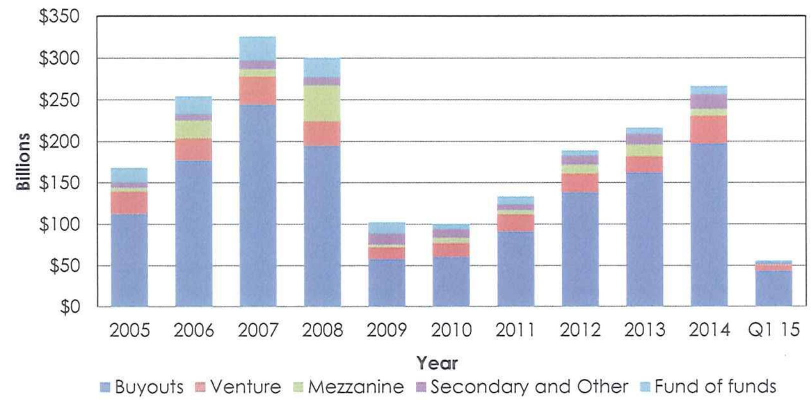
## 4.0 PRIVATE EQUITY MARKET OVERVIEW

This section examines the private equity market environment including fundraising and U.S. buyout market trends, U.S. and European purchase price and debt multiples, recaps and stock repurchases, distressed debt, U.S. venture capital trends, and private equity market performance.

### 4.1 FUNDRAISING TRENDS

- During the 2014 calendar year, approximately $266 billion of commitments were raised continuing to exhibit year-over-year increases. Commitments raised in the full calendar year 2013 reached $217 billion.
- Buyouts continue to represent the largest proportion of commitments raised.
- Fundraising pace slowed slightly in the first three months of 2015.

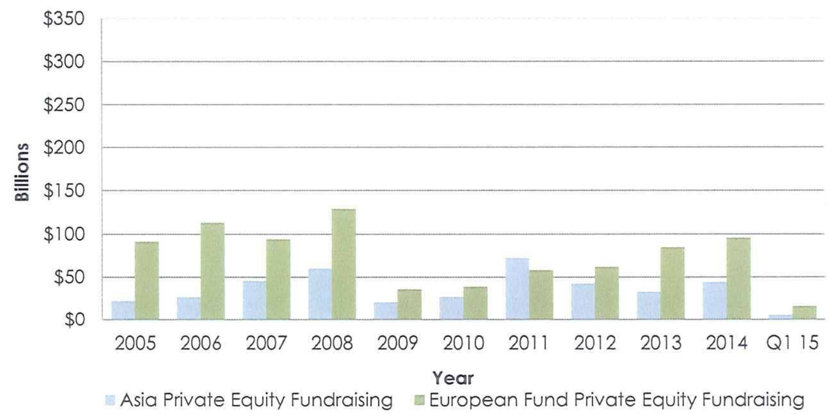
**Commitments to U.S. Private Equity Partnerships**




Source: *Private Equity Analyst* through March 2015

- Commitments to private equity partnerships outside of the U.S. exhibited similar trends in fund raising activity over the past several years.
- Commitments to European funds have historically outpaced those to Asian private equity funds. This continued to be true in 2014 as commitments to Europe outpaced those to Asia.

**Commitments to Non-U.S. Private Equity**

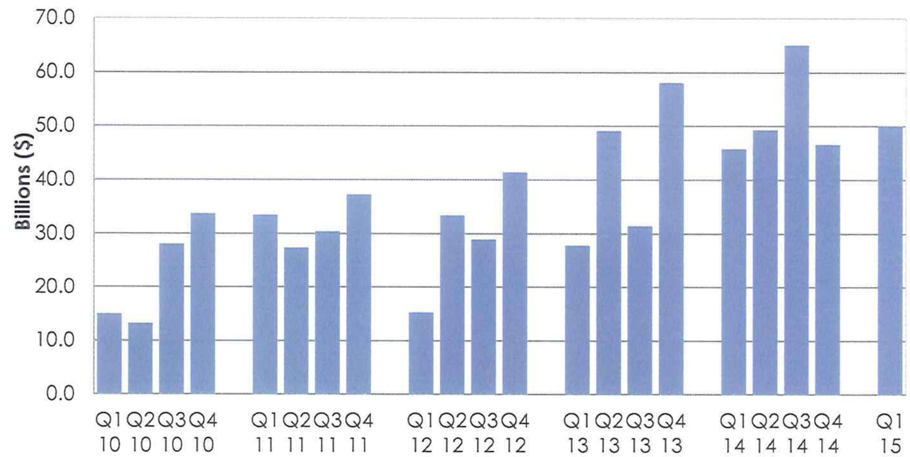



Source: Thomson Reuters, through December 2014

## 4.2 U.S. BUYOUT MARKET TRENDS

- Total announced U.S. buyout deal volume was $207 billion in 2014, up from $167 billion in 2013 and $119 billion in 2012.
- First quarter of 2015 exhibited strong deal volume at $50 billion for the quarter.
- The high-tech industry exhibited the most transaction activity over the latest quarter, followed by consumer products and services, and industrials.

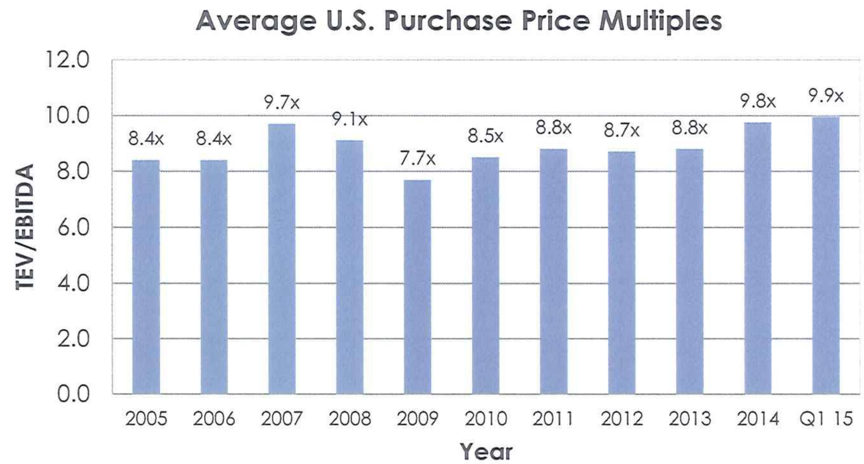
**Announced and Disclosed U.S. Quarterly LBO Deal Value***




* Total deal size (both equity and debt).
Source: *Thomson Reuters Buyouts*

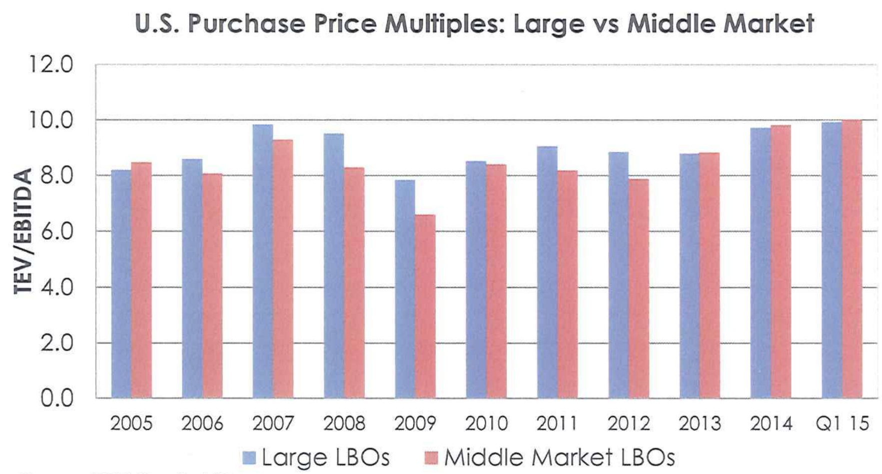
## 4.3 U.S. PURCHASE PRICE MULTIPLES

- Purchase price multiples (as represented by total enterprise value divided by earnings before interest, taxes, depreciation and amortization or EBITDA) rose in 2014 after stabilizing during the 2010 to 2013 time frame.
- The average purchase price multiple last year, at 9.8x, was above the ten-year average of 8.8x and well above the longer-term average (dating back to 1997) of 8.0x. At 9.9x through the first three months of 2015, current multiples are well above long-term averages.




Source: S&P Capital IQ

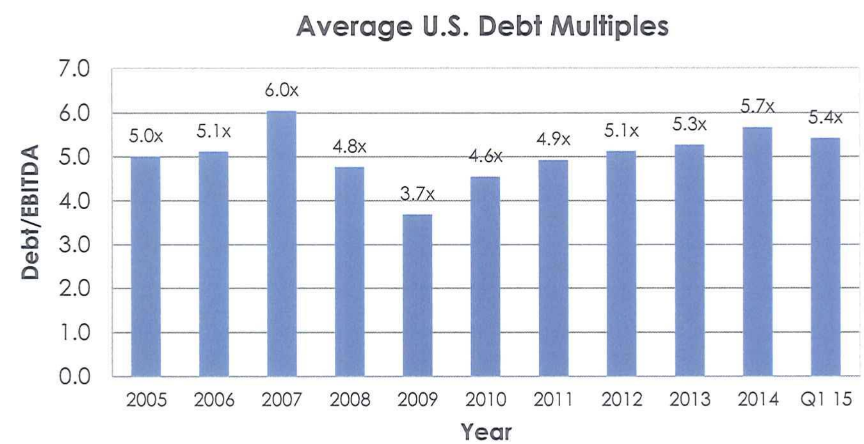
- Purchase price multiples for larger transactions (EBITDAs >$50 million and represented by the blue bars) have historically been higher than the purchase price multiples exhibited in the smaller and middle market (EBITDAs <$50 million and represented by the red bars).
- Post crisis focus shifted towards commitments to smaller/middle market opportunities, suggesting additional competition for deals that could influence the purchase price multiple in the smaller end of the market. In 2014 and the first quarter of 2015, purchase price multiples for small/middle-market transactions slightly exceeded those for larger transactions.




Source: S&P Capital IQ

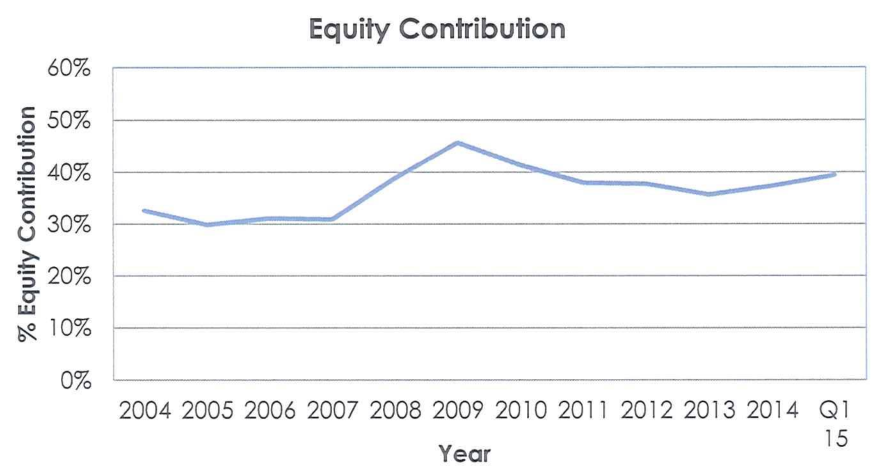
## 4.4 DEBT MULTIPLES

- 2014 exhibited a continued increase in the average debt multiple to 5.7x, just slightly below the 6.0x exhibited in 2007.
- The average debt multiple increased from a low of 3.7x in 2009 as the availability of debt continued to expand and risk appeared to be increasing in buyout transactions.
- Debt multiples ticked down slightly in the first three months of 2015




Source: S&P Capital IQ

- The average equity contribution declined from a high of 46% in 2009 to 37% in 2014.
- Lower equity contributions result in less conservative capital structures for transactions. The long-term impact on performance results remains uncertain.
- The average equity contribution for the first three months of 2015 increased to 39%.

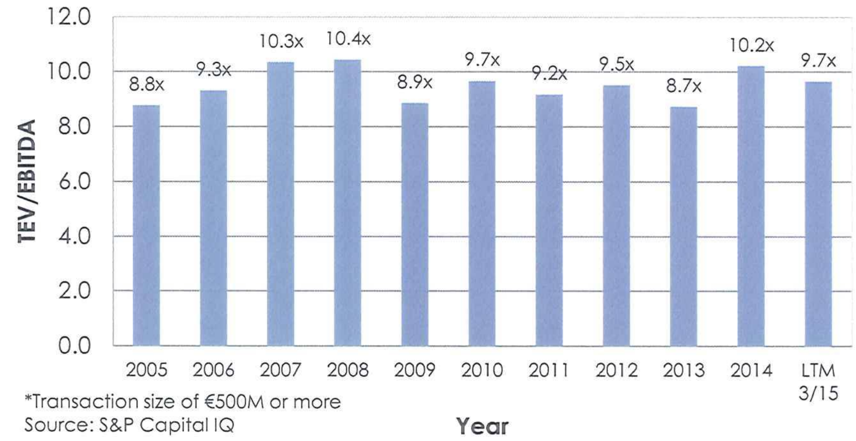



Source: S&P Capital IQ

## 4.5 EUROPEAN PURCHASE PRICE AND DEBT MULTIPLES

- European purchase price multiples in 2014 exhibited an increase to 10.2x, above the ten-year average of 9.5x.
- The first quarter of 2015 exhibited a slight decrease to 9.7x.

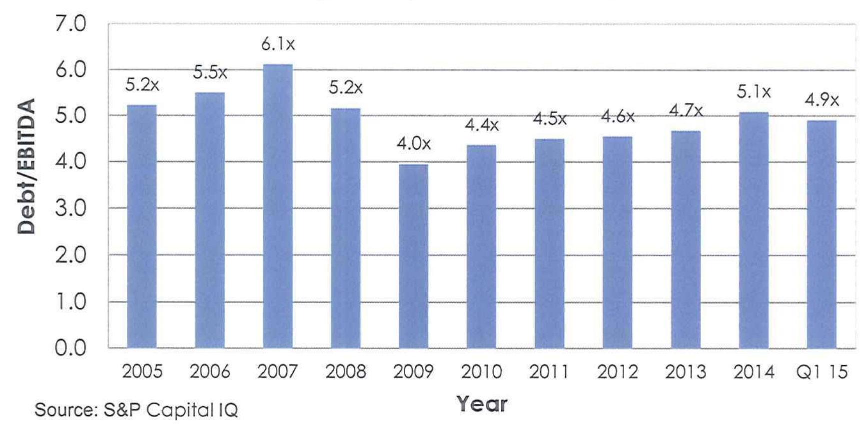
**Average European Purchase Price Multiples**




*Transaction size of €500M or more
Source: S&P Capital IQ

- The average debt multiple for European LBO transactions increased from a low in 2009 of 4.0x, up to 5.1x in 2014.
- As with the U.S. credit markets, 2007 reached a peak in average debt multiples. The dynamics of 2009 and 2010 resulted in more conservative capital structures for transactions completed with increasing debt utilization over recent periods.

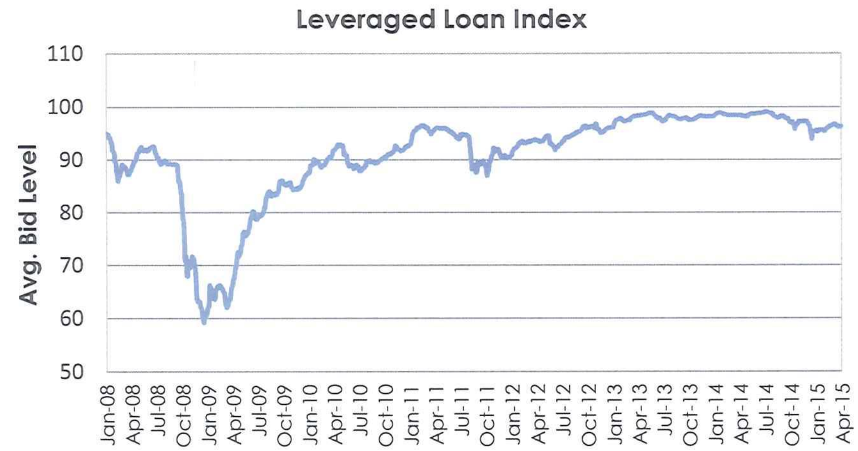
**Average European Debt Multiples**




Source: S&P Capital IQ

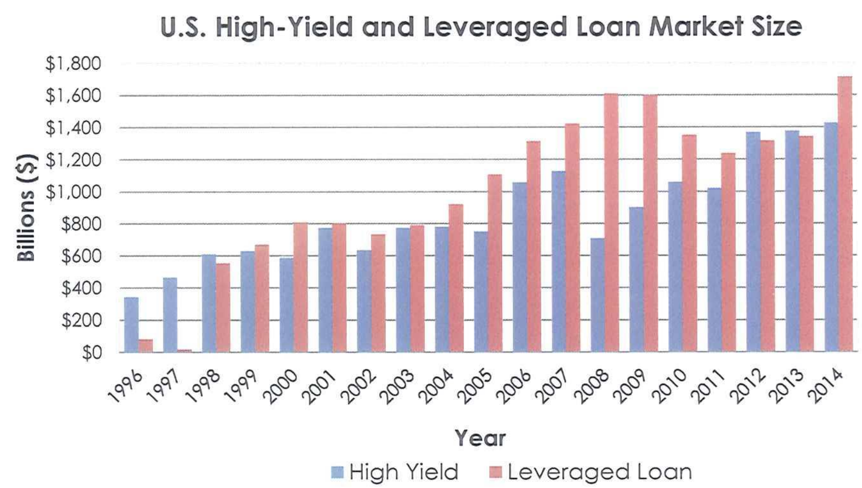
## 4.7 DISTRESSED DEBT

- Interest in the leveraged loan market pushed the price of leveraged loans back towards par after lows seen in 2009, easing the opportunity set for trading strategies.
- Prices continued a steady climb towards par since late 2011, limiting opportunities, but 2015 exhibited some declines from par.




Source: Loan Syndications and Trading Association (LSTA)

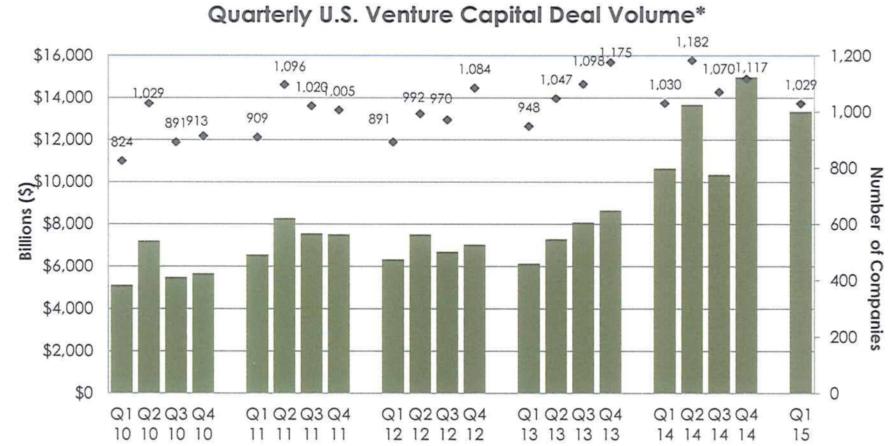
- The opportunity set for debt-for-control strategies remains unclear. The market size for U.S. High Yield and Leverage Loans is large and continues to grow, but default rates remain low.




Source: Thomson Reuters, Credit Suisse Leveraged Finance Market Update

## 4.8 U.S. VENTURE CAPITAL TRENDS

- In 2014, 4,399 companies received approximately $49.7 billion of capital up from 2013 where 4,268 companies received $30.1 billion of capital.
- The average transaction size increased to $11.3 million in the 2014, up from $7.1 million in 2013.
- The software industry continued to receive the largest proportion of capital.

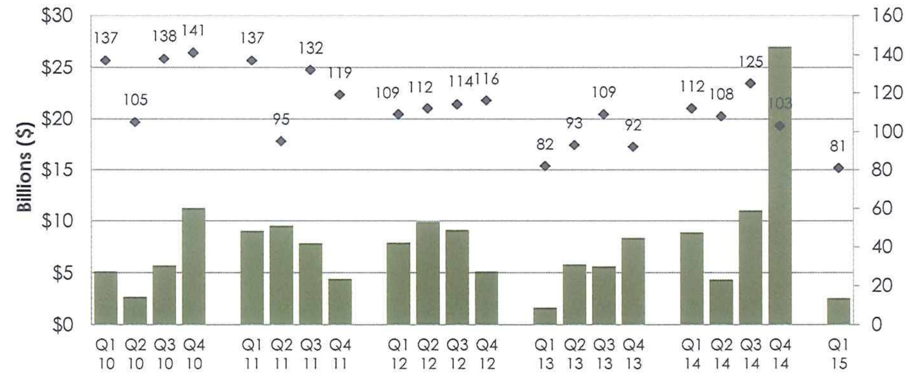



* Only includes equity portion of deal value.
Source: Thomson Reuters

## 4.9 VENTURE CAPITAL EXIT ENVIRONMENT

- M&A value for venture-backed companies increased in 2014, as 448 transactions were completed representing $51.3 billion of value.
- 2015 is off to a slow start for venture M&A transactions as 81 companies transacted, representing only $2.5 billion of value.
- Q4 2014 activity was driven by the $19 billion purchase of Whatsapp.

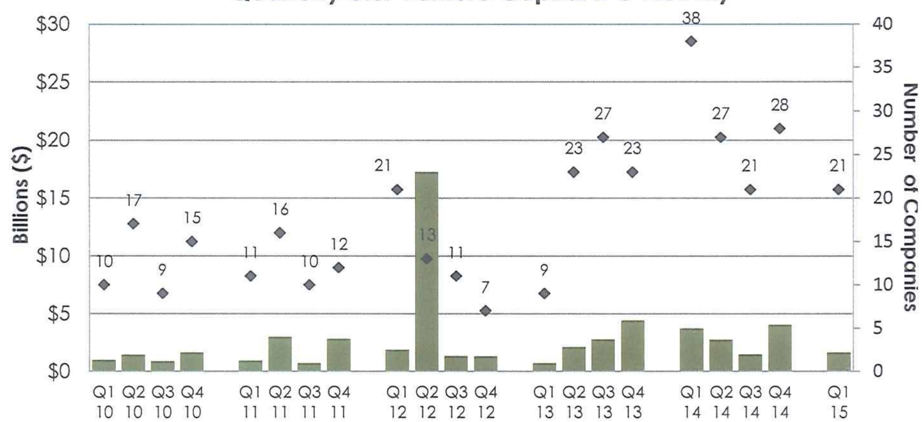
**Quarterly U.S. Venture Capital M&A Activity**




Source: Thomson Reuters

- 2014 exhibited a slight increase in IPO activity from 2013 as 114 venture-backed companies went public, raising $12.0 billion after $10.0 billion was raised the prior year.
- The IPO pace for the first three months of 2015 trailed that of 2014.

**Quarterly U.S. Venture Capital IPO Activity**




Source: Thomson Reuters

## 4.10 PRIVATE EQUITY MARKET PERFORMANCE

- According to the Cambridge Associates Horizon Summary Report as of December 31, 2014, recent private equity results remained relatively strong with a one-year return of 11.0% per year.
- Venture capital led the way over the last twelve months, posting a 23.9% return.
- Private equity results exhibited attractive absolute results across time periods.

**Cambridge Associates Horizon Summary Report as of December 31, 2014**

| Fund Type | 1 Yr | 3 Yr | 5 Yr | 10 Yr | 15 Yr | 20 Yr |
|---|---|---|---|---|---|---|
| Venture Capital | 23.9% | 18.7% | 16.5% | 10.4% | 5.3% | 28.0% |
| Growth Equity | 11.1% | 14.2% | 14.0% | 12.6% | 10.5% | 15.0% |
| Buyout | 9.6% | 15.2% | 14.4% | 12.7% | 11.4% | 13.2% |
| Mezzanine | 11.0% | 12.3% | 11.9% | 10.6% | 8.0% | 10.3% |
| Distressed | 7.5% | 14.5% | 12.5% | 10.7% | 11.3% | 11.6% |
| Private Equity Energy | -2.4% | 4.4% | 8.7% | 12.3% | 13.7% | 13.2% |
| Upstream Energy & Royalties | -17.0% | -1.5% | 5.5% | 12.3% | 17.8% | 15.3% |
| Timber | 5.8% | 7.3% | 5.7% | 5.0% | 5.0% | 5.2% |
| Real Estate | 14.1% | 12.7% | 12.5% | 5.5% | 6.5% | 7.0% |
| Fund of Funds | 12.1% | 12.6% | 12.3% | 9.6% | 7.7% | 9.2% |
| Secondary Funds | 10.2% | 12.4% | 13.5% | 11.8% | 12.2% | 13.3% |
| **Total** | **11.0%** | **14.0%** | **13.6%** | **10.9%** | **9.5%** | **13.1%** |

- On an opportunity cost basis, domestic private market returns outperformed versus the broad public market (as represented by the Russell 3000) over the longer periods evaluated (i.e. ten-years and beyond).
- Private market returns outperformed Non-U.S. public markets (as represented by the MSCI EAFE) over all periods evaluated.

**Public Market Performance Comparision, as of December 31, 2014**

| Fund Type | 1 Yr | 3 Yr | 5 Yr | 10 Yr | 20 Yr |
|---|---|---|---|---|---|
| All Private Equity | 11.0% | 14.0% | 13.6% | 10.9% | 13.1% |
| Russell 3000 | 12.4% | 16.4% | 14.7% | 8.4% | 9.6% |
| Russell 2000 | 8.2% | 16.3% | 14.6% | 8.8% | 9.6% |
| MSCI EAFE | -0.5% | 9.5% | 6.6% | 5.4% | 5.6% |
| BC Aggregate | 5.7% | 3.1% | 4.4% | 4.9% | 6.0% |

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INVESTMENTS:
AGENDA ITEM IV

# CITY OF HARTFORD

PENSION COMMISSION

**MEMORANDUM**

**To:** Pension Commission

**From:** Adam M. Cloud, Secretary amc

**Date:** July 17, 2015

**Subject:** **Longevity Swap Product Presentation**

Representatives from William Blair will attend the July 24, 2015 Pension Commission meeting and make a presentation on longevity swap products.

INVESTMENTS:
AGENDA ITEM V

# CITY OF HARTFORD

PENSION COMMISSION

## MEMORANDUM

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Report on Annual Performance Review Meeting with Parametric Eaton Vance**

Attached for your review is the report on our recent annual performance review meeting with Parametric Eaton Vance.

**CITY TREASURER'S OFFICE**
**INTERNAL MEMORANDUM**

**To:** Adam M. Cloud, Secretary
Carmen I. Sierra, Assistant Secretary

**From:** Gary B. Draghi, Director of Investments GBD
P. Wayne Moore, Assistant Director of Investments PWM
J. Sean Antoine, Principal Administrative Analyst JSA

**Date:** July 9, 2015

**Re:** **<u>Report on Annual Performance Review Meeting with Parametric</u>**

The Pension Commission held an annual performance review meeting with Parametric Portfolio Associates LLC ("Parametric"), a subsidiary of Eaton Vance Corp., on Thursday, June 18, 2015. Parametric manages an emerging markets equity mandate for the MERF.

Mr. Jason Chalmers opened the meeting by giving a brief introduction to the firm. He reported that David Stein, founder and CIO of the firm, would retire in October 2015, and be replaced by Paul Bouchey. Mr. Chalmers stated that there were no additional changes planned to Parametric's investment staff or its investment philosophy. Mr. Chalmers then turned the meeting over to his colleague Mr. Greg Johnson.

Mr. Johnson provided an overview of Parametric's investment strategy, explaining that the process is quantitative and based on rules-based methods and proprietary technology. Mr. Johnson stated that Parametric determines an initial group of model countries, assigning each country to one of four tiers, with each tier determined based upon size and liquidity characteristics. Mr. Johnson stated that within each tier, countries are equally weighted such that every country in Tier 1, for example, has the same weight in the model portfolio. He stated that the larger, more liquid emerging market countries, such as Brazil and China, are assigned to Tier 1 and carry a higher percent of the overall allocation while the smaller, less developed markets, such as Vietnam and Morocco, are assigned to lower tiers and carry a lower exposure in the portfolio. Discussion ensued.

In response to a question regarding the portfolio underweight to China, Mr. Johnson stated that the underweight is serving Parametric and its client's well, as China's markets have recently stumbled. He added that the MERF's overall portfolio performance ended 48 basis points ahead of the MSCI EM Index in May and was running approximately 200 basis points ahead of the Index so far in June.

In response to a question regarding Parametric monitoring of risk in countries where they do not have a local office, Mr. Johnson stated that because of their large trading platform of partners in the countries in which they are invested, Parametric is able to monitor risk in that particular country.

In response to a question regarding rebalancing, Mr. Johnson noted that rebalancing is prompted by a country's overweight within the portfolio and triggers that are based on each country's transaction cost and volatility. He also added that Parametric rebalances the portfolio every six months as country allocations are reviewed, or more frequently if a country's fundamentals change at any point.

Mr. Johnson then reviewed the performance of the MERF's portfolio, stating that the portfolio's return (7.46% vs. 7.34%) outperformed the benchmark by 12 basis points since inception, due primarily to the structural underweight to Brazil, which performed poorly and the overweight positions in the Russia and Argentina, both of which outperformed the benchmark.

Mr. Chalmers then thanked the Commission for its continued business and confidence in Parametric.

INVESTMENTS:
AGENDA ITEM VI

# CITY OF HARTFORD

PENSION COMMISSION

## MEMORANDUM

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Securities Lending Report**

Enclosed, is the securities lending report for June 30, 2015. We look forward to discussing this with you.

**CITY TREASURER'S OFFICE**
**INTERNAL MEMORANDUM**

**To:** Pension Commission

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Re:** Securities Lending Report

**Background:**

**On May 31, 2013, the MERF was authorized by the Pension Commission to reinstitute its securities lending program with BNY Mellon ("BNYM"). The MERF also extended its custody contract with BNYM.**

BNYM runs the industry's largest securities lending program with approximately $3.1 trillion in lendable assets and approximately 500 global clients. BNYM combines its investment services and investment management capabilities to create collateralized transactions where BNYM lends out its clients' (e.g., the MERF) assets in exchange for collateral, generating incremental income in the process.

The typical borrowers are broker/dealers, banks and hedge funds. These entities borrow for different reasons, such as covering short sales or to capitalize on profitable transactional opportunities such as a merger or acquisition. Lenders such as the MERF earn a fee for each security lent and also derive income from the reinvestment of collateral.

Prior to the MERF reconstituting its securities lending program, BNYM made a number of significant improvements to its securities lending program, including centralizing all short-term cash management, discontinuing the offering of more aggressive cash collateral reinvestment pools, offering more customized guidelines and using centralized credit analysis technology.

**Highlights of the MERF Securities Lending Program**

- Earnings since inception, 10/2013 – 6/2015: $195,688
- Earnings for FYE 06/30/2015: $123,958 (budget: $75,000)
- % of Portfolio on Loan as of 06/30/2015: 16%
- Top Borrowers (Goldman, Cr. Suisse, M. Stanley, M. Lynch, Deutsche Bk.)

INVESTMENTS:
AGENDA ITEM VII

# CITY OF HARTFORD

PENSION COMMISSION

## MEMORANDUM

**To:** Pension Commission

amc

**From:** Adam M. Cloud, Secretary

**Date:** July 17, 2015

**Subject:** **Other Business**

Staff will discuss the enclosed manager updates.

**Subject:** TA Realty
**Date:** Wednesday, July 15, 2015 at 3:54:57 PM Eastern Daylight Time
**From:** Finney-Cooke, Kristin <KFC@nepc.com>
**To:** Draghi, Gary B. <DRAGG001@hartford.gov>, Moore, P. Wayne <MOORP001@hartford.gov>
**CC:** Forde, William <WForde@nepc.com>

Gary and Wayne-

Please see our comments around the TA Realty announcement. At this point we do not believe that there should be any action, but we are not underwriting their next Fund (Fund XI) as communicated previously due to the organizational changes that occurred last year.

TA Associates Realty announced that four partners (out of 23 partners of the Firm): Robert Provost, Dwight Angelini , Reid Parker, and Nilesh Bubna resigned effective immediately, without details regarding their future plans. Robert Provost and Dwight Angelini were part of the Acquisitions group, while Reid Parker and Nilesh Bubna were part of the Asset Management group. Their responsibilities and markets were covered with existing resources and will be further supported by additional new hires who were already being considered by TA Realty. Importantly, these departures do not trigger any of the "Key Persons" provisions in fund documents, nor were any of these individuals members of the Investment or Management Committees. Given the deep bench at TA Realty, we do not believe these departures will have a material impact on existing client portfolios. The possibility of personnel changes, following the change in ownership last year, was one of the reason that had given us pause on underwriting Fund XI. In conjunction with the strength of other similar offerings currently in the market, we do not intend to pursue Fund XI as a FPL candidate.

Please let me know if you have any questions.

Kristin

Kristin R. Finney-Cooke, CAIA
Senior Consultant

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**Subject:** TA Realty Personnel Update
**Date:** Friday, July 10, 2015 at 2:46:56 PM Eastern Daylight Time
**From:** TA Realty Managing Partners <managingpartners@tarealty.com>
**To:** Draghi, Gary B. <DRAGG001@hartford.gov>

Dear Gary:

We are writing to make you aware of recent staff resignations at TA Realty.

On Monday, July 6, 2015, four partners, Robert Provost, Reid Parker, Nilesh Bubna and Dwight Angelini, resigned, effective immediately, without offering any details regarding their future plans.

Reid Parker and Nilesh Bubna were part of the Asset Management group and Robert Provost and Dwight Angelini were part of the Acquisitions group. Their responsibilities and markets were immediately covered with existing resources and internal realignments. Additionally, we are finalizing certain new hires, which were already being considered as part of our ongoing operations. Furthermore, these departures do not affect any of the 'Key Man' provisions in our commingled funds, nor were any of these individuals members of the Investment or Management Committees.

Given the breadth of our staff's expertise and experience, complemented by the collaborative nature of the firm's culture, we fully expect that our ability to serve our investors, execute and manage our real estate strategies and develop future initiatives will continue uninterrupted.

If we can offer additional information and perspective for your benefit, please do not hesitate to contact Tom Landry at 617-476-2700. We look forward to serving you in the months and years ahead and thank you again for your support and consideration.

Sincerely,

Michael A. Ruane
Founder and Managing Partner

James O. Buckingham
Managing Partner

Thomas E. Landry
Managing Partner

**Subject:** Firm Announcement
**Date:** Tuesday, July 14, 2015 at 3:23:05 PM Eastern Daylight Time
**From:** Robert Smith <RSmith@vistaequitypartners.com>
**To:** Robert Smith <RSmith@vistaequitypartners.com>
**CC:** Maria Nicolas <MNicolas@vistaequitypartners.com>

Today I have some exciting news.

I am pleased to announce that we are taking the next step in the direction of strengthening our capital structure to allow us to accelerate our deal-making, enhance our product platform, fortify and expand our transformational capabilities, as well as increase our investor base.

Dyal Capital is leading a group of co-investors in a minority interest investment in Vista Equity Partners, at less than 20%. The significant interest shown in Vista clearly illustrates we are recognized as the premier investment firm in the software and technology space.

Dyal Capital is a group within Neuberger Berman, which invests in minority stakes in GPs such as ourselves. This group also includes two of Dyal's key investors as well as a select number of new strategic investors. The governance of the Firm will remain essentially unchanged as a result of this transaction and Dyal will be privy to regular reporting of information. We will operate in the same manner as we have operated to date.

We expect we will use a significant portion of the capital to invest in our existing private equity funds, scale and enhance our portfolio company transformational support activities and provide expansion capital to our newer investment platforms.

Your dedication and efforts have enabled us to effect this transaction, for which we are grateful.

We are delighted that investors like yourselves are recognizing the power of our platform, the quality of our management, the wisdom of our strategy and the significance of our achievements. They are excited about our leading the next evolution of private investing.

Thank you for your continued support and confidence and to a bright future together.

If you have any questions, please do not hesitate to reach out. The easiest course for making sure we connect is to email or call Maria Nicolas at mnicolas@vistaequitypartners.com or 512.730.2480 and she will coordinate. Thank you!
Onward and Upward!

**ROBERT F. SMITH**
Chairman & CEO

Vista Equity Partners

## Vista Equity Partners Announces Minority Investment

Vista Equity Partners today announced that a group led by Dyal Capital Partners has made a passive, minority investment in Vista that will allow the Austin-headquartered firm to continue to expand its industry-leading asset management platform. Vista will use this investment to deepen its network of global investors, to expand its product offerings and to scale its business.

"This investment is an exciting development in the evolution of Vista," said Vista Founder, Chairman & CEO Robert F. Smith. "Dyal and its parent, Neuberger Berman, will be great strategic partners for Vista, as we continue to take advantage of the growing investment opportunities in the software, data and technology-enabled services sectors. Vista remains committed to the same proven investment and operational formula that has made us successful."

Michael Rees, Head of Dyal Capital Partners, said, "We are thrilled to have the opportunity to invest in Vista. Given the unique platform that Vista offers and the strength of the management team, we believe that the partnership between our businesses provides tremendous opportunities to both Dyal and Vista."

Since its founding in 2000, Vista has completed more than 170 transactions representing more than $45 billion.

The terms of the transaction are private and are not being publicly disclosed. Vista will maintain complete control over the operations of the firm. Dyal is a passive, minority partner.

### About Vista Equity Partners

Vista Equity Partners, a U.S.-based private equity firm with offices in Austin, Chicago and San Francisco, with more than $14 billion in cumulative capital commitments, currently invests in software, data and technology-based organizations led by world-class management teams with long-term perspective. Vista is a value-added investor, contributing professional expertise and multi-level support towards companies realizing their full potential. Vista's investment approach is anchored by a sizable long-term capital base, experience in structuring technology-oriented transactions, and proven management techniques that yield flexibility and opportunity in private equity investing. For more information, please visitwww.vistaequitypartners.com.

### About Dyal Capital Partners

Dyal Capital Partners, a unit of Neuberger Berman Group, establishes minority equity interests in institutional alternative asset management businesses worldwide. Dyal Capital Partners was established in 2011 and has twelve minority partnerships currently. For more information, please visit www.dyalcapital.com.

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Media contact for Dyal:
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alexander.samuelson@nb.com