Agenda
Village of Glen Ellyn
Police Pension Board
Regular Meeting
Wednesday, July 17, 2019
7:30 PM
Police Department Community Room
65 S Park Blvd Glen Ellyn

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*Individuals with disabilities who plan to attend the hearing and who require certain accommodations in order to allow them to observe and participate, or who have questions regarding the accessibility of the meeting or facilities, are requested to contact the Police Department at least 24 hours before the meeting.*

**A. Call to Order**

**B. Public Comment (Non Agenda Items)**

**C. Approval of Minutes**

1. Police Pension Board - Regular Meeting - Apr 17, 2019 7:30 PM

**D. Investment Consultant Report & Recommendations**

1. Christopher Caparelli from Marquette Associates will present the Second Quarter 2019 report as well as recommendations for the investment portfolio.

**E. Approval of Expenses**

1. Approve the Expense Vouchers in the amount of $35,428,83 and Pension Expenses in the amount of $565,573,44 for a total of $601,002.27

**F. Approval of Membership Changes / Contribution Refunds / Transfers**

1. 1. Motion to accept Erika Rodriguez into the Police Pension Fund, effective May 10, 2019. 2. Motion to commence the pension for William Holmer, effective August 5, 2019 with an initial monthly benefit of $7,610.63 (annually $91,327.60). 3. Motion to accept the retirement of Paul Baird retired effective June 30, 2019 and start his pension benefit effective 7/1/19 with an initial monthly benefit of $4,575.05 (annually $54,900.56). 4. Motion to approve a transfer of service for Jaroslaw Hampel to the Wheaton Police Pension Fund in the amount of $258,211.60.

**G. Election of Officers**

**H. Actuarial Report**

1. Motion to accept the 2018 actuary report for the Police Pension Fund

**I. Department of Insurance Report**

1. Motion to accept the Department of Insurance Report for the year ending December 31, 2018.

**J. Other Business**

1. Next Meeting: Wednesday, October 16, 7:30 PM

**K. Adjournment**

1. Motion to Adjourn

# Minutes
Village of Glen Ellyn
Police Pension Board
Regular Meeting
Wednesday, April 17, 2019
7:30 PM
Police Department Community Room
65 S Park Blvd Glen Ellyn

## A. Call to Order

| Attendee Name | Title | Status |
|---|---|---|
| Bill Housey | Trustee | Present |
| John Adduci | President | Present |
| Jim Monson | Trustee | Present |
| Anthony Terranova | Trustee | Present |
| James King | Trustee | Present |

Also present: Finance Director Coyle, Investment Consultant Chris Caparelli (Marquette Associates), Recording Secretary Elisa Pollina.

President Adduci called the meeting to order at 7:30 PM.

## B. Public Comment (Non Agenda Items)

Peter Groninger from Glen Ellyn was in attendance. No public comment.

## C. Approval of Minutes

1. Police Pension Board - Regular Meeting - Jan 16, 2019 7:30 PM

| | |
|---|---|
| **RESULT:** | **ACCEPTED AS AMENDED [UNANIMOUS]** |
| **MOVER:** | Jim Monson, Trustee |
| **SECONDER:** | James King, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

## D. Investment Report and Recommendations

1. Christopher Caparelli from Marquette Associates will present the First Quarter 2018 report as well as recommendations for the investment portfolio.

Mr. Caparelli invites the Police Pension Commission to attend the 2019 Investment Symposium at the Standard Club in Chicago on October 4, 2019.

Mr. Caparelli reports that early forecasts for the US Economy 1Q growth are at 2.3%. Unemployment rate remained at 3.8% with 196K new jobs added rebounding from a disappointing February. CPI increased 1.5% over the trailing 12 months, with energy prices falling 5.0% during this time. Core CPI remains consistent at 2.1%. The Fed is not expected to raise rates in 2019. Rates will probably start to come down if the economy starts to slow. The S&P is +13.6% YTD. Non-US

Equities +10.3% YTD. Real estate is having another positive quarter 1.4% in 4Q and 6.7% YTD. Each year we are getting 1.5%-2% positive returns in Real estate. Total Fund Composite +7.3%, U.S. Fixed income +2.4% qtr., U.S Equities +13.75% qtr., Non U.S. equities +9.9% qtr., Global Tactical +7.0% qtr., Real Estate 1.6% qtr.

Trustee Housey motions to accept the quarterly report and Trustee Terranova seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Bill Housey, Trustee |
| **SECONDER:** | Anthony Terranova, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

**E. Approval of Expenses**

1. Approve the Expense Vouchers in the amount of $7,350.36 and Pension Expenses in the amount of $565,573.44 for a total of $572,923.80

Trustee Terranova motions to approve the expense vouchers in the amount of $7,350.36 and Pension Expenses in the amount of $565,573.44 for a total of $572,923.80. Trustee King seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Anthony Terranova, Trustee |
| **SECONDER:** | James King, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

**F. Approval of Membership Changes / Contribution Refunds / Transfers**

1. Motion to refund the contributions of Jacob Jakaitis to an IRA with JP Morgan Securities FBO Jake Jakaitis in the amount of $10,862.15.

Trustee Monson motions to refund the contributions of Jacob Jakaitis to an IRA with JP Morgan Securities FBO Jake Jakaitis in the amount of $10,862.15. Trustee Terranova seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Jim Monson, Trustee |
| **SECONDER:** | Anthony Terranova, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

2. Motion to accept Philip Horan into the Glen Ellyn Police Pension Fund, effective January 16, 2019.

Trustee Monson motions to accept Philip Horan into the Glen Ellyn Police Pension Fund, effective January 16, 2019. Trustee Housey seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Jim Monson, Trustee |
| **SECONDER:** | Bill Housey, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

3. Motion to accept Dmitri Konton into the Glen Ellyn Police Pension Fund, effective January 16, 2019.

Trustee Monson motions to accept Dmitri Konton into the Glen Ellyn Police Pension Fund, effective January 16, 2019. Trustee Housey seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Jim Monson, Trustee |
| **SECONDER:** | Bill Housey, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

**G. Approval of Fiduciary Liability Insurance Bond**

1. Motion to approve renewal of Fiduciary Insurance Policy with Rockwood Company/Travelers Insurance in the amount of $4,637.00.

Trustee King motions to approve renewal of Fiduciary Insurance Policy with Rockwood Company/Travelers Insurance in the amount of $4,637.00. Trustee Housey seconds the motion.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | James King, Trustee |
| **SECONDER:** | Bill Housey, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

**H. Election for Active and Retired Members**

The following members have been reelected: James King, James Monson, and Anthony Terranova.

**I. Other Business**

1. Next Meeting: Wednesday, July 17, 7:30 PM

**J. Adjournment**

1. Motion to Adjourn

Trustee Housey moves and Trustee Monson seconds to adjourn the meeting. The meeting was adjourned at 8:23 pm.

| | |
|---|---|
| **RESULT:** | **APPROVED [UNANIMOUS]** |
| **MOVER:** | Bill Housey, Trustee |
| **SECONDER:** | Jim Monson, Trustee |
| **AYES:** | Housey, Adduci, Monson, Terranova, King |

**Police Pension Board**
535 Duane Street
Glen Ellyn, IL 60137

SCHEDULED

Meeting: 07/17/19 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

**AGENDA ITEM (ID # 4075)** DOC ID: 4075

# Christopher Caparelli from Marquette Associates will present the Second Quarter 2019 report as well as recommendations for the investment portfolio.

Please see the attached reports.

**ATTACHMENTS:**

- 2Q 2019 Market Environment (PDF)
- 2Q19 Glen Ellyn Police (PDF)

Marquette Associates

# 2Q 2019
# Market Environment

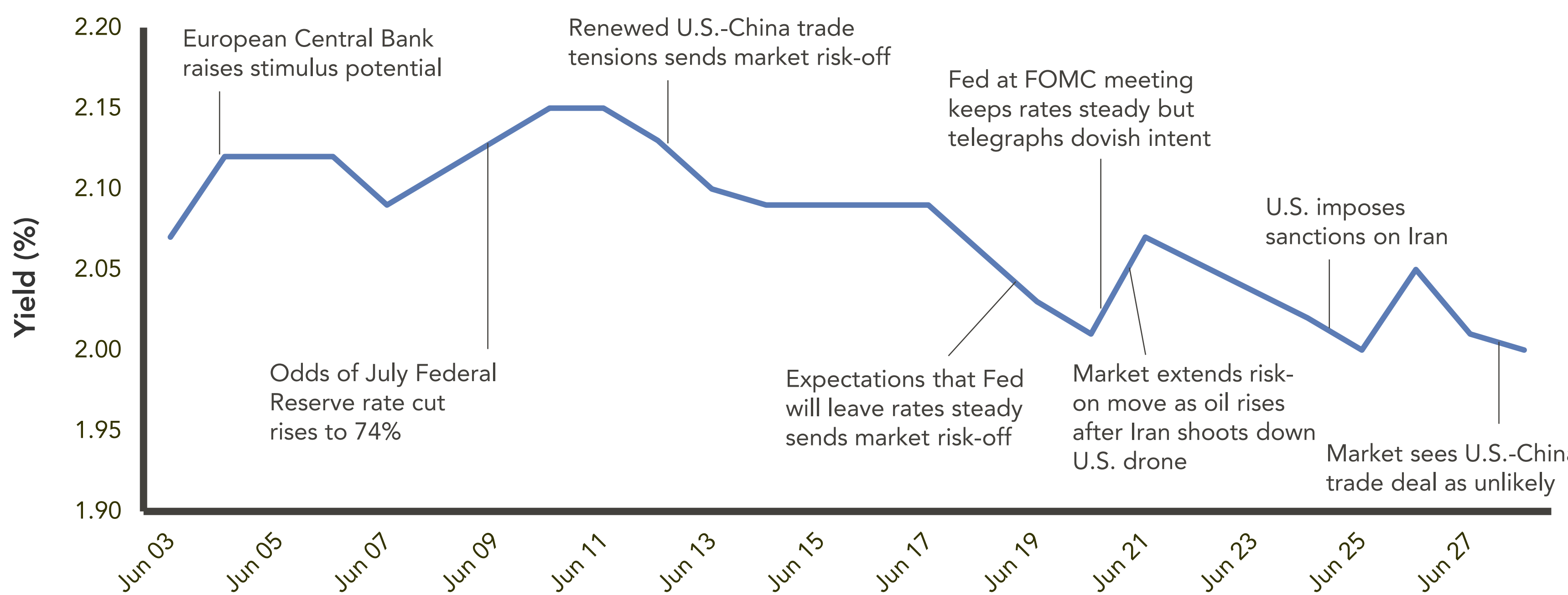
# U.S. economy overview

- GDP grew 3.1% in Q1, driven by strong personal consumption, private inventories, and net exports. 2$^{nd}$ quarter growth is expected to be much weaker at 1.3%
- The unemployment rate rose to 3.7% with 224K new jobs added in June
- CPI increased 1.8% over the trailing 12 months with core CPI at 2.0%
- China and the U.S. agree to restart trade talks, but remain far apart over the terms of a deal

# June: U.S.-China trade deal seen as unlikely

## …sending 10-year yield to 1.97%

10-Year Treasury Yield




Source: Federal Reserve as of June 30, 2019

# Fixed income: A rollercoaster ride so far in 2019

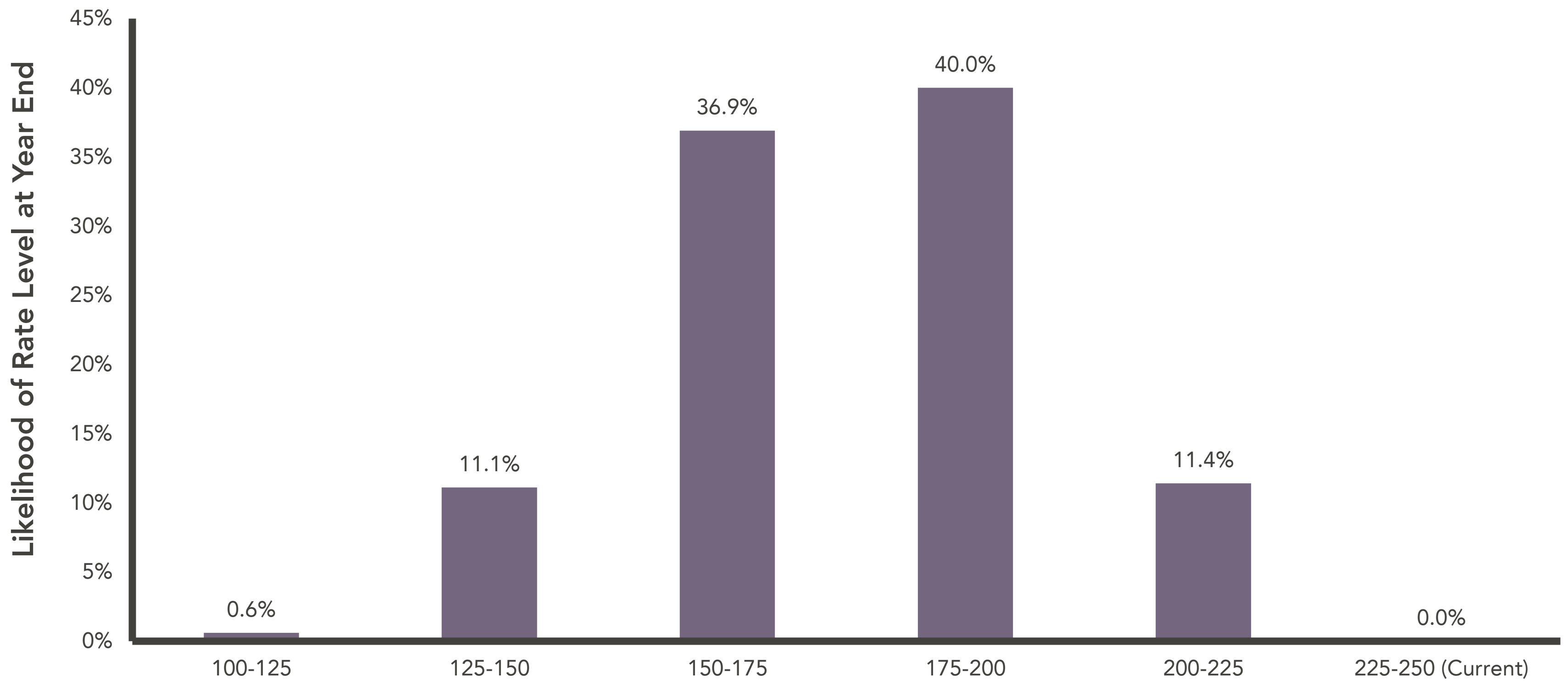
## Monthly reversals post-1Q: Both credit and havens perform in June

| | Month (%) | Qtr (%) | YTD (%) | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) |
|---|---|---|---|---|---|---|---|
| **Broad Market Indices** | | | | | | | |
| Blm BC Aggregate | 1.3 | 3.1 | 6.1 | 7.9 | 2.3 | 2.9 | 3.9 |
| **Intermediate Indices** | | | | | | | |
| Blm BC Int. Gov./Credit | 1.1 | 2.6 | 5.0 | 6.9 | 2.0 | 2.4 | 3.2 |
| **Government Only Indices** | | | | | | | |
| Blm BC Long Gov. | 1.3 | 6.0 | 10.9 | 12.3 | 1.4 | 5.7 | 6.5 |
| Blm BC Int. Gov. | 0.8 | 2.3 | 4.0 | 6.2 | 1.3 | 1.9 | 2.4 |
| Blm BC 1-3 Year Gov. | 0.5 | 1.5 | 2.5 | 4.0 | 1.3 | 1.2 | 1.2 |
| Blm BC U.S. TIPS | 0.9 | 2.9 | 6.2 | 4.8 | 2.1 | 1.8 | 3.6 |
| **Credit Indices** | | | | | | | |
| Blm BC U.S. Long Credit | 3.9 | 7.0 | 15.4 | 15.0 | 5.3 | 5.8 | 8.4 |
| Blm BC High Yield | 2.3 | 2.5 | 9.9 | 7.5 | 7.5 | 4.7 | 9.2 |
| CS Leveraged Loan Index | 0.2 | 1.6 | 5.4 | 4.1 | 5.4 | 3.9 | 6.3 |
| **Securitized Bond Indices** | | | | | | | |
| Blm BC MBS | 0.7 | 2.0 | 4.2 | 6.2 | 2.1 | 2.6 | 3.2 |
| Blm BC ABS | 0.4 | 1.7 | 3.2 | 5.0 | 2.0 | 2.1 | 3.4 |
| Blm BC CMBS | 1.0 | 3.3 | 6.6 | 9.0 | 2.9 | 3.4 | 7.2 |
| **Non-U.S. Indices** | | | | | | | |
| Blm BC Global Aggregate Hedged | 1.4 | 2.9 | 6.0 | 7.8 | 3.0 | 3.8 | 4.2 |
| JPM EMBI Global Diversified | 3.4 | 4.1 | 11.3 | 12.4 | 5.5 | 5.3 | 7.8 |
| JPM GBI-EM Global Diversified | 2.8 | 4.1 | 6.9 | 10.3 | 6.6 | 6.9 | 7.9 |
| **Municipal Indices** | | | | | | | |
| Blm BC Municipal 5 Year | 0.6 | 1.7 | 3.8 | 5.2 | 2.0 | 2.3 | 3.2 |
| Blm BC HY Municipal | 0.5 | 2.7 | 6.7 | 7.8 | 5.3 | 6.4 | 8.1 |

Source: Bloomberg Barclays, Credit Suisse, JPMorgan as of June 30, 2019

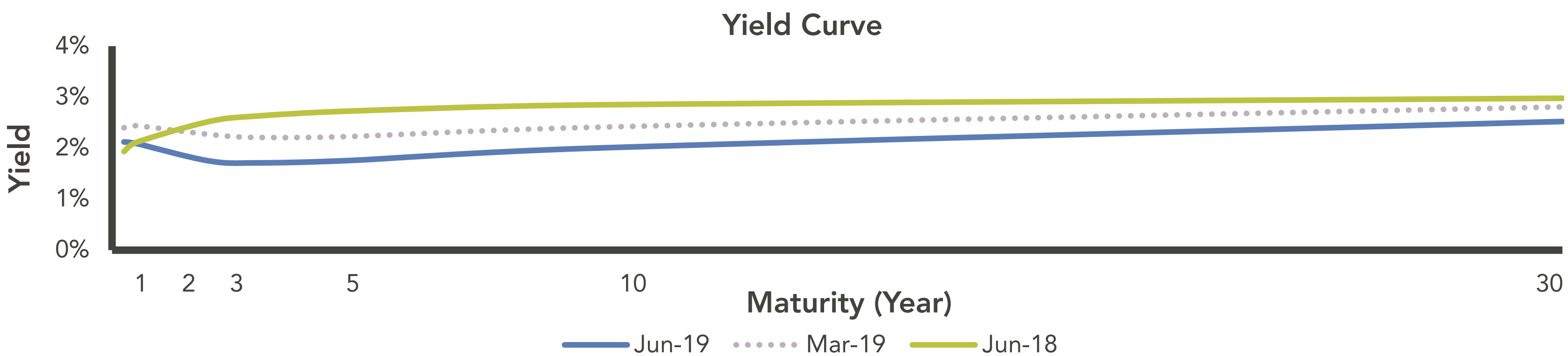
# Fed rate decrease appears likely

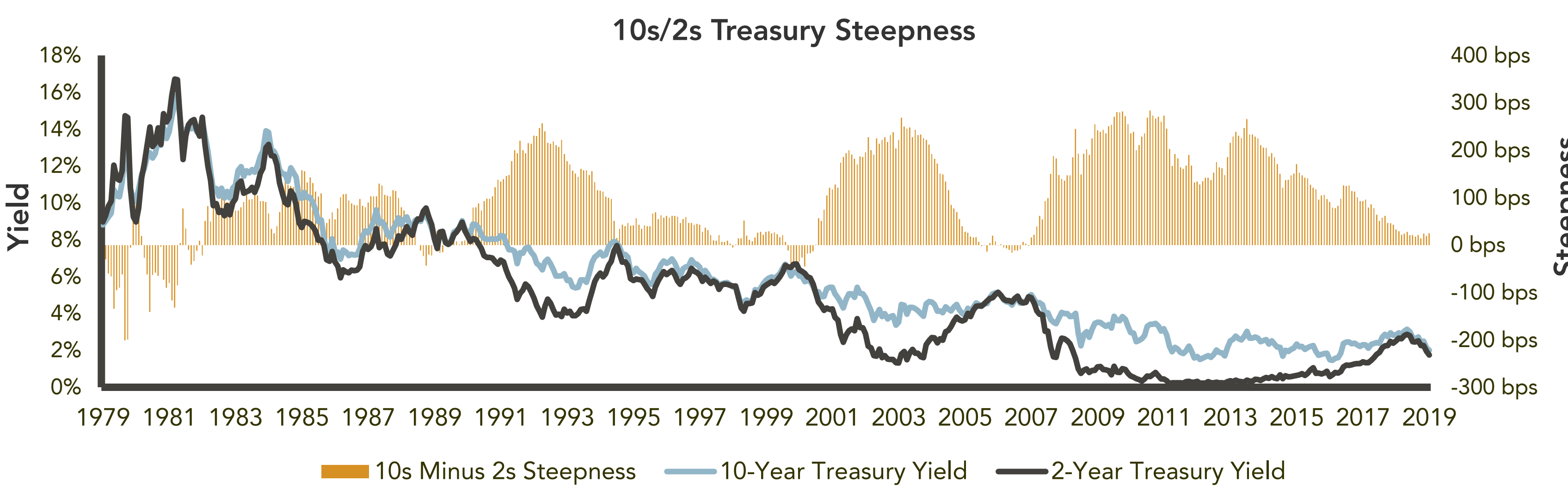
## Markets suggest a high probability of at least two rate cuts by the end of the year




Source: CME Group

# Inversion persists on short end of yield curve



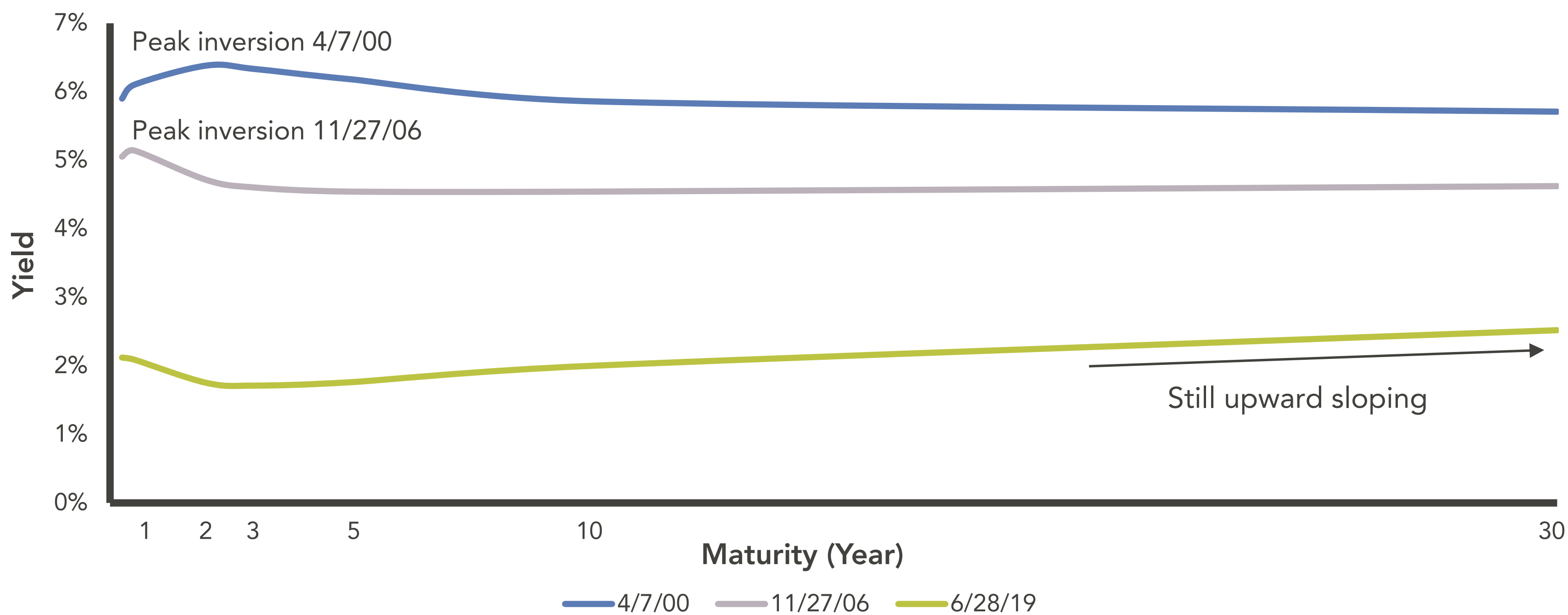




Source: Federal Reserve as of June 30, 2019

# Yield curve not fully inverted

## Previous inversions had full inversion between 1yr and 30yr

### Yield Curve

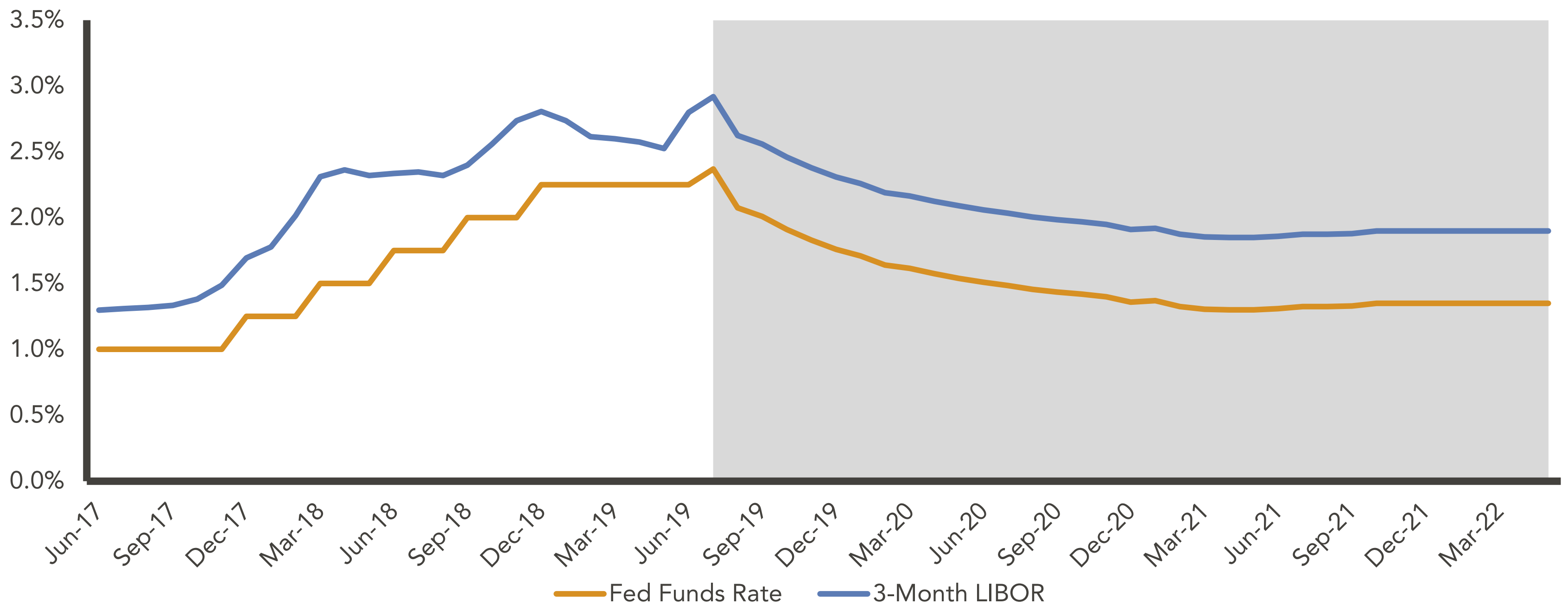



Source: U.S. Treasury

# Fed funds and LIBOR projected to pull back

## Futures curve suggests Fed will be more dovish due to global growth concerns and escalating tariffs

Futures Curve Indicates Lower Short-Term Rates

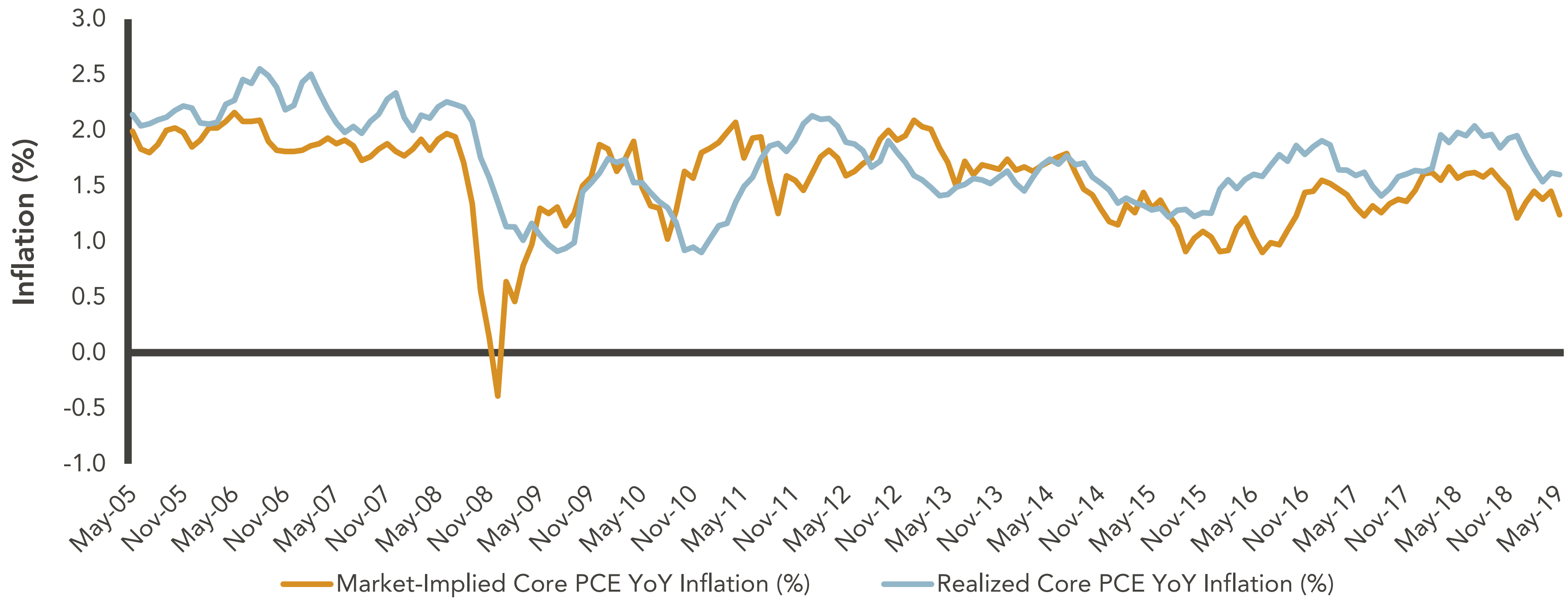



Sources: Bloomberg, Federal Reserve, as of June 30, 2019

# Inflation still shy of Fed's targeted 2%

## Market expects inflation to drop further

### Market-Implied vs. Actual Inflation




Note: Market-implied based on 10-year breakeven inflation rate minus 50bp, as Core PCE is typically 50bp lower than CPI, and the 10-year breakeven inflation is based on CPI
Source: Federal Reserve; latest data as of June 30, 2019

# U.S. equities: Market rebound in full swing

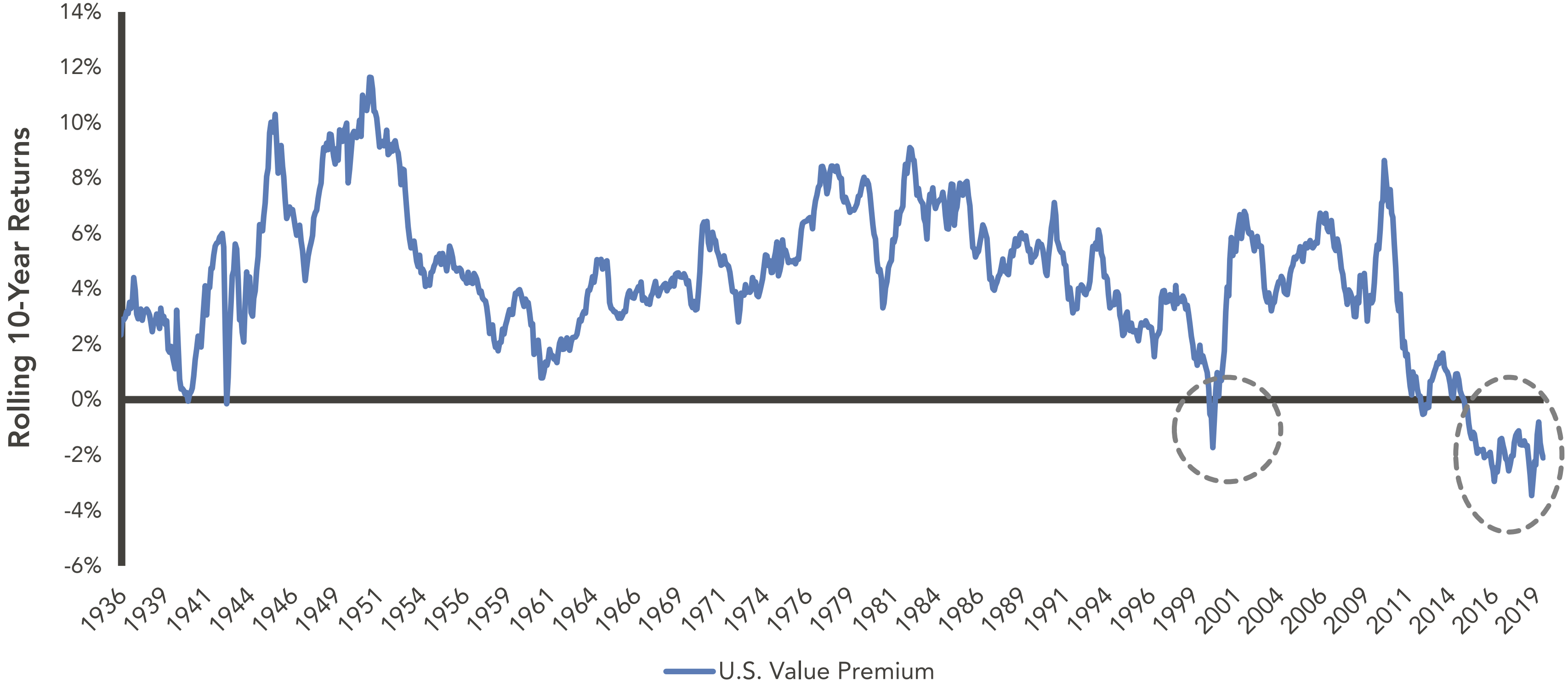
## U.S. equity index returns

| | Month (%) | 3-Month (%) | YTD (%) | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) |
|---|---|---|---|---|---|---|---|
| **Broad Market Indices** | | | | | | | |
| Dow Jones | 7.3 | 3.2 | 15.4 | 12.2 | 16.8 | 12.3 | 15.0 |
| Wilshire 5000 | 7.0 | 4.0 | 18.7 | 9.1 | 14.0 | 10.3 | 14.7 |
| Russell 3000 | 7.0 | 4.1 | 18.7 | 9.0 | 14.0 | 10.2 | 14.7 |
| **Large-Cap Market Indices** | | | | | | | |
| S&P 500 | 7.0 | 4.3 | 18.5 | 10.4 | 14.2 | 10.7 | 14.7 |
| Russell 1000 | 7.0 | 4.2 | 18.8 | 10.0 | 14.1 | 10.5 | 14.8 |
| Russell 1000 Value | 7.2 | 3.8 | 16.2 | 8.5 | 10.2 | 7.5 | 13.2 |
| Russell 1000 Growth | 6.9 | 4.6 | 21.5 | 11.6 | 18.1 | 13.4 | 16.3 |
| **Mid-Cap Market Indices** | | | | | | | |
| Russell MidCap | 6.9 | 4.1 | 21.3 | 7.8 | 12.2 | 8.6 | 15.2 |
| Russell MidCap Value | 6.8 | 3.2 | 18.0 | 3.7 | 8.9 | 6.7 | 14.6 |
| Russell MidCap Growth | 7.0 | 5.4 | 26.1 | 13.9 | 16.5 | 11.1 | 16.0 |
| **Small-Cap Market Indices** | | | | | | | |
| Russell 2000 | 7.1 | 2.1 | 17.0 | -3.3 | 12.3 | 7.1 | 13.4 |
| Russell 2000 Value | 6.4 | 1.4 | 13.5 | -6.2 | 9.8 | 5.4 | 12.4 |
| Russell 2000 Growth | 7.7 | 2.7 | 20.4 | -0.5 | 14.7 | 8.6 | 14.4 |

Source: Morningstar Direct as of June 30, 2019

# Value is usually positive… until recently

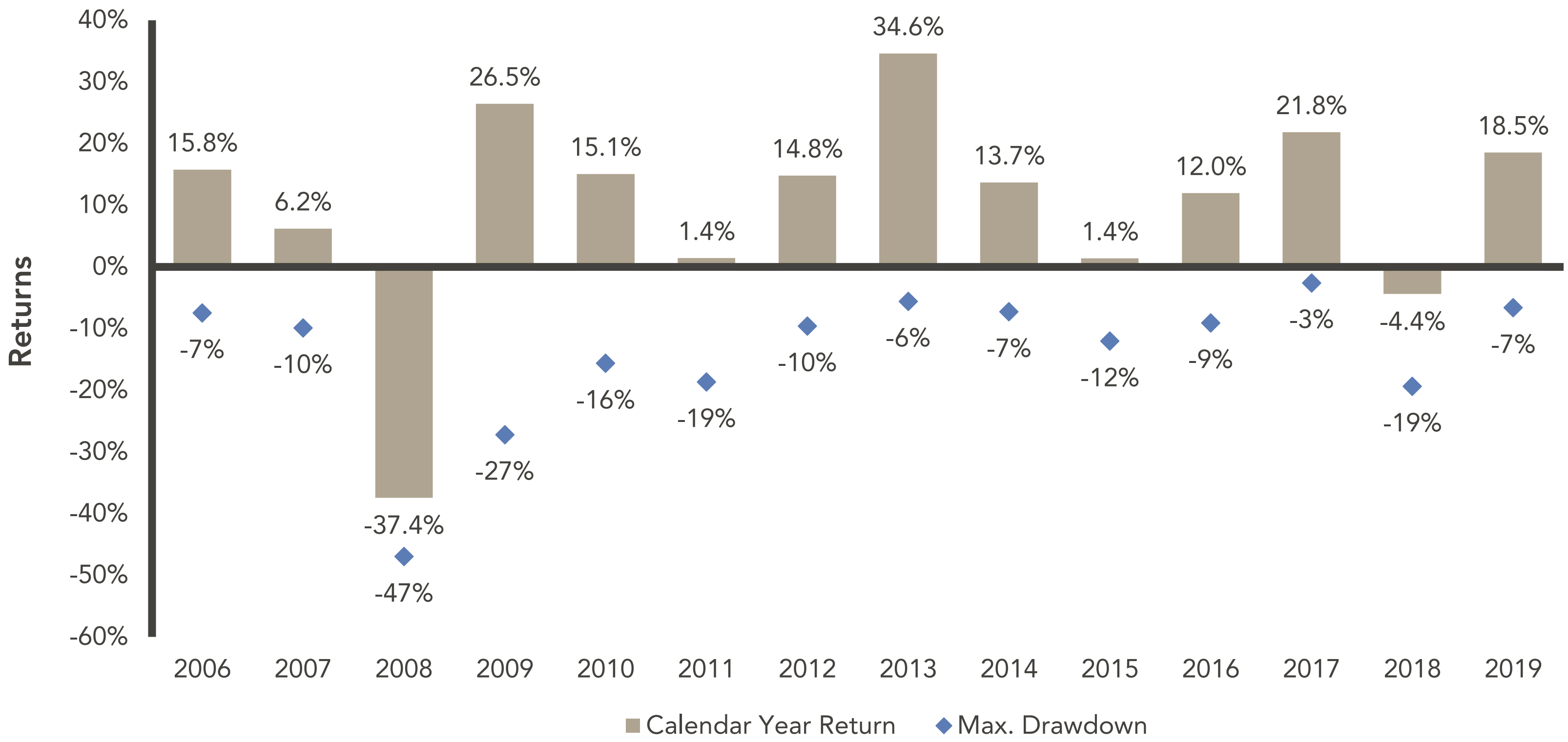
## Consistent value premium since the Great Depression




Source: Kenneth French Data Library, eVestment; December 31, 1926 – May 31, 2019. U.S. value represented by Fama/French HML

# Despite strong markets, negative returns are normal

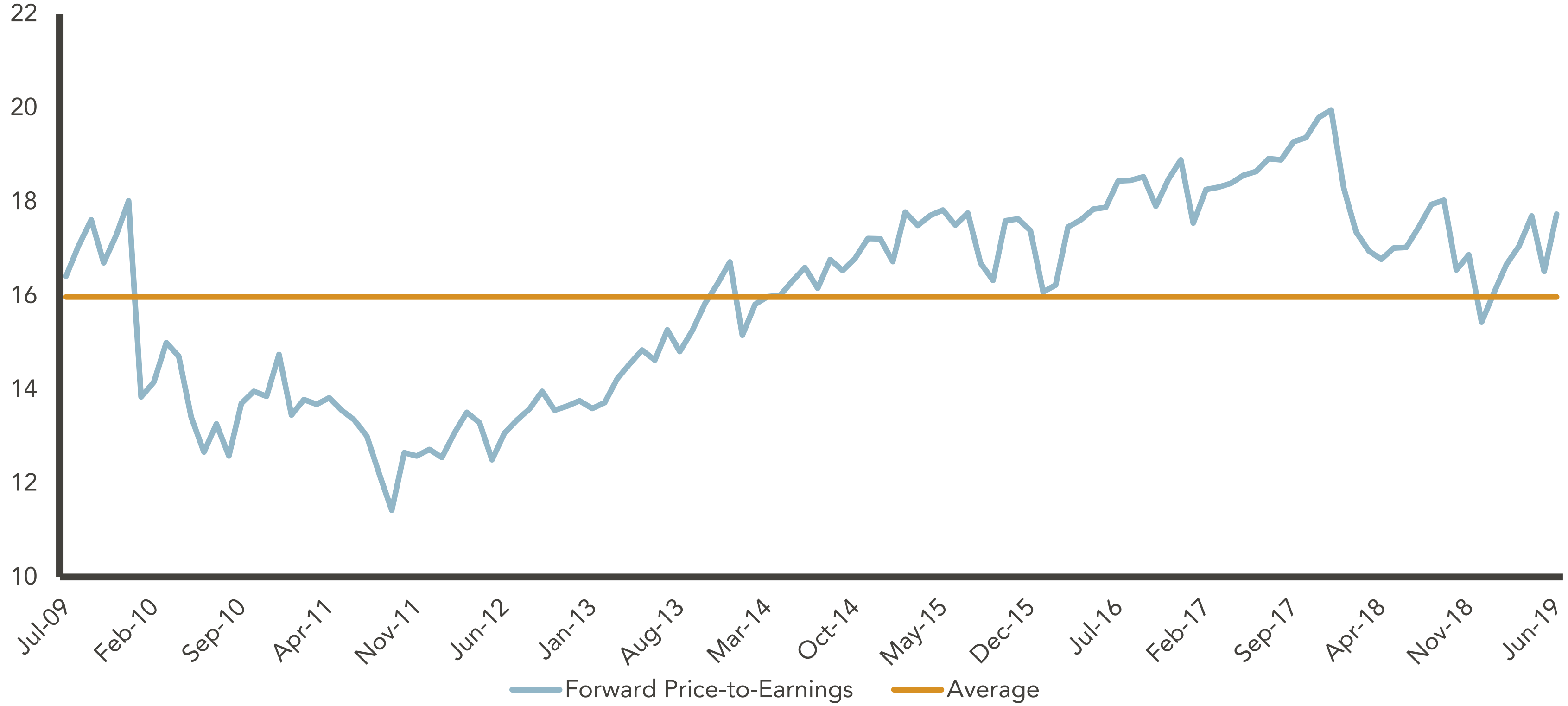
## S&P 500 maximum market drawdown




Source: Bloomberg as of June 30, 2019

# Valuations hover around long-term averages

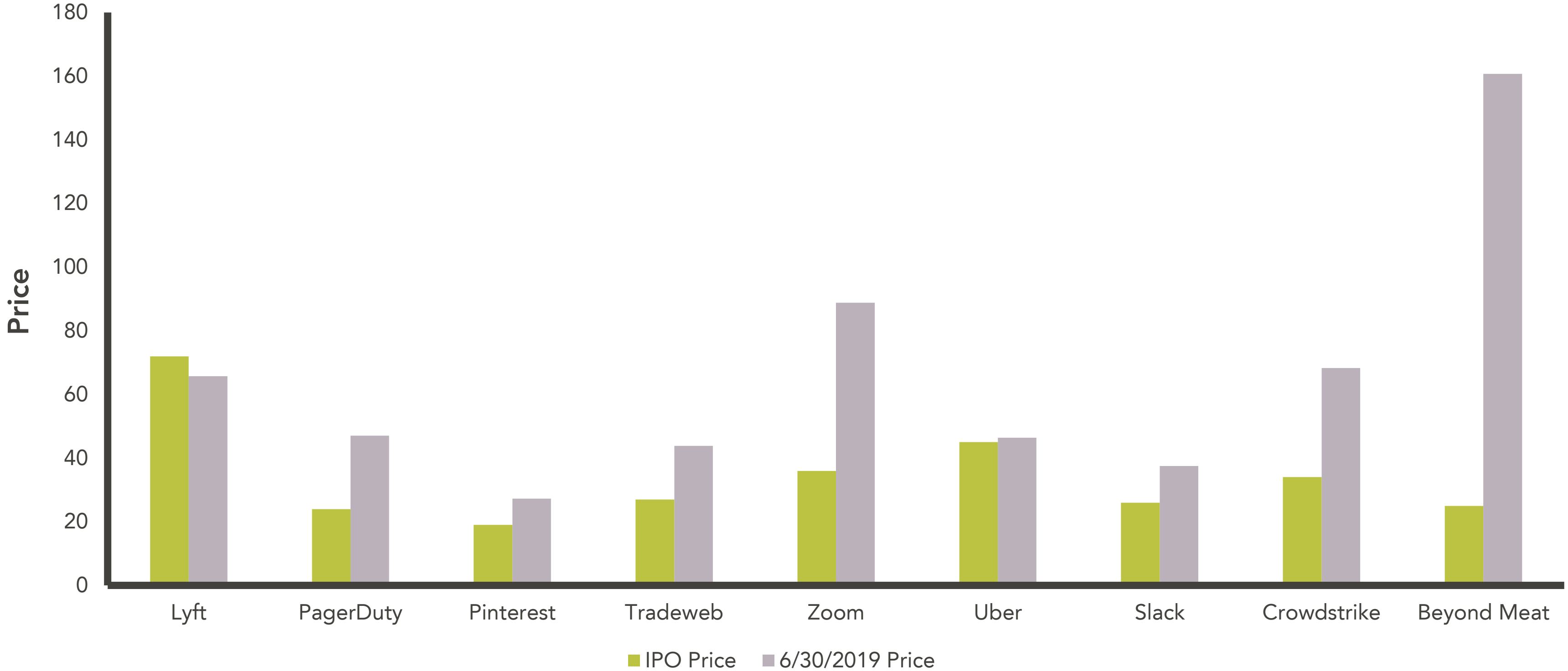
## S&P 500 now at 17.7x vs. 10-year average of 16.0x




Source: Bloomberg as of June 30, 2019

# Is it 1999-2000 all over again?

## Initial public offering (IPO) price & subsequent market performance




Source: Bloomberg; Performance post-IPO through June 30, 2019

# Non-U.S. equities: Positive June and strong YTD

## Gains seen in June across non-U.S. Equities

| | Month (%) | 3-Month (%) | YTD (%) | 1 Year (%) | 3 Year (%) | 5 Year (%) | 10 Year (%) |
|---|---|---|---|---|---|---|---|
| MSCI ACWI ex. U.S. | 6.0 | 3.0 | 13.6 | 1.3 | 9.4 | 2.2 | 6.5 |
| MSCI EAFE | 5.9 | 3.7 | 14.0 | 1.1 | 9.1 | 2.3 | 6.9 |
| MSCI EAFE Local | 4.3 | 2.8 | 13.7 | 2.2 | 9.8 | 5.9 | 8.4 |
| MSCI Emerging Markets | 6.2 | 0.6 | 10.6 | 1.2 | 10.7 | 2.5 | 5.8 |
| MSCI EM Local | 4.6 | 0.2 | 10.1 | 1.8 | 11.1 | 6.1 | 7.8 |
| MSCI EAFE Small-Cap | 4.2 | 1.7 | 12.6 | -6.4 | 9.1 | 4.4 | 9.7 |
| MSCI EM Small-Cap | 3.9 | -1.0 | 6.7 | -5.1 | 5.5 | 0.5 | 5.9 |
| MSCI Frontier | 2.3 | 4.7 | 11.9 | 4.9 | 8.4 | -0.8 | 4.8 |

Source: Bloomberg as of June 30, 2019

# Non-U.S. equities: not cheap but less expensive

## Multiple expansion has increased valuations since start of year

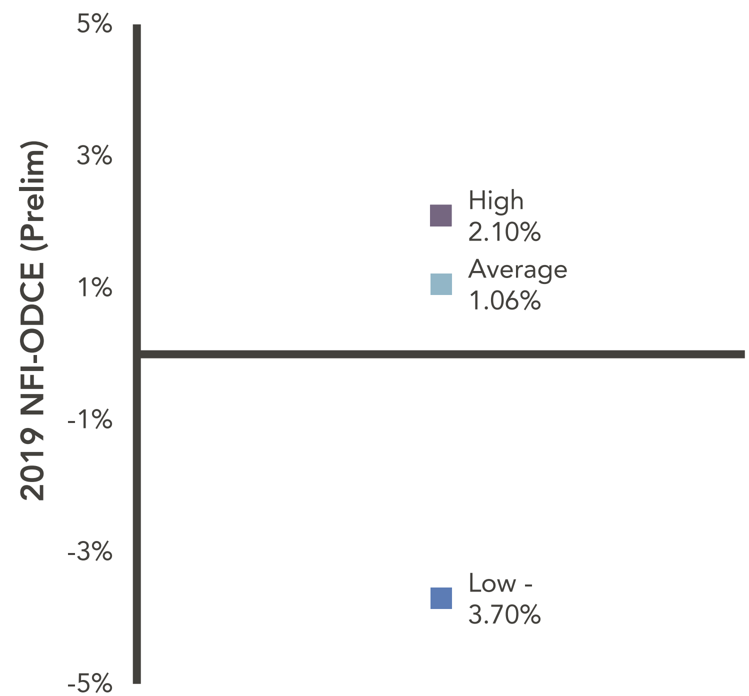
| | S&P 500 | | MSCI EAFE | | MSCI EM | | MSCI EAFE SC | |
|---|---|---|---|---|---|---|---|---|
| Valuation Metrics | Current | Historical Percentile (%) | Current | Historical Percentile (%) | Current | Historical Percentile (%) | Current | Historical Percentile (%) |
| P/E | 19.3 | 73 | 15.1 | 46 | 12.8 | 69 | 14.4 | 47 |
| Forward P/E | 17.7 | 84 | 14.0 | 45 | 13.0 | 81 | 15.9 | 36 |
| P/B | 3.4 | 87 | 1.6 | 34 | 1.6 | 47 | 1.4 | 50 |
| P/S | 2.2 | 95 | 1.2 | 77 | 1.2 | 64 | 0.9 | 87 |
| P/CF | 13.7 | 76 | 9.7 | 54 | 8.4 | 67 | 11.0 | 74 |
| EV/EBITDA | 13.5 | 95 | 9.2 | 34 | 8.7 | 80 | 15.4 | 98 |
| **Average** | | **85** | | **48** | | **68** | | **65** |

Source: Bloomberg through June 30, 2019, as of July 8, 2019
P/E is adjusted for negative earnings; percentiles are based on data going back to 1999 except for FP/E which goes back to 2005.

# Performance dispersion among NFI-ODCE

## Performance dispersion among the NFI-ODCE is high in the second quarter due to write downs within the retail sector

- On average, managers within the NFI-ODCE are averaging 1.06%
- The highest (lowest) reported returns are 2.1% (-3.5%)
- Negative returns due to write-downs on mall assets within the retail sector




Sources: Manager reported returns (preliminary) as of 2Q19

Purpose:

# Guide institutional investment programs

**Mission**
Enable institutions to become more effective investment stewards

**Vision**
Leading investment consultant of risk-adjusted returns & client services

**Principles**

- ✓ Real-world experience
- ✓ Independent expertise
- ✓ Focused client service
- ✓ Careful research

The sources of information used in this report are believed to be reliable. Marquette Associates, Inc. has not independently verified all of the information and its accuracy cannot be guaranteed. Opinions, estimates, projections and comments on financial market trends constitute our judgment and are subject to change without notice. References to specific securities are for illustrative purposes only and do not constitute recommendations. Past performance does not guarantee future results.

Marquette is an independent investment adviser registered under the Investment Advisers Act of 1940, as amended. Registration does not imply a certain level of skill or training. More information about Marquette including our investment strategies, fees and objectives can be found in our ADV Part 2, which is available upon request.

## About Marquette Associates

Marquette Associates is an independent investment consulting firm that guides institutional investment programs with a focused client service approach and careful research. For more than 30 years Marquette has served this mission in close collaboration with clients – enabling institutions to be more effective investment stewards. Marquette is a completely independent and 100% employee-owned consultancy founded with the sole purpose of advising institutions. For more information, please visit www.marquetteassociates.com.

MarquetteAssociates

**Pension Fund**

Glen Ellyn Police

Pension Fund

Executive Summary

**June 30, 2019**

## Total Fund Composite

## Manager Status

Market Value: $31.6 Million and 100.0% of Fund

| Investment Manager | Asset Class | Status | Reason |
|---|---|---|---|
| Great Lakes Advisors | Int. Fixed Income | Alert | Professional Turnover |
| Vanguard Value Index | Large-Cap Value | In Compliance | --- |
| Vanguard 500 Index | Large-Cap Core | In Compliance | --- |
| Vanguard Mid-Cap Growth ETF | Mid-Cap Growth | In Compliance | --- |
| Nuveen Small Cap Value | Small-Cap Value | In Compliance | --- |
| Vanguard Developed Markets | Non-U.S. Large-Cap Core | In Compliance | --- |
| Goldman Sachs International Small Cap Insights | Non-U.S. Small-Cap Core | In Compliance | --- |
| DFA Emerging Markets Core Equity Fund | Emerging Markets | In Compliance | --- |
| BlackRock Multi-Asset Income | Global Tactical Asset Allocation | In Compliance | --- |
| Principal U.S. Property Separate Account | Core Real Estate | In Compliance | --- |

## Open-End Investment Manager Evaluation Terminology

The following terminology has been developed by Marquette Associates to facilitate efficient communication among the Investment Manager, Investment Consultant, and the Plan Sponsor. Each term signifies a particular status with the Fund and any conditions that may require improvement. In each case, communication is made only after consultation with the Trustees and/or the Investment Committee of the Plan.

**In Compliance** – The investment manager states it is acting in accordance with the Investment Policy Guidelines.

**Alert** – The investment manager is notified of a problem in performance (usually related to a benchmark or volatility measure), a change in investment characteristics, an alteration in management style or key investment professionals, and/or any other irregularities.

**On Notice** – The investment manager is notified of continued concern with one or more Alert issues. Failure to improve upon stated issues within a specific time frame justifies termination.

**Termination** – The Trustees have decided to terminate the investment manager. The investment manager is notified and transition plans are in place.

# Total Fund Composite

Market Value: $31.6 Million and 100.0% of Fund

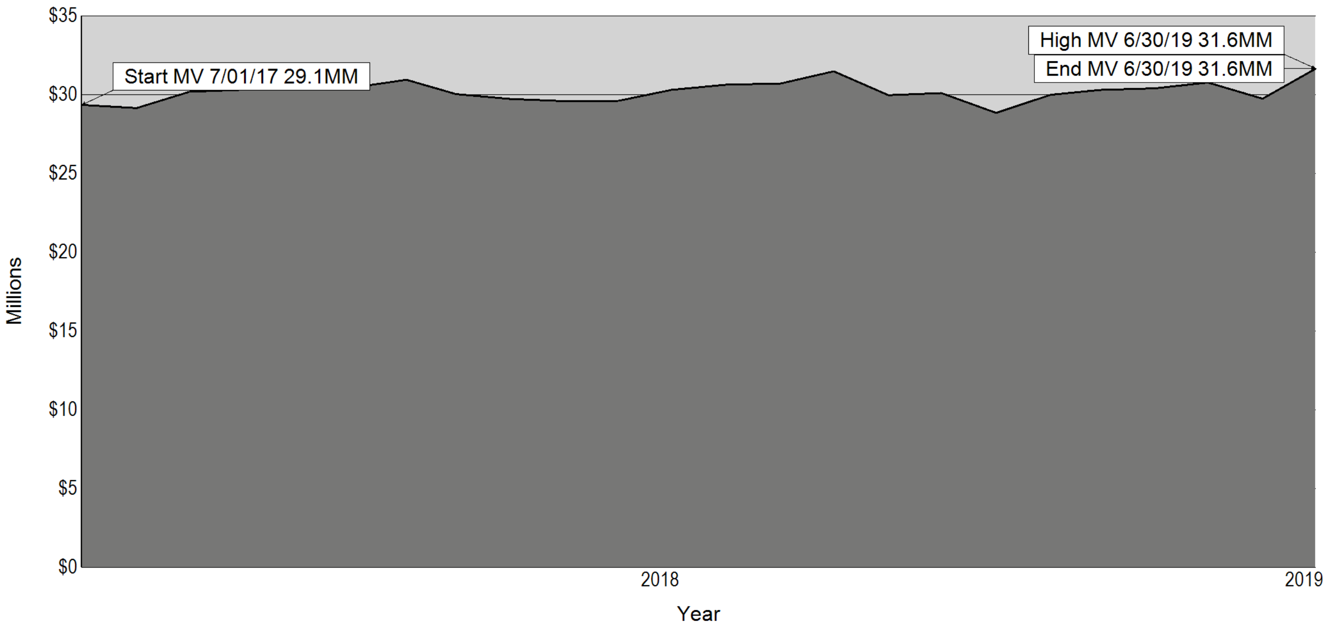
## Ending June 30, 2019

| | Asset Class | Market Value ($) | 3 Mo Net Cash Flows ($) | % of Portfolio | Policy % | Policy Difference ($) |
|---|---|---|---|---|---|---|
| **Total Fund Composite** | | **31,633,798** | **451,920** | **100.0** | **100.0** | **0** |
| **U.S. Fixed Income Composite** | | **11,164,171** | **-15,705** | **35.3** | **35.0** | **92,342** |
| Great Lakes Advisors | Int. Fixed Income | 11,164,171 | -15,705 | 35.3 | 35.0 | 92,342 |
| **U.S. Equity Composite** | | **9,406,752** | **-2,960** | **29.7** | **30.0** | **-83,387** |
| Vanguard Value Index | Large-Cap Value | 2,852,518 | 0 | 9.0 | 9.0 | 5,476 |
| Vanguard 500 Index | Large-Cap Core | 2,877,281 | 0 | 9.1 | 9.0 | 30,239 |
| Vanguard Mid-Cap Growth ETF | Mid-Cap Growth | 1,934,046 | -2,960 | 6.1 | 6.0 | 36,018 |
| Nuveen Small Cap Value | Small-Cap Value | 1,742,907 | 0 | 5.5 | 6.0 | -155,121 |
| **Non U.S. Equity Composite** | | **6,207,789** | **0** | **19.6** | **20.0** | **-118,971** |
| Vanguard Developed Markets | Non-U.S. Large-Cap Core | 3,136,416 | 0 | 9.9 | 10.0 | -26,964 |
| Goldman Sachs International Small Cap Insights | Non-U.S. Small-Cap Core | 1,537,654 | 0 | 4.9 | 5.0 | -44,036 |
| DFA Emerging Markets Core Equity Fund | Emerging Markets | 1,533,719 | 0 | 4.8 | 5.0 | -47,971 |
| **Global Tactical Composite** | | **1,600,830** | **0** | **5.1** | **5.0** | **19,141** |
| BlackRock Multi-Asset Income | Global Tactical Asset Allocation | 1,600,830 | 0 | 5.1 | 5.0 | 19,141 |
| **Real Estate Composite** | | **2,156,517** | **0** | **6.8** | **10.0** | **-1,006,863** |
| Principal U.S. Property Separate Account | Core Real Estate | 2,156,517 | 0 | 6.8 | 10.0 | -1,006,863 |
| **Cash Composite** | | **1,097,739** | **470,585** | **3.5** | **0.0** | **1,097,739** |
| US Bank Money Market | Cash & Equivalents | 1,097,739 | 470,585 | 3.5 | 0.0 | 1,097,739 |

# Total Fund Composite

## Market Value History

Market Value: $31.6 Million and 100.0% of Fund




### Summary of Cash Flows

| | Second Quarter | Year-To-Date | One Year | 2018 | 2017 |
|---|---|---|---|---|---|
| **Beginning Market Value** | **$30,392,084** | **$28,836,431** | **$30,292,690** | **$30,434,632** | **$27,417,815** |
| Net Cash Flow | $451,920 | -$100,580 | -$64,923 | $76,821 | -$248,667 |
| Net Investment Change | $789,793 | $2,897,946 | $1,406,031 | -$1,675,022 | $3,265,483 |
| **Ending Market Value** | **$31,633,798** | **$31,633,798** | **$31,633,798** | **$28,836,431** | **$30,434,632** |

## Total Fund Composite

## Annualized Performance (Net of Fees)

Market Value: $31.6 Million and 100.0% of Fund

**Ending June 30, 2019**

| | 1 Mo | 3 Mo | YTD | 1 Yr | 2 Yrs | 3 Yrs | 4 Yrs | 5 Yrs | 7 Yrs | 10 Yrs |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Fund Composite** | **3.6** | **2.6** | **10.1** | **4.7** | **4.5** | **6.2** | **4.9** | **4.7** | **5.7** | **6.5** |
| *Total Fund Composite Benchmark* | *3.6* | *2.7* | *10.0* | *5.5* | *6.5* | *7.7* | *7.1* | *6.7* | *8.7* | *10.0* |
| **U.S. Fixed Income Composite** | **1.0** | **2.3** | **4.8** | **6.2** | **2.8** | **3.9** | **4.0** | **3.4** | **3.0** | **4.6** |
| *BBgBarc US Aggregate TR* | *1.3* | *3.1* | *6.1* | *7.9* | *3.7* | *2.3* | *3.2* | *2.9* | *2.6* | *3.9* |
| **U.S. Equity Composite** | **6.8** | **3.5** | **17.6** | **6.2** | **9.3** | **12.7** | **8.7** | **8.9** | **12.5** | **13.8** |
| *Wilshire 5000 Total Market* | *7.0* | *4.0* | *18.7* | *9.1* | *11.8* | *14.0* | *11.2* | *10.3* | *13.8* | *14.7* |
| **Non U.S. Equity Composite** | **5.7** | **2.2** | **12.4** | **-1.2** | **2.5** | **--** | **--** | **--** | **--** | **--** |
| *MSCI ACWI ex USA* | *6.0* | *3.0* | *13.6* | *1.3* | *4.2* | *9.4* | *4.1* | *2.2* | *6.4* | *6.5* |
| **Global Tactical Composite** | **2.2** | **2.8** | **10.0** | **7.3** | **--** | **--** | **--** | **--** | **--** | **--** |
| *BBgBarc US Govt/Credit Int TR* | *1.1* | *2.6* | *5.0* | *6.9* | *3.1* | *2.0* | *2.6* | *2.4* | *2.2* | *3.2* |
| **Real Estate Composite** | **0.7** | **1.3** | **2.9** | **6.7** | **--** | **--** | **--** | **--** | **--** | **--** |
| *NFI* | *0.0* | *0.0* | *1.2* | *4.7* | *6.1* | *6.3* | *7.4* | *8.6* | *9.4* | *8.8* |

Total Fund Composite Benchmark is 40% BBgBarc US Govt/Credit Int, 9% CRSP US Large Cap Value, 9% S&P 500, 6% CRSP US Mid Cap Growth, 6% Russell 2000 Value, 10% FTSE Developed ex US All Cap, 5% MSCI EAFE Small Cap, 5% MSCI Emerging Markets, 10% NFI. Prior to 12/31/2017, the Benchmark was 60/40 S&P 500/BBgBarc US Aggregate.

## Investment Manager

## Annualized Performance (Net of Fees)

Market Value: $31.6 Million and 100.0% of Fund

**Ending June 30, 2019**

| | 1 Mo | 3 Mo | YTD | 1 Yr | 2 Yrs | 3 Yrs | 4 Yrs | 5 Yrs | 7 Yrs | 10 Yrs | Inception | Inception Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Fund Composite** | **3.6%** | **2.6%** | **10.1%** | **4.7%** | **4.5%** | **6.2%** | **4.9%** | **4.7%** | **5.7%** | **6.5%** | **5.7%** | **Oct-93** |
| *Total Fund Composite Benchmark* | *3.6%* | *2.7%* | *10.0%* | *5.5%* | *6.5%* | *7.7%* | *7.1%* | *6.7%* | *8.7%* | *10.0%* | *7.9%* | *Oct-93* |
| **U.S. Fixed Income Composite** | **1.0%** | **2.3%** | **4.8%** | **6.2%** | **2.8%** | **3.9%** | **4.0%** | **3.4%** | **3.0%** | **4.6%** | **4.9%** | **Dec-01** |
| *BBgBarc US Aggregate TR* | *1.3%* | *3.1%* | *6.1%* | *7.9%* | *3.7%* | *2.3%* | *3.2%* | *2.9%* | *2.6%* | *3.9%* | *4.5%* | *Dec-01* |
| Great Lakes Advisors | 1.0% | 2.3% | 4.8% | 6.2% | -- | -- | -- | -- | -- | -- | 2.8% | Sep-17 |
| *BBgBarc US Govt/Credit Int TR* | *1.1%* | *2.6%* | *5.0%* | *6.9%* | *3.1%* | *2.0%* | *2.6%* | *2.4%* | *2.2%* | *3.2%* | *3.2%* | *Sep-17* |
| **U.S. Equity Composite** | **6.8%** | **3.5%** | **17.6%** | **6.2%** | **9.3%** | **12.7%** | **8.7%** | **8.9%** | **12.5%** | **13.8%** | **8.8%** | **Dec-01** |
| *Wilshire 5000 Total Market* | *7.0%* | *4.0%* | *18.7%* | *9.1%* | *11.8%* | *14.0%* | *11.2%* | *10.3%* | *13.8%* | *14.7%* | *8.1%* | *Dec-01* |
| Vanguard Value Index | 7.2% | 3.8% | 14.9% | 9.9% | 10.0% | -- | -- | -- | -- | -- | 10.0% | Jun-17 |
| *CRSP US Large Cap Value TR USD* | *7.2%* | *3.8%* | *15.0%* | *9.9%* | *10.1%* | *12.2%* | *10.3%* | *9.3%* | *13.2%* | *14.0%* | *10.1%* | *Jun-17* |
| Vanguard 500 Index | 7.0% | 4.3% | 18.5% | 10.4% | 12.3% | -- | -- | -- | -- | -- | 12.3% | Jun-17 |
| *S&P 500* | *7.0%* | *4.3%* | *18.5%* | *10.4%* | *12.4%* | *14.2%* | *11.5%* | *10.7%* | *14.0%* | *14.7%* | *12.4%* | *Jun-17* |
| Vanguard Mid-Cap Growth ETF | 6.4% | 4.8% | 25.2% | 12.0% | 13.5% | 14.5% | -- | -- | -- | -- | 16.2% | Jan-16 |
| *CRSP US Mid Cap Growth TR USD* | *6.3%* | *4.8%* | *25.4%* | *12.1%* | *13.6%* | *14.6%* | *9.8%* | *10.2%* | *13.7%* | *15.3%* | *16.3%* | *Jan-16* |
| Nuveen Small Cap Value | 6.3% | 0.4% | 13.3% | -10.7% | -- | -- | -- | -- | -- | -- | -7.1% | Nov-17 |
| *Russell 2000 Value* | *6.4%* | *1.4%* | *13.5%* | *-6.2%* | *3.0%* | *9.8%* | *6.6%* | *5.4%* | *10.3%* | *12.4%* | *-1.3%* | *Nov-17* |
| **Non U.S. Equity Composite** | **5.7%** | **2.2%** | **12.4%** | **-1.2%** | **2.5%** | **--** | **--** | **--** | **--** | **--** | **2.5%** | **Jun-17** |
| *MSCI ACWI ex USA* | *6.0%* | *3.0%* | *13.6%* | *1.3%* | *4.2%* | *9.4%* | *4.1%* | *2.2%* | *6.4%* | *6.5%* | *4.2%* | *Jun-17* |
| Vanguard Developed Markets | 5.9% | 3.3% | 13.8% | 0.0% | 3.6% | -- | -- | -- | -- | -- | 3.6% | Jun-17 |
| *FTSE Developed ex US All Cap* | *5.9%* | *3.2%* | *13.7%* | *-0.4%* | *3.5%* | *8.8%* | *4.0%* | *2.1%* | *--* | *--* | *3.5%* | *Jun-17* |
| Goldman Sachs International Small Cap Insights | 5.2% | 1.6% | 12.6% | -6.9% | -- | -- | -- | -- | -- | -- | -2.3% | Sep-17 |
| *MSCI EAFE Small Cap* | *4.2%* | *1.7%* | *12.5%* | *-6.3%* | *2.6%* | *9.1%* | *5.7%* | *4.4%* | *9.9%* | *9.7%* | *-1.1%* | *Sep-17* |
| DFA Emerging Markets Core Equity Fund | 5.6% | 0.9% | 9.5% | 1.3% | -- | -- | -- | -- | -- | -- | 0.0% | Sep-17 |
| *MSCI Emerging Markets* | *6.2%* | *0.6%* | *10.6%* | *1.2%* | *4.6%* | *10.7%* | *4.5%* | *2.5%* | *4.2%* | *5.8%* | *0.9%* | *Sep-17* |
| **Global Tactical Composite** | **2.2%** | **2.8%** | **10.0%** | **7.3%** | **--** | **--** | **--** | **--** | **--** | **--** | **4.2%** | **Nov-17** |
| *BBgBarc US Govt/Credit Int TR* | *1.1%* | *2.6%* | *5.0%* | *6.9%* | *3.1%* | *2.0%* | *2.6%* | *2.4%* | *2.2%* | *3.2%* | *3.8%* | *Nov-17* |
| BlackRock Multi-Asset Income | 2.2% | 2.8% | 10.0% | 7.3% | -- | -- | -- | -- | -- | -- | 4.2% | Nov-17 |
| *BBgBarc US Govt/Credit Int TR* | *1.1%* | *2.6%* | *5.0%* | *6.9%* | *3.1%* | *2.0%* | *2.6%* | *2.4%* | *2.2%* | *3.2%* | *3.8%* | *Nov-17* |
| **Real Estate Composite** | **0.7%** | **1.3%** | **2.9%** | **6.7%** | **--** | **--** | **--** | **--** | **--** | **--** | **7.3%** | **Dec-17** |
| *NFI* | *0.0%* | *0.0%* | *1.2%* | *4.7%* | *6.1%* | *6.3%* | *7.4%* | *8.6%* | *9.4%* | *8.8%* | *5.7%* | *Dec-17* |
| Principal U.S. Property Separate Account | 0.7% | 1.3% | 2.9% | 6.7% | -- | -- | -- | -- | -- | -- | 7.3% | Dec-17 |
| *NFI* | *0.0%* | *0.0%* | *1.2%* | *4.7%* | *6.1%* | *6.3%* | *7.4%* | *8.6%* | *9.4%* | *8.8%* | *5.7%* | *Dec-17* |

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: $31.6 Million and 100.0% of Fund

| | Calendar Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
| **Total Fund Composite** | -5.5% | 12.0% | 6.1% | 0.4% | 6.7% | 8.1% | 6.5% | 4.1% | 10.1% | 10.0% | -7.5% |
| *Total Fund Composite Benchmark* | -4.0% | 14.2% | 8.3% | 1.3% | 10.6% | 17.6% | 11.3% | 4.7% | 12.1% | 18.4% | -22.1% |
| *InvestorForce Public DB < $50mm Net Rank* | 81 | 87 | 83 | 23 | 26 | 97 | 98 | 3 | 76 | 93 | 5 |
| **U.S. Fixed Income Composite** | 0.4% | 5.3% | 6.4% | 0.6% | 3.8% | -1.7% | 5.0% | 11.9% | 6.8% | 4.1% | 6.3% |
| *BBgBarc US Aggregate TR* | 0.0% | 3.5% | 2.6% | 0.5% | 6.0% | -2.0% | 4.2% | 7.8% | 6.5% | 5.9% | 5.2% |
| *InvestorForce Public DB Total Fix Inc Net Rank* | 37 | 46 | 22 | 35 | 48 | 59 | 58 | 2 | 70 | 89 | 14 |
| Great Lakes Advisors | 0.3% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *BBgBarc US Govt/Credit Int TR* | 0.9% | 2.1% | 2.1% | 1.1% | 3.1% | -0.9% | 3.9% | 5.8% | 5.9% | 5.2% | 5.1% |
| *eV US Interm Duration Fixed Inc Net Rank* | 86 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **U.S. Equity Composite** | -8.1% | 23.5% | 8.7% | -0.2% | 11.3% | 32.7% | 14.7% | -1.3% | 21.1% | 34.1% | -38.2% |
| *Wilshire 5000 Total Market* | -5.3% | 21.0% | 13.4% | 0.7% | 12.7% | 33.1% | 16.1% | 1.0% | 17.2% | 28.3% | -37.2% |
| *InvestorForce Public DB US Eq Net Rank* | 83 | 6 | 93 | 52 | 43 | 84 | 77 | 79 | 16 | 11 | 63 |
| Vanguard Value Index | -5.4% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *CRSP US Large Cap Value TR USD* | -5.4% | 17.2% | 16.9% | -0.9% | 13.3% | 33.3% | 16.7% | 1.4% | 16.1% | 18.4% | -35.3% |
| *Large Value MStar MF Rank* | 21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Vanguard 500 Index | -4.4% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *S&P 500* | -4.4% | 21.8% | 12.0% | 1.4% | 13.7% | 32.4% | 16.0% | 2.1% | 15.1% | 26.5% | -37.0% |
| *Large Blend MStar MF Rank* | 24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Vanguard Mid-Cap Growth ETF | -5.5% | 21.8% | 6.9% | -- | -- | -- | -- | -- | -- | -- | -- |
| *CRSP US Mid Cap Growth TR USD* | -5.6% | 21.9% | 6.8% | -0.9% | 13.6% | 33.0% | 15.8% | -2.2% | 27.5% | 38.4% | -44.9% |
| *Mid-Cap Growth MStar MF Rank* | 52 | 73 | 45 | -- | -- | -- | -- | -- | -- | -- | -- |
| Nuveen Small Cap Value | -20.6% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *Russell 2000 Value* | -12.9% | 7.8% | 31.7% | -7.5% | 4.2% | 34.5% | 18.0% | -5.5% | 24.5% | 20.6% | -28.9% |
| *Small Value MStar MF Rank* | 95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Non U.S. Equity Composite** | -15.9% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *MSCI ACWI ex USA* | -14.2% | 27.2% | 4.5% | -5.7% | -3.9% | 15.3% | 16.8% | -13.7% | 11.2% | 41.4% | -45.5% |
| *InvestorForce Public DB Glbl Eq Net Rank* | 95 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Vanguard Developed Markets | -14.5% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *FTSE Developed ex US All Cap* | -15.0% | 26.1% | 2.9% | -2.0% | -4.6% | 20.3% | -- | -- | -- | -- | -- |
| *Foreign Large Blend MStar MF Rank* | 42 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Goldman Sachs International Small Cap Insights | -18.8% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *MSCI EAFE Small Cap* | -17.9% | 33.0% | 2.2% | 9.6% | -4.9% | 29.3% | 20.0% | -15.9% | 22.0% | 46.8% | -47.0% |
| *Foreign Small/Mid Value MStar MF Rank* | 39 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| DFA Emerging Markets Core Equity Fund | -15.2% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *MSCI Emerging Markets* | -14.6% | 37.3% | 11.2% | -14.9% | -2.2% | -2.6% | 18.2% | -18.4% | 18.9% | 78.5% | -53.3% |
| *Diversified Emerging Mkts MStar MF Rank* | 35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

## Investment Manager

## Calendar Performance (Net of Fees)

Market Value: $31.6 Million and 100.0% of Fund

| | Calendar Year | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 |
| **Global Tactical Composite** | **-3.5%** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| *BBgBarc US Govt/Credit Int TR* | *0.9%* | *2.1%* | *2.1%* | *1.1%* | *3.1%* | *-0.9%* | *3.9%* | *5.8%* | *5.9%* | *5.2%* | *5.1%* |
| *InvestorForce Corp DB Global Tactical Net Rank* | *3* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* |
| BlackRock Multi-Asset Income | -3.5% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *BBgBarc US Govt/Credit Int TR* | *0.9%* | *2.1%* | *2.1%* | *1.1%* | *3.1%* | *-0.9%* | *3.9%* | *5.8%* | *5.9%* | *5.2%* | *5.1%* |
| *Multialternative MStar MF Rank* | *42* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* |
| **Real Estate Composite** | **7.9%** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** | **--** |
| *NFI* | *7.4%* | *6.7%* | *7.8%* | *13.9%* | *11.5%* | *12.9%* | *9.8%* | *15.0%* | *15.3%* | *-30.4%* | *-10.7%* |
| *InvestorForce Public DB Real Estate Pub Net Rank* | *2* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* | *--* |
| Principal U.S. Property Separate Account | 7.9% | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| *NFI* | *7.4%* | *6.7%* | *7.8%* | *13.9%* | *11.5%* | *12.9%* | *9.8%* | *15.0%* | *15.3%* | *-30.4%* | *-10.7%* |

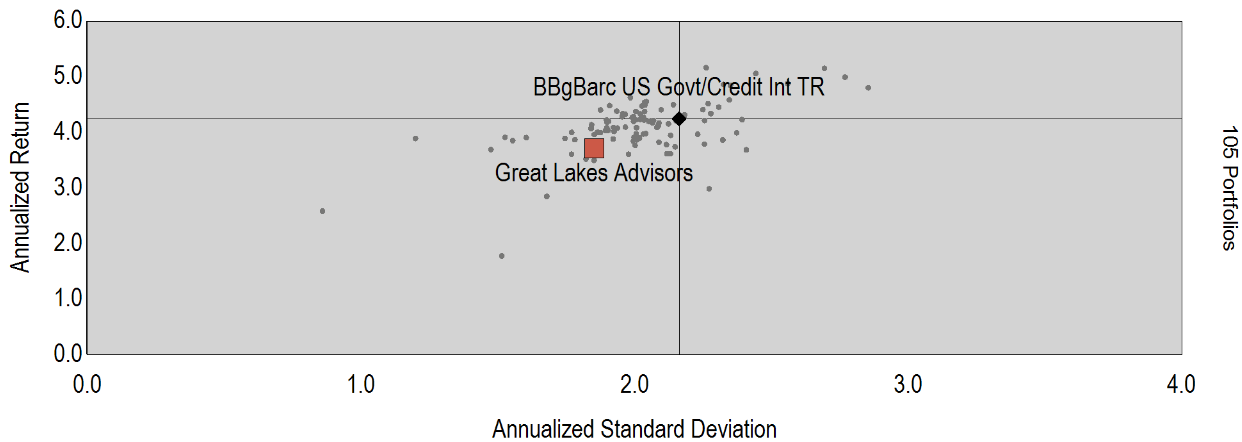
# Great Lakes Advisors

# Characteristics

As of March 31, 2019

Market Value: $10.9 Million and 35.9% of Fund

## Risk/Return - 1 Year




## Characteristics

| | Portfolio Q1-19 | Index Q1-19 |
|---|---|---|
| Yield to Maturity | 2.9% | 2.6% |
| Avg. Eff. Maturity | 3.7 yrs. | 4.3 yrs. |
| Avg. Duration | 3.3 yrs. | 3.9 yrs. |
| Avg. Quality | A | -- |

| Region | Number Of Assets |
|---|---|
| North America ex U.S. | 2 |
| United States | 134 |
| Emerging Markets | 1 |
| Other | 0 |
| **Total** | **137** |

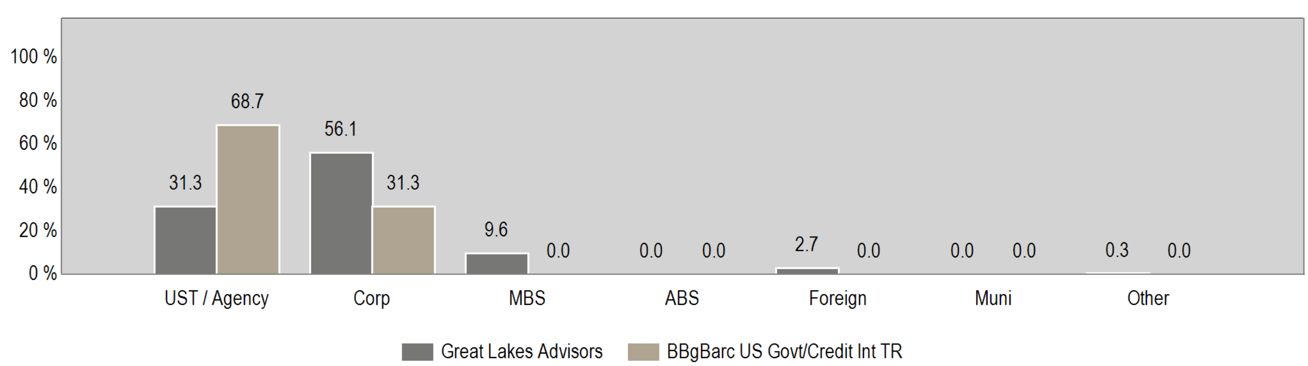
## Sector

| | Portfolio Q1-19 | Index Q1-19 |
|---|---|---|
| UST/Agency | 31.3% | 68.7% |
| Corporate | 56.1% | 31.3% |
| MBS | 9.6% | -- |
| ABS | -- | -- |
| Foreign | 2.7% | -- |
| Muni | -- | -- |
| Other | 0.3% | -- |

## Maturity

| | Q1-19 |
|---|---|
| <1 Year | 21.7% |
| 1-3 Years | 30.4% |
| 3-5 Years | 21.0% |
| 5-7 Years | 9.3% |
| 7-10 Years | 16.5% |
| 10-15 Years | 0.0% |
| 15-20 Years | 1.2% |
| >20 Years | 0.0% |
| Not Rated/Cash | 0.0% |

## Sectors
## Great Lakes Advisors



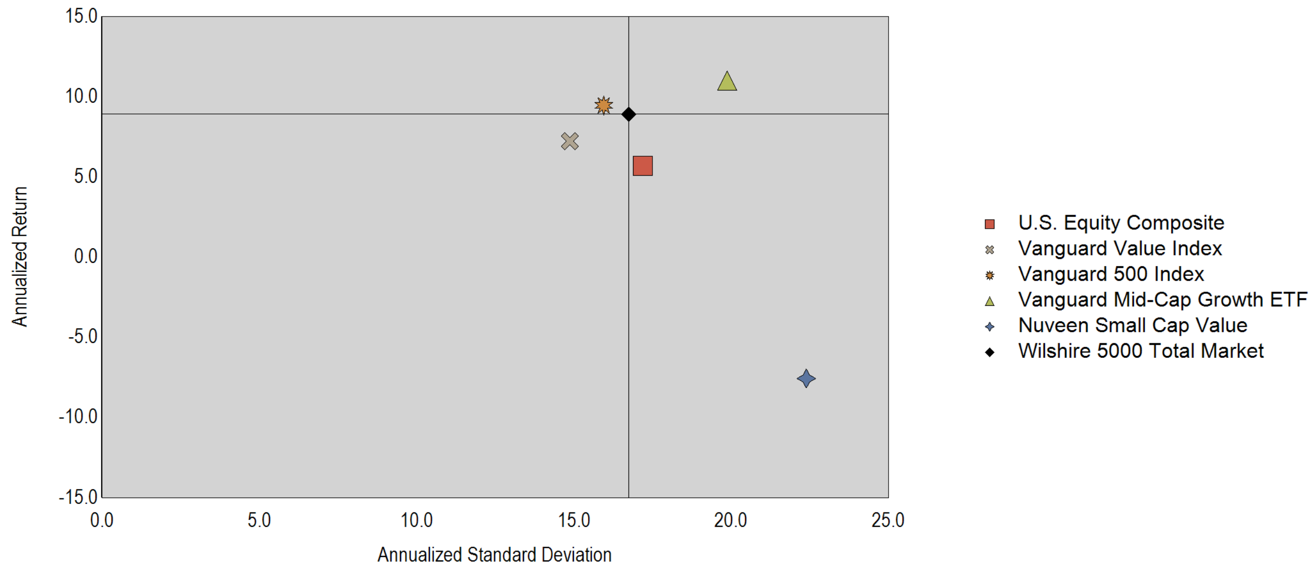
# U.S. Equity Composite

## Characteristics

As of March 31, 2019

Market Value: $9.1 Million and 29.9% of Fund

### Risk / Return - 1 Year




### Characteristics

| | Portfolio | Dow Jones U.S. Total Stock Market |
|---|---|---|
| Number of Holdings | 702 | 3,760 |
| Weighted Avg. Market Cap. ($B) | 109.0 | 176.9 |
| Median Market Cap. ($B) | 16.3 | 0.9 |
| Price To Earnings | 19.0 | 20.1 |
| Price To Book | 2.8 | 3.3 |
| Price To Sales | 1.7 | 1.8 |
| Return on Equity (%) | 19.3 | 21.3 |
| Yield (%) | 2.0 | 1.9 |
| Beta | 1.0 | 1.0 |
| R-Squared | 1.0 | 1.0 |

### Largest Holdings

| | End Weight | Return |
|---|---|---|
| BERKSHIRE HATHAWAY 'B' | 1.5 | -1.6 |
| JOHNSON & JOHNSON | 1.4 | 9.0 |
| EXXON MOBIL | 1.3 | 19.8 |
| JP MORGAN CHASE & CO. | 1.3 | 4.6 |
| MICROSOFT | 1.2 | 16.6 |

### Top Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| MICROSOFT | 2.3 | 16.6 | 0.4 |
| EXXON MOBIL | 1.2 | 19.8 | 0.2 |
| APPLE | 1.1 | 20.9 | 0.2 |
| CISCO SYSTEMS | 0.8 | 25.6 | 0.2 |
| PROPETRO HOLDING | 0.2 | 83.0 | 0.2 |

### Characteristics

| | Portfolio | Dow Jones U.S. Total Stock Market |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.6 | 5.1 |
| Materials | 3.1 | 2.9 |
| Industrials | 11.9 | 10.1 |
| Consumer Discretionary | 8.0 | 10.4 |
| Consumer Staples | 6.4 | 6.5 |
| Health Care | 13.4 | 14.3 |
| Financials | 17.7 | 13.2 |
| Information Technology | 16.8 | 20.9 |
| Communication Services | 6.2 | 9.3 |
| Utilities | 4.4 | 3.2 |
| Real Estate | 5.2 | 4.1 |
| Unclassified | 0.0 | 0.0 |

### Bottom Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| CVS HEALTH | 0.4 | -17.1 | -0.1 |
| NATUS MEDICAL | 0.2 | -25.4 | -0.1 |
| CIGNA | 0.3 | -15.3 | 0.0 |
| CME GROUP | 0.3 | -12.1 | 0.0 |
| BERKSHIRE HATHAWAY 'B' | 1.7 | -1.6 | 0.0 |

### Market Capitalization

| | Small Cap | Small/ Mid | Mid Cap | Mid/ Large | Large Cap |
|---|---|---|---|---|---|
| U.S. Equity Composite | 13.3% | 8.7% | 25.9% | 22.6% | 29.6% |
| Dow Jones U.S. Total Stock Market | 5.7% | 8.9% | 15.8% | 27.6% | 41.9% |
| *Weight Over/Under* | *7.6%* | *-0.2%* | *10.0%* | *-5.1%* | *-12.3%* |

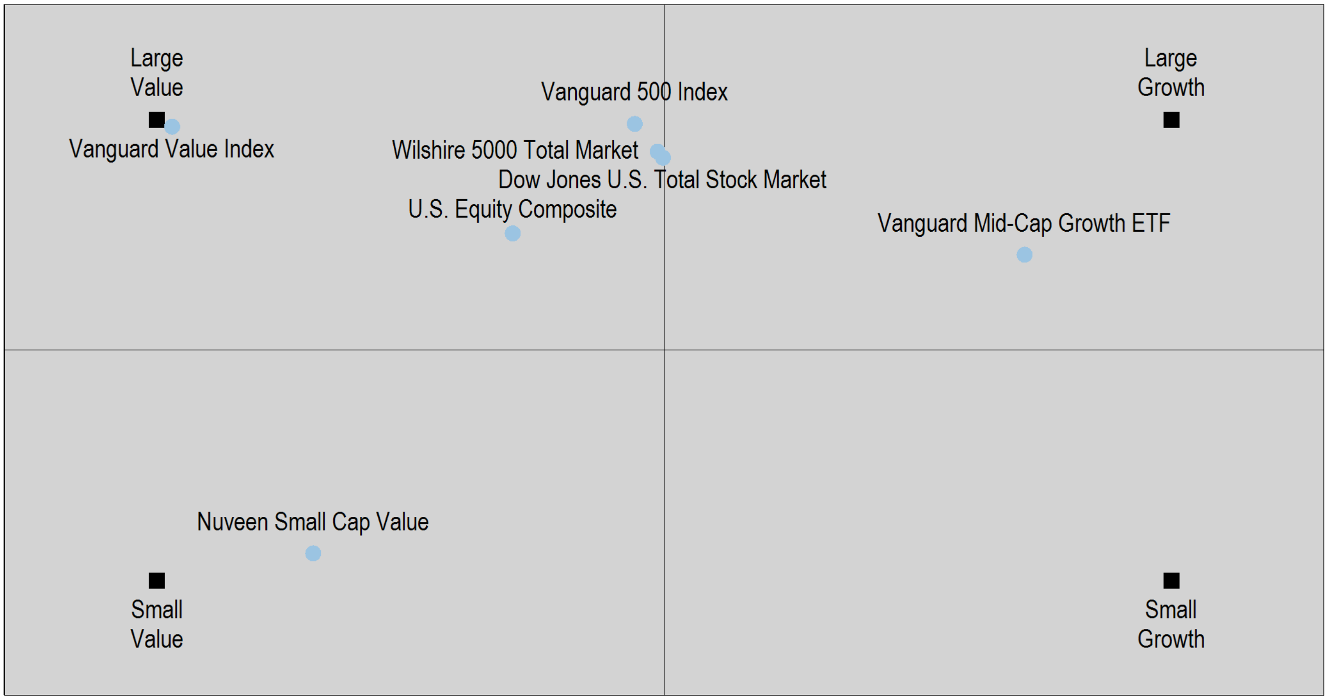
# U.S. Equity Composite

As of March 31, 2019

Style

Market Value: $9.1 Million and 29.9% of Fund

## Equity Style Map - 1 Year




## Common Holdings Matrix

| | Vanguard Value Index # | Vanguard Value Index % | Vanguard 500 Index # | Vanguard 500 Index % | Vanguard Mid-Cap Growth ETF # | Vanguard Mid-Cap Growth ETF % | Nuveen Small Cap Value # | Nuveen Small Cap Value % |
|---|---|---|---|---|---|---|---|---|
| Vanguard Value Index | -- | -- | 284 | 51 | 10 | 2 | 0 | 0 |
| Vanguard 500 Index | 284 | 97 | -- | -- | 117 | 78 | 0 | 0 |
| Vanguard Mid-Cap Growth ETF | 10 | 0 | 117 | 8 | -- | -- | 0 | 0 |
| Nuveen Small Cap Value | 0 | 0 | 0 | 0 | 0 | 0 | -- | -- |

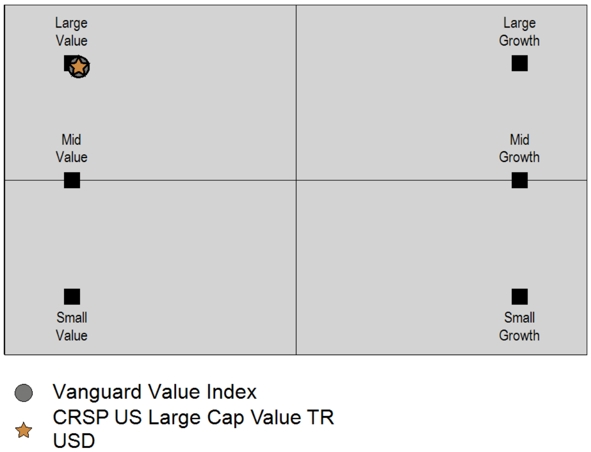
# Vanguard Value Index

# Characteristics

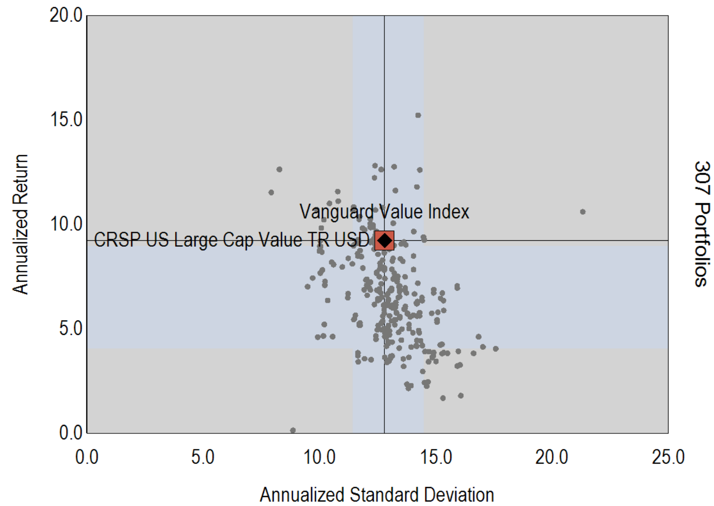
As of June 30, 2019

Market Value: $2.9 Million and 9.0% of Fund

## Style Drift - 1 Year




## Risk/Return - 1 Year




## Characteristics

| | Portfolio | CRSP US Large Cap Value TR USD |
|---|---|---|
| Number of Holdings | 344 | 336 |
| Weighted Avg. Market Cap. ($B) | 135.0 | 134.4 |
| Median Market Cap. ($B) | 16.5 | 16.5 |
| Price To Earnings | 16.5 | 16.5 |
| Price To Book | 2.4 | 2.4 |
| Price To Sales | 1.4 | 1.4 |
| Return on Equity (%) | 18.4 | 18.5 |
| Yield (%) | 2.7 | 2.7 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

## Largest Holdings

| | End Weight | Return |
|---|---|---|
| BERKSHIRE HATHAWAY 'B' | 3.3 | -1.6 |
| JOHNSON & JOHNSON | 3.1 | 9.0 |
| EXXON MOBIL | 2.8 | 19.8 |
| JP MORGAN CHASE & CO. | 2.8 | 4.6 |
| PROCTER & GAMBLE | 2.2 | 14.1 |

## Top Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| MICROSOFT | 3.5 | 16.6 | 0.6 |
| EXXON MOBIL | 2.6 | 19.8 | 0.5 |
| CISCO SYSTEMS | 1.7 | 25.6 | 0.4 |
| INTEL | 1.9 | 15.1 | 0.3 |
| PROCTER & GAMBLE | 2.0 | 14.1 | 0.3 |

## Characteristics

| | Portfolio | CRSP US Large Cap Value TR USD |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 8.2 | 8.3 |
| Materials | 3.2 | 3.2 |
| Industrials | 10.1 | 10.1 |
| Consumer Discretionary | 4.3 | 4.4 |
| Consumer Staples | 10.5 | 10.6 |
| Health Care | 17.8 | 17.9 |
| Financials | 22.2 | 22.3 |
| Information Technology | 9.3 | 9.3 |
| Communication Services | 5.9 | 5.9 |
| Utilities | 6.6 | 6.6 |
| Real Estate | 1.4 | 1.4 |
| Unclassified | 0.1 | 0.0 |

## Bottom Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| CVS HEALTH | 0.8 | -17.1 | -0.1 |
| CIGNA | 0.6 | -15.3 | -0.1 |
| CME GROUP | 0.6 | -12.1 | -0.1 |
| BERKSHIRE HATHAWAY 'B' | 3.6 | -1.6 | -0.1 |
| PFIZER | 2.3 | -1.9 | 0.0 |

## Market Capitalization

| | Small Cap | Small/ Mid | Mid Cap | Mid/ Large | Large Cap |
|---|---|---|---|---|---|
| Vanguard Value Index | 0.3% | 5.8% | 6.4% | 13.2% | 74.3% |
| CRSP US Large Cap Value TR USD | 0.5% | 5.6% | 5.8% | 13.6% | 74.5% |
| *Weight Over/Under* | *-0.2%* | *0.2%* | *0.6%* | *-0.4%* | *-0.1%* |

Attachment: 2Q19 Glen Ellyn Police (4075 : Investment Report 2019Q2)

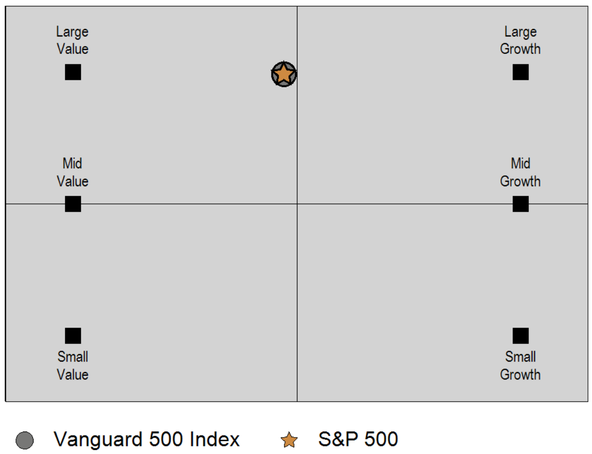
# Vanguard 500 Index

## Characteristics

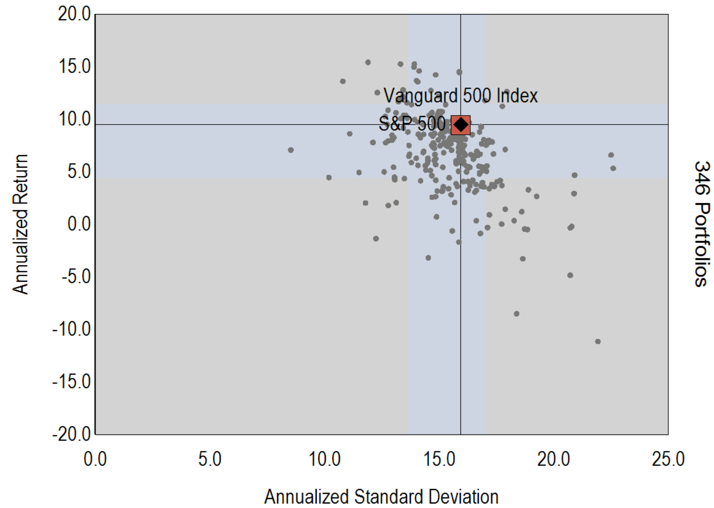
As of March 31, 2019

Market Value: $2.8 Million and 9.1% of Fund

### Style Drift - 1 Year




### Risk/Return - 1 Year




### Characteristics

| | Portfolio | S&P 500 |
|---|---|---|
| Number of Holdings | 511 | 505 |
| Weighted Avg. Market Cap. ($B) | 211.5 | 211.5 |
| Median Market Cap. ($B) | 21.2 | 21.2 |
| Price To Earnings | 20.2 | 20.2 |
| Price To Book | 3.5 | 3.5 |
| Price To Sales | 2.1 | 2.1 |
| Return on Equity (%) | 26.3 | 26.3 |
| Yield (%) | 2.0 | 2.0 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

### Largest Holdings

| | End Weight | Return |
|---|---|---|
| MICROSOFT | 3.8 | 16.6 |
| APPLE | 3.6 | 20.9 |
| AMAZON.COM | 3.1 | 18.6 |
| FACEBOOK CLASS A | 1.7 | 27.2 |
| BERKSHIRE HATHAWAY 'B' | 1.6 | -1.6 |

### Top Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| APPLE | 3.4 | 20.9 | 0.7 |
| MICROSOFT | 3.7 | 16.6 | 0.6 |
| AMAZON.COM | 2.9 | 18.6 | 0.5 |
| FACEBOOK CLASS A | 1.5 | 27.2 | 0.4 |
| EXXON MOBIL | 1.4 | 19.8 | 0.3 |

### Characteristics

| | Portfolio | S&P 500 |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 5.4 | 5.4 |
| Materials | 2.6 | 2.6 |
| Industrials | 9.4 | 9.5 |
| Consumer Discretionary | 10.1 | 10.1 |
| Consumer Staples | 7.3 | 7.3 |
| Health Care | 14.5 | 14.6 |
| Financials | 12.6 | 12.7 |
| Information Technology | 21.1 | 21.2 |
| Communication Services | 10.1 | 10.1 |
| Utilities | 3.3 | 3.3 |
| Real Estate | 3.1 | 3.1 |
| Unclassified | 0.1 | 0.0 |

### Bottom Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| ABBVIE | 0.7 | -11.5 | -0.1 |
| CVS HEALTH | 0.4 | -17.1 | -0.1 |
| BIOGEN | 0.3 | -21.4 | -0.1 |
| CIGNA | 0.3 | -15.3 | -0.1 |
| CME GROUP | 0.3 | -12.1 | 0.0 |

### Market Capitalization

| | Small Cap | Small/ Mid | Mid Cap | Mid/ Large | Large Cap |
|---|---|---|---|---|---|
| Vanguard 500 Index | 0.0% | 1.6% | 15.6% | 32.2% | 50.5% |
| S&P 500 | 0.2% | 1.6% | 15.4% | 32.4% | 50.5% |
| *Weight Over/Under* | *-0.1%* | *0.1%* | *0.2%* | *-0.1%* | *0.0%* |

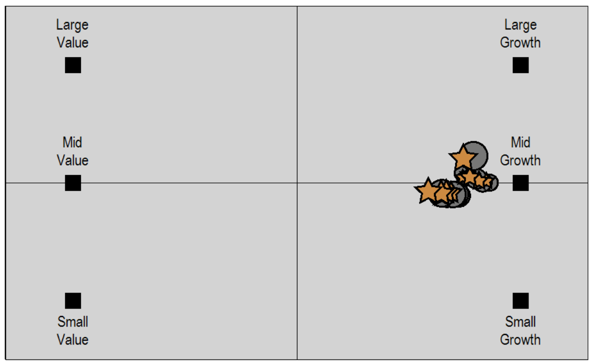
# Vanguard Mid-Cap Growth ETF

## Characteristics

As of March 31, 2019

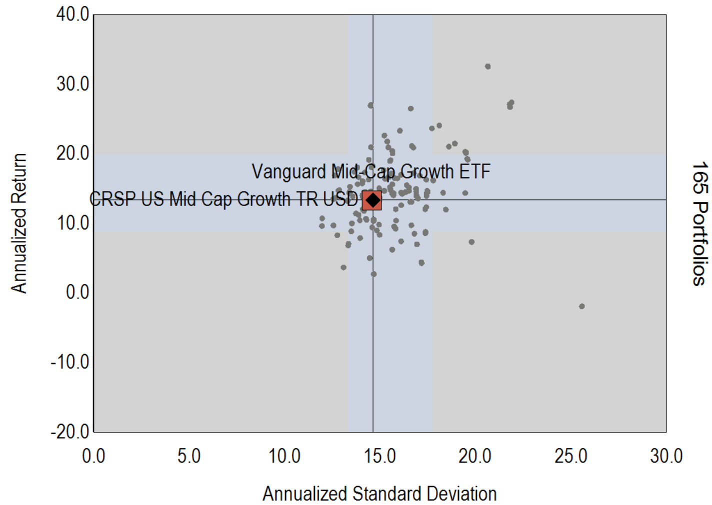
Market Value: $1.8 Million and 6.1% of Fund

### Style Drift - 2 Years




Vanguard Mid-Cap Growth ETF
CRSP US Mid Cap Growth TR USD

### Risk/Return - 2 Years




### Characteristics

| | Portfolio | Russell MidCap Growth |
|---|---|---|
| Number of Holdings | 173 | 417 |
| Weighted Avg. Market Cap. ($B) | 18.5 | 17.0 |
| Median Market Cap. ($B) | 13.1 | 8.4 |
| Price To Earnings | 30.2 | 24.4 |
| Price To Book | 4.5 | 6.0 |
| Price To Sales | 3.0 | 2.5 |
| Return on Equity (%) | 18.2 | 28.7 |
| Yield (%) | 0.9 | 0.9 |
| Beta | 0.9 | 1.0 |
| R-Squared | 1.0 | 1.0 |

### Largest Holdings

| | End Weight | Return |
|---|---|---|
| ROPER TECHNOLOGIES | 1.6 | 28.5 |
| FISERV | 1.6 | 20.1 |
| WORLDPAY A | 1.6 | 48.5 |
| XILINX | 1.5 | 49.3 |
| RED HAT | 1.4 | 4.0 |

### Top Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| WORLDPAY A | 1.2 | 48.5 | 0.6 |
| XILINX | 1.2 | 49.3 | 0.6 |
| EDWARDS LIFESCIENCES | 1.7 | 24.9 | 0.4 |
| ROPER TECHNOLOGIES | 1.5 | 28.5 | 0.4 |
| CHIPOTLE MEXN.GRILL | 0.6 | 64.5 | 0.4 |

### Characteristics

| | Portfolio | Russell MidCap Growth |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.3 | 1.5 |
| Materials | 2.7 | 3.5 |
| Industrials | 17.7 | 15.7 |
| Consumer Discretionary | 9.2 | 16.1 |
| Consumer Staples | 2.4 | 3.0 |
| Health Care | 15.4 | 14.4 |
| Financials | 6.1 | 6.4 |
| Information Technology | 26.5 | 33.2 |
| Communication Services | 3.6 | 3.8 |
| Utilities | 0.3 | 0.0 |
| Real Estate | 9.7 | 2.3 |
| Unclassified | 0.0 | 0.0 |

### Bottom Contributors

| | Beg Wgt | Return | Contribution |
|---|---|---|---|
| CENTENE | 1.2 | -7.9 | -0.1 |
| ABIOMED | 0.7 | -12.1 | -0.1 |
| RESMED | 0.9 | -8.3 | -0.1 |
| TAKE TWO INTACT.SFTW. | 0.6 | -8.3 | -0.1 |
| MARKEL | 0.7 | -4.0 | 0.0 |

### Market Capitalization

| | Small Cap | Small/ Mid | Mid Cap | Mid/ Large | Large Cap |
|---|---|---|---|---|---|
| Vanguard Mid-Cap Growth ETF | 0.2% | 6.4% | 77.1% | 16.3% | 0.0% |
| Russell MidCap Growth | 0.9% | 23.3% | 58.0% | 17.7% | 0.0% |
| *Weight Over/Under* | *-0.8%* | *-16.9%* | *19.1%* | *-1.5%* | *0.0%* |

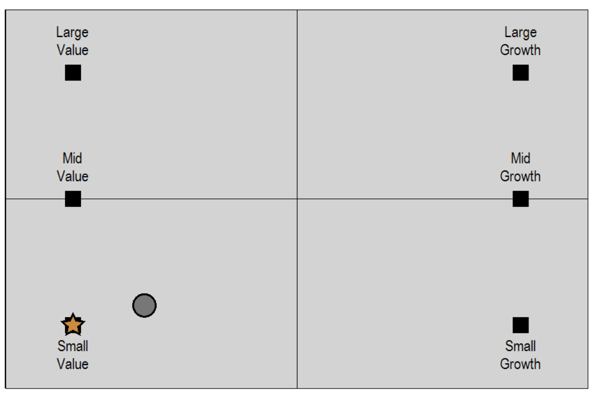
# Nuveen Small Cap Value

## Characteristics

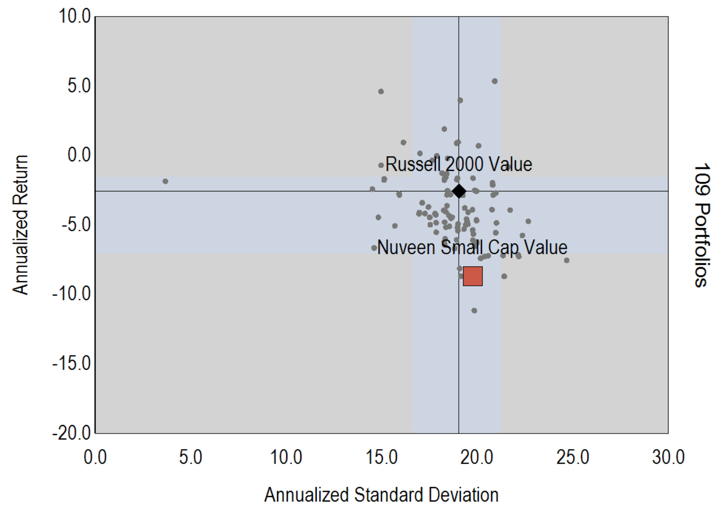
As of March 31, 2019

Market Value: $1.7 Million and 5.7% of Fund

### Style Drift - 1 Year




### Risk/Return - 1 Year




### Characteristics

| | Portfolio | Russell 2000 Value |
|---|---|---|
| Number of Holdings | 83 | 1,366 |
| Weighted Avg. Market Cap. ($B) | 2.4 | 2.1 |
| Median Market Cap. ($B) | 2.1 | 0.7 |
| Price To Earnings | 14.8 | 15.6 |
| Price To Book | 1.7 | 1.6 |
| Price To Sales | 1.0 | 0.9 |
| Return on Equity (%) | 8.8 | 6.0 |
| Yield (%) | 2.0 | 2.2 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

### Largest Holdings

| | End Weight | Return |
|---|---|---|
| GIBRALTAR INDS. | 2.0 | 14.1 |
| BRINK'S | 2.0 | 16.9 |
| RADWARE | 1.9 | 15.1 |
| IBERIABANK | 1.9 | 12.2 |
| BANNER | 1.8 | 2.0 |

### Top Contributors

| | End Weight | Return | Contribution |
|---|---|---|---|
| PROPETRO HOLDING | 1.8 | 83.0 | 1.5 |
| PLANTRONICS | 1.8 | 39.7 | 0.7 |
| APERGY | 1.2 | 51.6 | 0.6 |
| G-III APPAREL GROUP | 1.3 | 43.3 | 0.6 |
| EVERCORE A | 1.6 | 27.9 | 0.4 |

### Characteristics

| | Portfolio | Russell 2000 Value |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.4 | 5.5 |
| Materials | 4.2 | 4.3 |
| Industrials | 12.6 | 11.3 |
| Consumer Discretionary | 9.4 | 9.2 |
| Consumer Staples | 2.5 | 2.6 |
| Health Care | 2.5 | 4.3 |
| Financials | 30.9 | 28.3 |
| Information Technology | 11.5 | 11.5 |
| Communication Services | 3.4 | 3.2 |
| Utilities | 6.8 | 7.3 |
| Real Estate | 9.9 | 12.4 |
| Unclassified | 0.0 | 0.0 |

### Bottom Contributors

| | End Weight | Return | Contribution |
|---|---|---|---|
| NATUS MEDICAL | 0.9 | -25.4 | -0.2 |
| AMN HLTHCR.SVS. | 0.6 | -16.9 | -0.1 |
| MILACRON HOLDINGS | 1.4 | -4.8 | -0.1 |
| COOPER TIRE & RUB. | 0.9 | -7.2 | -0.1 |
| HEARTLAND FINL.USA | 1.3 | -2.6 | 0.0 |

### Market Capitalization

| | Small Cap | Small/ Mid | Mid Cap | Mid/ Large | Large Cap |
|---|---|---|---|---|---|
| Nuveen Small Cap Value | 69.1% | 30.9% | 0.0% | 0.0% | 0.0% |
| Russell 2000 Value | 76.8% | 23.2% | 0.0% | 0.0% | 0.0% |
| *Weight Over/Under* | *-7.7%* | *7.7%* | *0.0%* | *0.0%* | *0.0%* |

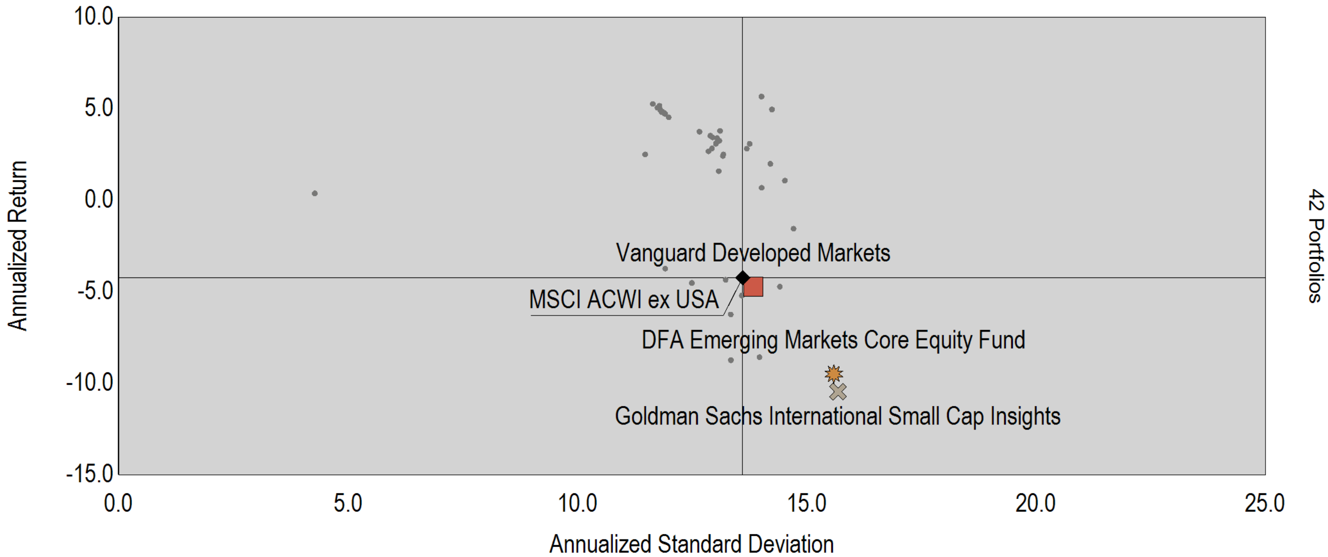
# Non U.S. Equity Composite

## Characteristics

As of March 31, 2019

Market Value: $6.1 Million and 20.0% of Fund

**Risk/Return - 1 Year**




**Characteristics**

| | Portfolio | MSCI ACWI ex USA |
|---|---|---|
| Number of Holdings | 8,463 | 2,145 |
| Weighted Avg. Market Cap. ($B) | 36.7 | 64.4 |
| Median Market Cap. ($B) | 0.9 | 7.7 |
| Price To Earnings | 13.9 | 14.6 |
| Price To Book | 2.2 | 2.2 |
| Price To Sales | 1.0 | 1.2 |
| Return on Equity (%) | 15.0 | 15.5 |
| Yield (%) | 3.1 | 3.2 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

| Region | % of Total | % of Bench |
|---|---|---|
| North America ex U.S. | 4.3% | 6.8% |
| United States | 0.2% | 0.0% |
| Europe Ex U.K. | 29.6% | 30.8% |
| United Kingdom | 10.4% | 11.5% |
| Pacific Basin Ex Japan | 10.7% | 8.5% |
| Japan | 19.4% | 16.1% |
| Emerging Markets | 25.1% | 25.6% |
| Other | 0.4% | 0.6% |
| **Total** | **100.0%** | **100.0%** |

**Characteristics**

| | Portfolio | FTSE Developed ex North America |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.4 | 5.6 |
| Materials | 7.5 | 7.7 |
| Industrials | 14.6 | 14.7 |
| Consumer Discretionary | 10.4 | 11.0 |
| Consumer Staples | 10.1 | 11.4 |
| Health Care | 9.6 | 10.9 |
| Financials | 18.9 | 18.6 |
| Information Technology | 7.4 | 7.6 |
| Communication Services | 5.0 | 5.3 |
| Utilities | 3.3 | 3.6 |
| Real Estate | 3.9 | 3.7 |
| Unclassified | 0.3 | 0.0 |

**Market Capitalization**

| | Small Cap | Mid Cap | Large Cap |
|---|---|---|---|
| Non U.S. Equity Composite | 42.2% | 15.8% | 42.0% |
| MSCI ACWI ex USA | 5.7% | 19.8% | 74.5% |
| *Weight Over/Under* | *36.5%* | *-4.0%* | *-32.5%* |

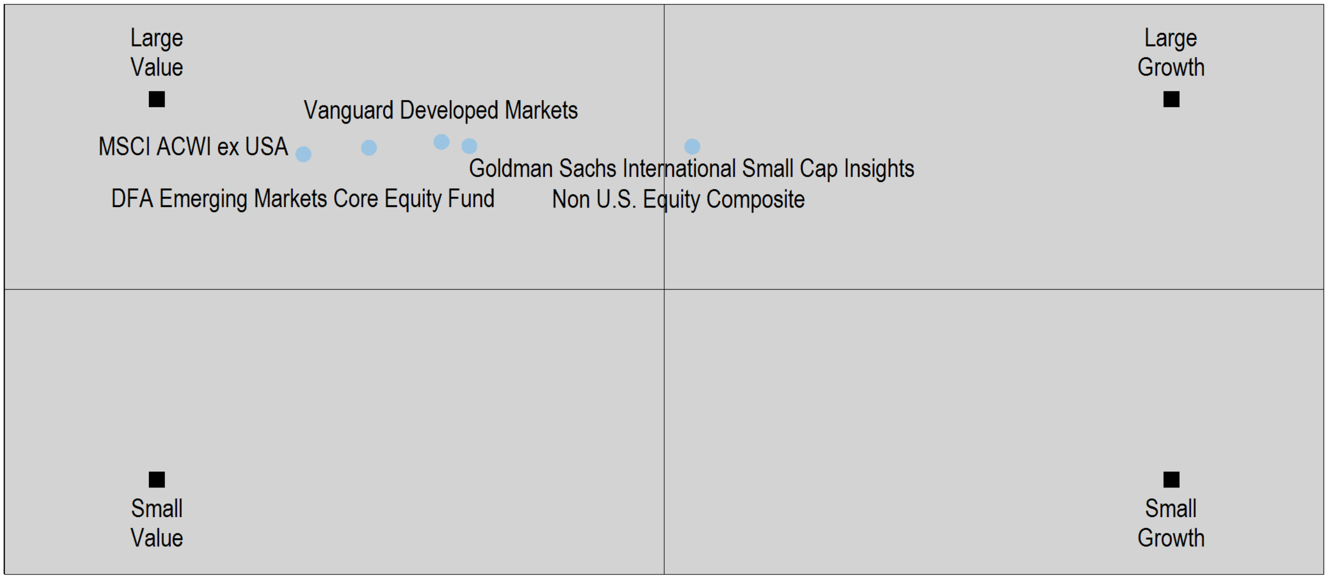
# Non U.S. Equity Composite

## Characteristics

As of March 31, 2019

Market Value: $6.1 Million and 20.0% of Fund

### Equity Style Map - 1 Year




### Common Holdings Matrix

| | Vanguard Developed Markets # | Vanguard Developed Markets % | Goldman Sachs International Small Cap Insights # | Goldman Sachs International Small Cap Insights % | DFA Emerging Markets Core Equity Fund # | DFA Emerging Markets Core Equity Fund % |
|---|---|---|---|---|---|---|
| Vanguard Developed Markets | -- | -- | 396 | 89 | 462 | 17 |
| Goldman Sachs International Small Cap Insights | 396 | 3 | -- | -- | 1 | 0 |
| DFA Emerging Markets Core Equity Fund | 462 | 5 | 1 | 0 | -- | -- |

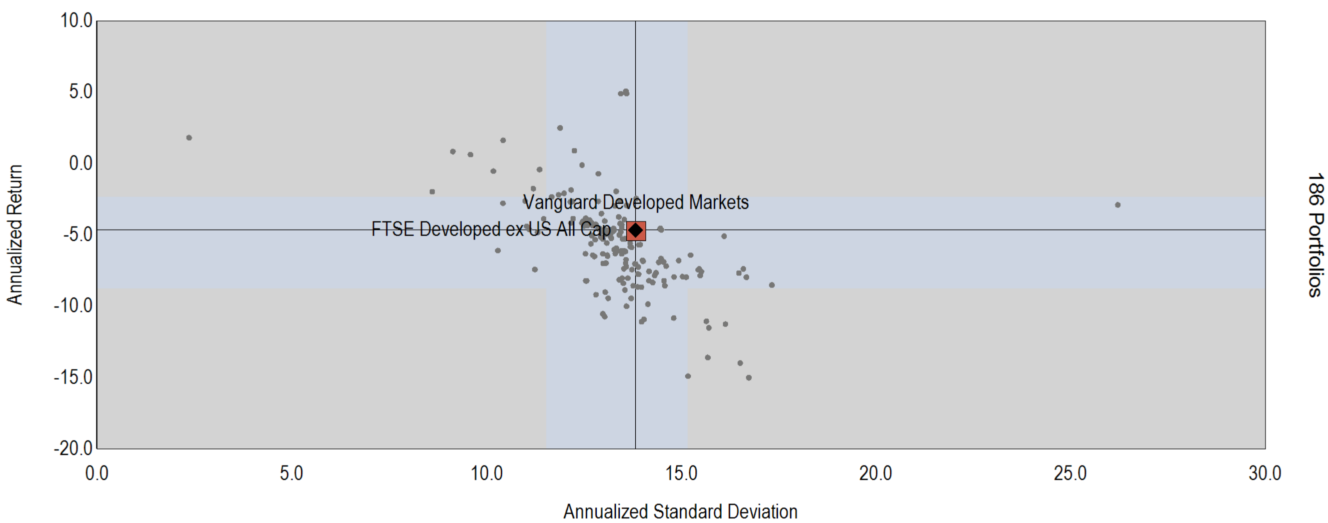
# Vanguard Developed Markets

## Characteristics

As of March 31, 2019

Market Value: $3.0 Million and 10.0% of Fund

### Risk/Return - 1 Year




### Characteristics

| | Portfolio | FTSE Developed ex North America |
|---|---|---|
| Number of Holdings | 3,894 | 1,496 |
| Weighted Avg. Market Cap. ($B) | 50.5 | 56.2 |
| Median Market Cap. ($B) | 1.6 | 6.3 |
| Price To Earnings | 14.6 | 14.6 |
| Price To Book | 2.1 | 2.2 |
| Price To Sales | 1.1 | 1.1 |
| Return on Equity (%) | 14.0 | 14.4 |
| Yield (%) | 3.2 | 3.3 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

| Region | % of Total | % of Bench |
|---|---|---|
| North America ex U.S. | 8.8% | 0.0% |
| United States | 0.1% | 0.0% |
| Europe Ex U.K. | 39.3% | 42.0% |
| United Kingdom | 12.7% | 16.5% |
| Pacific Basin Ex Japan | 11.5% | 12.4% |
| Japan | 22.3% | 24.1% |
| Emerging Markets | 4.8% | 4.5% |
| Other | 0.5% | 0.5% |
| **Total** | **100.0%** | **100.0%** |

### Characteristics

| | Portfolio | FTSE Developed ex North America |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.4 | 5.6 |
| Materials | 7.5 | 7.7 |
| Industrials | 14.6 | 14.7 |
| Consumer Discretionary | 10.4 | 11.0 |
| Consumer Staples | 10.1 | 11.4 |
| Health Care | 9.6 | 10.9 |
| Financials | 18.9 | 18.6 |
| Information Technology | 7.4 | 7.6 |
| Communication Services | 5.0 | 5.3 |
| Utilities | 3.3 | 3.6 |
| Real Estate | 3.9 | 3.7 |
| Unclassified | 0.3 | 0.0 |

### Market Capitalization

| | **Small Cap** | **Mid Cap** | **Large Cap** |
|---|---|---|---|
| Vanguard Developed Markets | 34.7% | 20.1% | 45.2% |
| FTSE Developed ex North America | 28.2% | 21.3% | 50.5% |
| *Weight Over/Under* | *6.5%* | *-1.2%* | *-5.3%* |

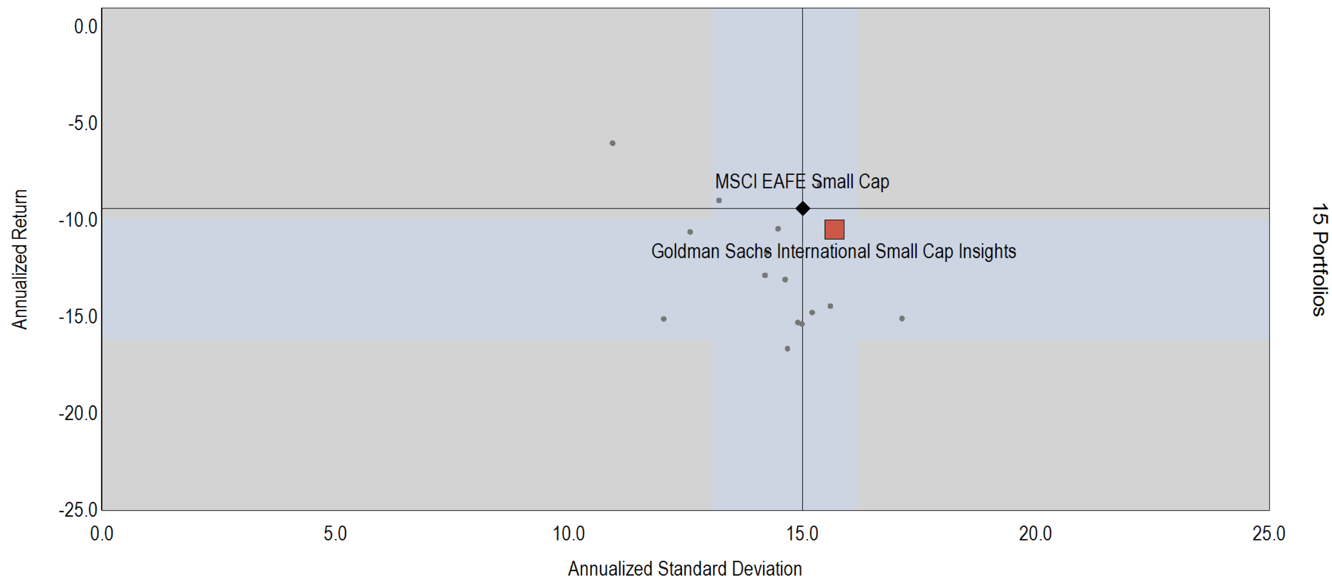
# Goldman Sachs International Small Cap Insights

## Characteristics

As of March 31, 2019

Market Value: $1.5 Million and 5.0% of Fund

### Risk/Return - 1 Year




### Characteristics

| | Portfolio | MSCI EAFE Small Cap |
|---|---|---|
| Number of Holdings | 448 | 2,326 |
| Weighted Avg. Market Cap. ($B) | 2.9 | 2.6 |
| Median Market Cap. ($B) | 1.7 | 1.0 |
| Price To Earnings | 14.4 | 15.2 |
| Price To Book | 2.2 | 2.1 |
| Price To Sales | 1.0 | 1.0 |
| Return on Equity (%) | 16.8 | 12.9 |
| Yield (%) | 3.0 | 2.9 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

| Region | % of Total | % of Bench |
|---|---|---|
| North America ex U.S. | 0.0% | 0.0% |
| United States | 0.2% | 0.0% |
| Europe Ex U.K. | 40.4% | 36.7% |
| United Kingdom | 16.3% | 18.9% |
| Pacific Basin Ex Japan | 9.8% | 12.2% |
| Japan | 33.2% | 30.5% |
| Emerging Markets | 0.0% | 0.0% |
| Other | 0.2% | 1.7% |
| **Total** | **100.0%** | **100.0%** |

### Characteristics

| | Portfolio | MSCI EAFE Small Cap |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 2.5 | 2.7 |
| Materials | 6.3 | 8.3 |
| Industrials | 18.3 | 21.3 |
| Consumer Discretionary | 11.5 | 12.9 |
| Consumer Staples | 7.7 | 6.5 |
| Health Care | 10.5 | 7.6 |
| Financials | 8.2 | 11.2 |
| Information Technology | 13.2 | 9.9 |
| Communication Services | 5.0 | 4.8 |
| Utilities | 4.4 | 2.4 |
| Real Estate | 12.4 | 12.5 |
| Unclassified | 0.0 | 0.0 |

### Market Capitalization

| | **Small Cap** | **Mid Cap** | **Large Cap** |
|---|---|---|---|
| Goldman Sachs International Small Cap Insights | 94.4% | 5.6% | 0.0% |
| MSCI EAFE Small Cap | 94.0% | 6.0% | 0.0% |
| *Weight Over/Under* | *0.4%* | *-0.4%* | *0.0%* |

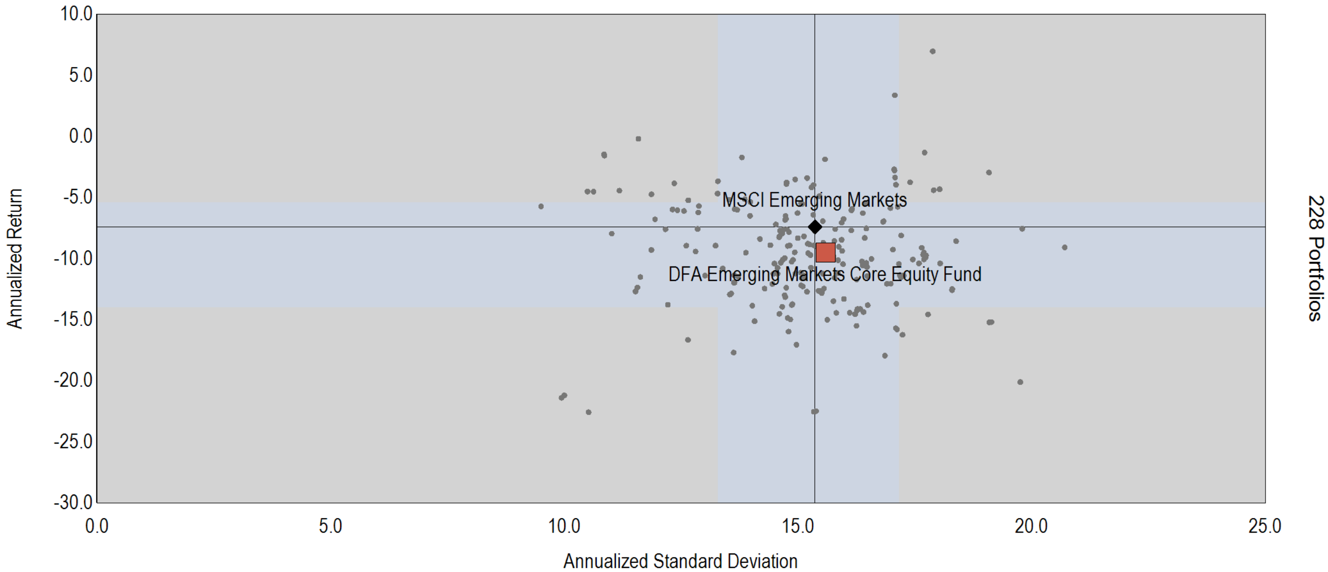
# DFA Emerging Markets Core Equity Fund

# Characteristics

As of March 31, 2019

Market Value: $1.5 Million and 5.0% of Fund

## Risk/Return - 1 Year




## Characteristics

| | Portfolio | MSCI Emerging Markets |
|---|---|---|
| Number of Holdings | 4,955 | 1,133 |
| Weighted Avg. Market Cap. ($B) | 44.2 | 84.9 |
| Median Market Cap. ($B) | 0.4 | 5.8 |
| Price To Earnings | 12.6 | 13.3 |
| Price To Book | 2.2 | 2.4 |
| Price To Sales | 0.9 | 1.3 |
| Return on Equity (%) | 15.9 | 17.8 |
| Yield (%) | 2.9 | 2.7 |
| Beta | | 1.0 |
| R-Squared | | 1.0 |

| Region | % of Total | % of Bench |
|---|---|---|
| EM Asia | 63.7% | 74.5% |
| EM Latin America | 14.2% | 11.7% |
| EM Europe & Middle East | 4.5% | 6.0% |
| EM Africa | 6.8% | 5.9% |
| Other | 10.8% | 1.9% |
| **Total** | **100.0%** | **100.0%** |

## Characteristics

| | Portfolio | MSCI Emerging Markets |
|---|---|---|
| INDUSTRY SECTOR DISTRIBUTION (% Equity) | | |
| Energy | 6.8 | 8.1 |
| Materials | 11.2 | 7.4 |
| Industrials | 9.0 | 5.5 |
| Consumer Discretionary | 10.9 | 13.3 |
| Consumer Staples | 7.2 | 6.4 |
| Health Care | 3.2 | 2.6 |
| Financials | 18.5 | 24.3 |
| Information Technology | 18.0 | 14.6 |
| Communication Services | 7.6 | 12.1 |
| Utilities | 3.4 | 2.6 |
| Real Estate | 4.1 | 3.1 |
| Unclassified | 0.1 | 0.0 |

## Market Capitalization

| | **Small Cap** | **Mid Cap** | **Large Cap** |
|---|---|---|---|
| DFA Emerging Markets Core Equity Fund | 30.8% | 20.9% | 48.3% |
| MSCI Emerging Markets | 4.2% | 17.6% | 78.2% |
| *Weight Over/Under* | *26.6%* | *3.3%* | *-29.9%* |

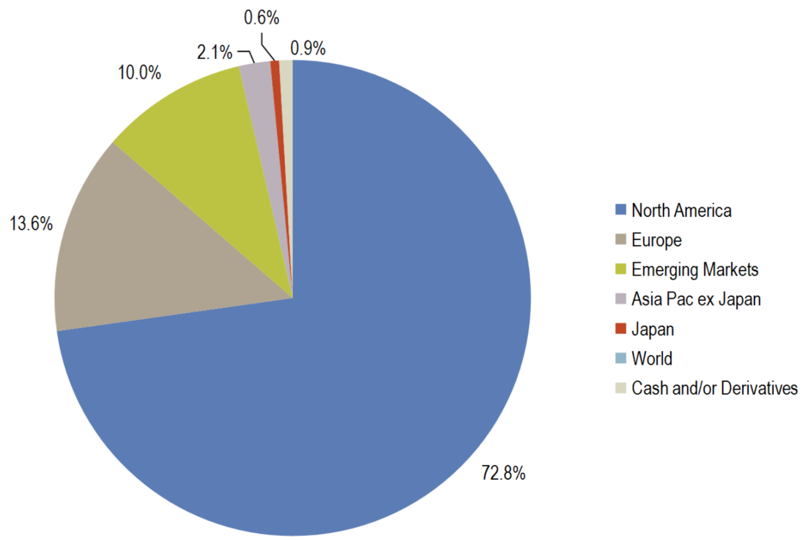
# BlackRock Multi-Asset Income

## Characteristics

As of March 31, 2019

Market Value: $1.6 Million and 5.1% of Fund

### Geographic Allocation



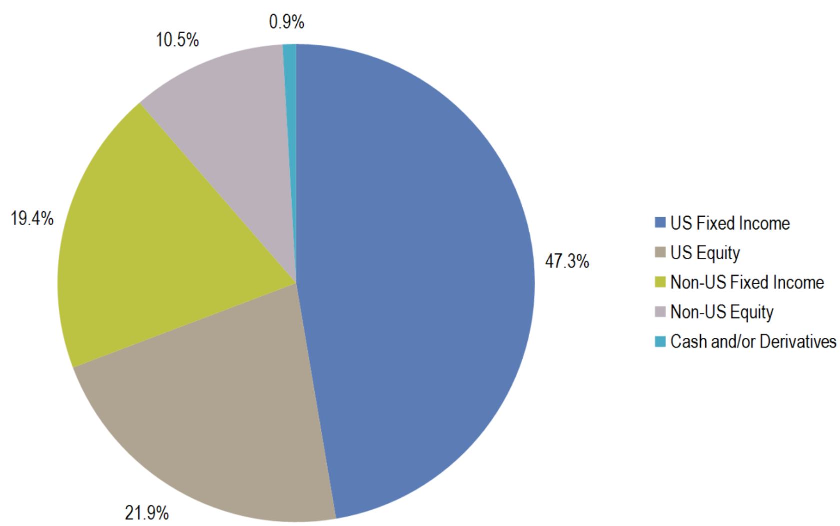

### Asset Class

| | |
|---|---|
| US Fixed Income | 27.81% |
| Non-US Fixed Income | 4.60% |
| US Equity | 33.16% |
| Non-US Equity | 24.76% |
| Cash and/or Derivatives | 9.79% |

### Currency Exposure

| | |
|---|---|
| US Dollar | 66.88% |
| Euro | 8.34% |
| Yen | 9.75% |
| Other Asia | 6.02% |
| Sterling | 4.12% |
| Other Europe | 1.81% |
| Latin America | 1.22% |
| Rest of World | 1.87% |

### Asset Allocation



# Principal U.S. Property Separate Account

## Characteristics

As of March 31, 2019

Market Value: $2.1 Million and 7.0% of Fund

### Characteristics

| | |
|---|---|
| Fund GAV ($MM) | $10,302.0 |
| Fund NAV ($MM) | $8,157.2 |
| Cash (% of NAV) | 2.7% |
| # of Investments | 135 |
| % in Top 10 by NAV | 29.9% |
| Leverage % | 18.6% |
| Occupancy | 90.1% |
| # of MSAs | 42 |
| 1-Year Dividend Yield | 0.0% |
| As of Date | 31-Mar-19 |

### Strategy Breakdown

| | % of Portfolio |
|---|---|
| Pre-Development | 0.7% |
| Development | 2.7% |
| Initial Leasing | 3.6% |
| Operating | 93.0% |
| Re-Development | 0.0% |
| Other | 0.0% |

| Top Five Metro Areas | % of NAV |
|---|---|
| New York, NY | 9.4% |
| Austin, TX | 7.6% |
| Cambridge, MA | 7.1% |
| Phoenix, AZ | 6.3% |
| Seattle, WA | 6.0% |

Queue In:

| | |
|---|---|
| Contribution Queue ($MM) | $0.00 |
| Anticipated Drawdown (Months) | 0 |

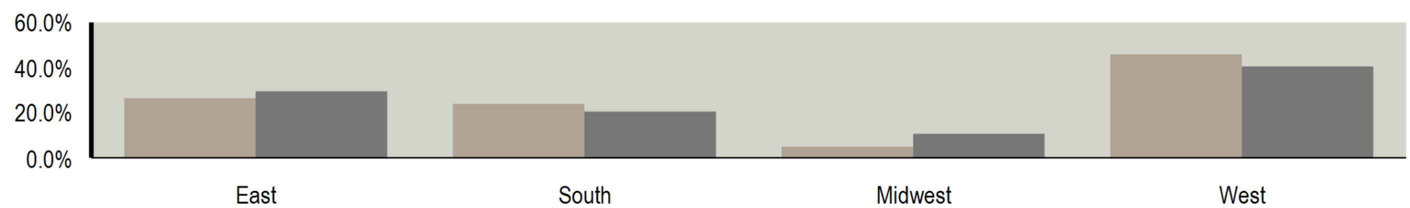
Queue Out:

| | |
|---|---|
| Redemption Queue ($MM) | $0.00 |
| Anticipated Payout (Months) | 0 |

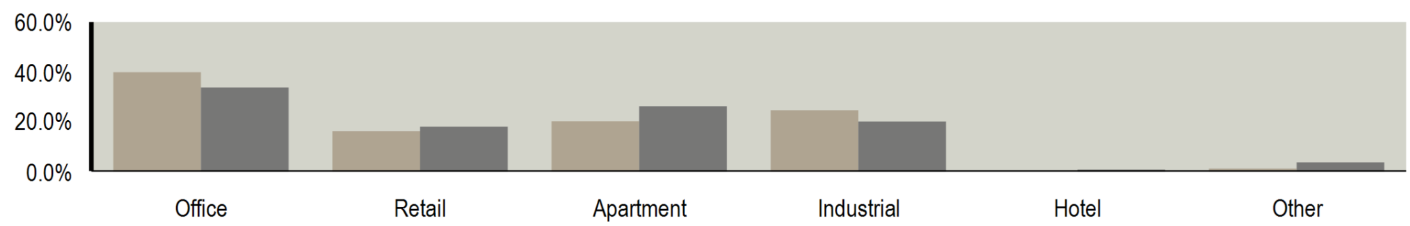
### Top Ten Holdings Investment Detail

| # | Property | Type | Location | % of Fund NAV |
|---|---|---|---|---|
| 1 | 500 West Second Street | Office | Austin, TX | 4.9% |
| 2 | Charles Park | Office | Cambridge, MA | 4.6% |
| 3 | 555 City Center | Office | Oakland, CA | 3.2% |
| 4 | Nine Two Nine | Office | Seattle, WA | 2.9% |
| 5 | Park Place | Other | Anaheim, CA | 2.7% |
| 6 | Watermark Kendall East & West | Apartment | Cambridge, MA | 2.6% |
| 7 | 225 West Santa Clara | Office | San Jose, CA | 2.5% |
| 8 | 1370 Avenue of the Americas | Office | New York, NY | 2.3% |
| 9 | Hazard Cener | Other | San Diego, CA | 2.2% |
| 10 | 461 Dean Street | Apartment | New York, NY | 1.9% |
| **Total** | | | | **29.9%** |

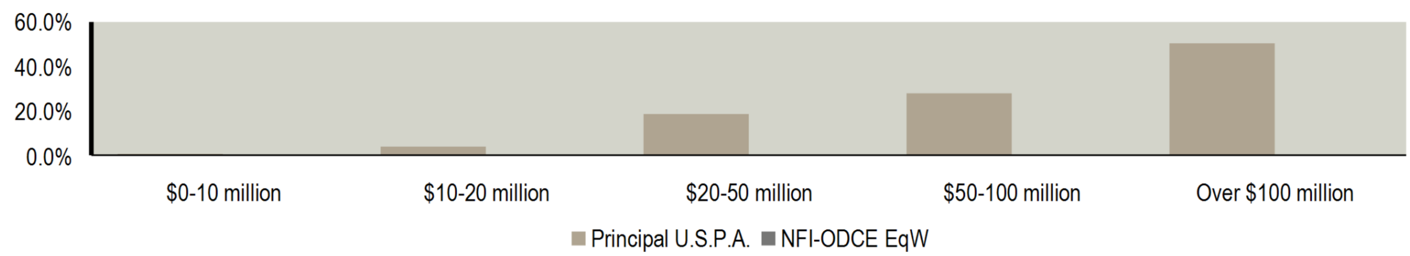
### Regional Breakdown by NAV (Excluding Cash & Debt)




### Property Type Breakdown by NAV (Excluding Cash & Debt)




### Property Size Breakdown by NAV (Excluding Cash & Debt)



# Total Fund Composite

## Fee Schedule

Market Value: $31.6 Million and 100.0% of Fund

| Asset Class | Investment Manager | Fee Schedule | Expense Ratio & Estimated Annual Fee [1] | Industry Average [2] |
|---|---|---|---|---|
| Int. Fixed Income | Great Lakes Advisors | 0.30% on the first $10 million<br>0.20% on the balance | 0.29%<br>$32,328 | 0.30% |
| Large-Cap Value | Vanguard Value Index | 0.06% on the balance | 0.06%<br>$1,712 | 0.79% |
| Large-Cap Core | Vanguard 500 Index | 0.04% on the balance | 0.04%<br>$1,151 | 0.13% |
| Mid-Cap Growth | Vanguard Mid-Cap Growth ETF | 0.07% on the balance | 0.07%<br>$1,354 | 0.22% |
| Small-Cap Value | Nuveen Small Cap Value | 0.97% on the balance | 0.97%<br>$16,906 | 1.06% |
| Non-U.S. Large-Cap Core | Vanguard Developed Markets | 0.07% on the balance | 0.07%<br>$2,195 | 0.26% |
| Non-U.S. Small-Cap Core | Goldman Sachs International Small Cap Insigh | 0.88% on the balance | 0.88%<br>$13,531 | 1.00% |
| Emerging Markets | DFA Emerging Markets Core Equity Fund | 0.53% on the balance | 0.53%<br>$8,129 | 1.27% |
| Global Tactical Asset Allocation | BlackRock Multi-Asset Income | 0.52% on the balance | 0.52%<br>$8,324 | 0.89% |
| Core Real Estate | Principal U.S. Property Separate Account | 1.10% on the balance | 1.10%<br>$23,722 | 1.01% |
| **Total Investment Management Fees** | | | **0.35%**<br>**$109,352** | **0.51%** |
| Investment Consultant | Marquette Associates, Inc. | $50,000 Annual Fee | 0.16%<br>$50,000 | |
| Custodian | US Bank | 0.02% on the balance<br>$7,500 annual minimum | 0.02%<br>$7,500 | |
| **Total Fund** | | | **0.53%**<br>**$166,852** | |

[1] Expense Ratio & Estimated Annual Fee are Based on Market Value at Quarter End.
[2] Source: 2016 Marquette Associates Investment Management Fee Study.

**Police Pension Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 07/17/19 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Vouchers
Prepared By: Christina Coyle

SCHEDULED

**AGENDA ITEM (ID # 4070)** DOC ID: 4070

# Approve the Expense Vouchers in the amount of $35,428,83 and Pension Expenses in the amount of $565,573,44 for a total of $601,002.27

Please see the information attached.

**ATTACHMENTS:**

- Vouchers July 2019 (PDF)

**POLICE PENSION FUND**
**APPROVAL OF VOUCHERS**
**For the meeting in July 2019**

| **Expenses** | Check Date: | Paid amount | |
|---|---|---|---|
| State of Illinois (Filing Fee - Dept. of Insurance) | 5/31/2019 | $ 6,096.27 | |
| Marquette Associates (First Quarter Investment) | 4/12/2019 | $ 12,500.00 | |
| Great Lakes Advisors (Investment Management) | 4/4/2019 | $ 7,855.56 | |
| US Bank (custodial account fees) | 4/30/2019 | $ 625.00 | |
| US Bank (custodial account fees) | 5/31/2019 | $ 625.00 | |
| Foster & Foster (actuarial report) | 6/21/2019 | $ 3,090.00 | |
| Rockwood Company (fiduciary liability insurance) | 5/31/2019 | $ 4,637.00 | |
| | | **$ 35,428.83** | |
| | | | **$ 35,428.83** |

| **Pension Expenses** | **April** | **May** | **June** | |
|---|---|---|---|---|
| Service Pensions | $ 166,381.48 | $ 166,381.48 | $ 166,381.48 | |
| Duty Disability Pensions | $ 11,450.41 | $ 11,450.41 | $ 11,450.41 | |
| Non-Duty Disability Pensions | $ - | $ - | $ - | |
| Surviving Spouse Pension | $ 10,692.59 | $ 10,692.59 | $ 10,692.59 | |
| **Total Payroll:** | **$ 188,524.48** | **$ 188,524.48** | **$ 188,524.48** | |
| | | | | **$ 565,573.44** |
| | | | **Grand Total** | **$ 601,002.27** |

*Make Checks Payable to:*
Illinois Dept of Insurance
*Send to:*
DEPARTMENT OF INSURANCE
P.O. Box 7087
SPRINGFIELD, IL 62791

**INVOICE BILLING NO: G50941**
INVOICE DATE: 5/7/2019

***PAYMENT DUE: July 1, 2019***
**CASH PAYMENTS NOT ACCEPTED**
A PENALTY OF 5% WILL BE ASSESSED AFTER 30 DAYS

427-4

**ITEMIZED BILLINGS:**

| CODE | Amount |
|---|---|
| 75-(Ann Compl Fee) | $ 6,096.27 |
| TOTAL: | $ 6,096.27 |

GLEN ELLYN POLICE PENSION FUND
Attn: President/Treasurer
535 Duane Street
Glen Ellyn, IL 60137

DETACH TOP PORTION AND RETURN WITH REMITTANCE.

GLEN ELLYN POLICE PENSION FUND
FY 2020 Compliance Fee Total Assets $30,481,339.70

# NOTICE
# STATE PENSION FUNDS
# COMPLIANCE FEE

40 ILCS 5/1A-112 provides that any pension fund that is required to file an annual statement is also required to pay an annual compliance fee. This fee is based upon 0.0002 of the total assets of the fund, not to exceed an amount of $8,000.00.

The annual compliance fee is due by **June 30** of the current calendar year. If the payment due date is on holiday or weekend, payment is due the next business day.

**Failure to pay the annual compliance fee by the due date will result in a penalty assessed pursuant to Section 4415.20 and as set forth in Section 1A-113(c). The late payment penalty is 5% of the fee for each month or portion of a month late capped at 25% of the compliance fee.**

This invoice serves as your notification pursuant to 50 Ill. Adm. Code 4415.50.

INVOICE BILLING NO: G50941
INVOICE DATE: 5/7/2019
TOTAL: 75 - Annual Compliance Fee $ 6,096.27

The Department of Insurance requires the annual compliance fee be submitted by check. If you have questions regarding this invoice, please contact Tax and Audit at (217) 557-3379.

POLICE PENSION - Annual DOI fee

| CODE | AMOUNT | APPROVAL | DATE |
|---|---|---|---|
| 90000 - 520610 | $6,096.27 | CD | 5/15/19 |
| | | | |
| | | | |
| | | | |
| | | | |

10574

**MarquetteAssociates**
180 N La Salle St, Suite 3500
Chicago, IL 60601

| Invoice Date | Invoice # |
|---|---|
| 4/1/19 | 1904056 |

**Account #** 1295

**Balance Due** $12,500.00

Glen Ellyn Police
535 Duane St.
Glen Ellyn, IL 60137

**Amount paid: $**_______________

**Check number:** _______________

☐ Please check box if address is incorrect or has changed, and indicate change(s) on reverse side.

Have E-Mail? Please write it here: ____________________

**PLEASE DETACH AND RETURN TOP PORTION WITH PAYMENT**

Glen Ellyn Police
535 Duane St.
Glen Ellyn, IL 60137

| Due Date | 4/1/19 |
|---|---|

| Description | Amount |
|---|---|
| Investment consulting services for the period January 1, 2019 through March 31, 2019. | 12,500.00 |

| CODE | AMOUNT | APPROVED | DATE |
|---|---|---|---|
| 90000 - 5208000 | $12,500.00 | @ | 4/3/19 |
| | | | |
| | | | |
| | | | |

**Terms: Due on receipt**  Cash 900 - 110155

**Billing Inquiries? Call 312.527.5500 X224**

Marquette Associates, Inc Attn: Accts Rec, 180 N LaSalle, Ste 3500, Chicago, IL 60601
www.marquetteassociates.com

00213201
18- -01-B -62 -124-01
0101 -11-03078-01

GLEN ELLYN POLICE PEN - FIXED INCOME


Period from April 1, 2019 to April 30, 2019

## PLAN EXPENSES

| DATE | DESCRIPTION | CASH |
|---|---|---|
| **Administrative Expenses** | | |
| **Investment Advisory And Management Fees** | | |
| **Investment Counsel Fee** | | |
| 04/04/2019 | Paid To Great Lakes Advisors, Inc.<br>Glen Ellyn Police Pension From 10/1/18 To 12/31/18 | - 7,855.56 |
| **Total Investment Counsel Fee** | | **- 7,855.56** |
| **Total Investment Advisory And Management Fees** | | **- 7,855.56** |
| **Total Administrative Expenses** | | **- 7,855.56** |
| **Total Plan Expenses** | | **- 7,855.56** |

usbank
MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing Period: | 03/01/2019-03/31/2019 |
| Invoice Number: | 11541381 |
| Account Number: | |
| Invoice Date: | 04/24/2019 |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

GLEN ELLYN POLICE PENSION FUND
ATTN: CHRISTINA COYLE
535 DUANE ST.
GLEN ELLYN, IL 60137

**GLEN ELLYN POLICE PENSION FUND**

The following is a statement of transactions pertaining to your account. For further information, please review the attached.

## STATEMENT SUMMARY

| | |
|---|---|
| Unpaid Balance from Prior Fee Statements | $625.00 |
| Payments through 04/03/2019 | ($625.00) |
| Current Invoice (for detail see attached) | $625.00 |
| Direct Charges | ($625.00) |
| Balance Due | $0.00 |

All invoices are due upon receipt.

**Advice Only - Do Not Pay**

usbank

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

Billing period: 03/01/2019 - 03/31/2019
Invoice Number: 11541381
Invoice Date: 04/24/2019
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

GLEN ELLYN POLICE PENSION FUND

Accounts Included
In This Relationship:

**CURRENT CHARGES SUMMARIZED FOR ENTIRE RELATIONSHIP**

| Detail of Current Charges | Volume | Rate | Portion of Year | Total Fees |
|---|---|---|---|---|
| ADM001 ADMIN FEE - MV | 28,174,073.84 | 0.0002 | 8.33% | $469.57 |
| ADM001 Minimum Adjustment | | | | $155.43 |
| **Subtotal Administrative Fees** | | | | **$625.00** |
| **TOTAL AMOUNT CHARGED TO ACCOUNT** | | | | **$625.00** |

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing period: | 03/01/2019 - 03/31/2019 |
| Invoice Number: | 11541381 |
| Invoice Date: | 04/24/2019 |
| Account Number: | |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

## CURRENT CHARGES ALLOCATED

| Allocated Activities Account Number | Basis | Volume | Allocation Basis | Fees |
|---|---|---|---|---|
| **ADM001 ADMIN FEE - MV** | | | | |
| | ADM001 ADMIN FEE - MV | 17,332,187.36 | 61.51821514% | $288.87 |
| | ADM001 ADMIN FEE - MV | 10,840,087.66 | 38.4754002% | $180.67 |
| | ADM001 ADMIN FEE - MV | 1,798.82 | 0.00638466% | $0.03 |
| | | **28,174,073.84** | **100.00%** | **$469.57** |
| **ADM001 Minimum Adjustment** | | | | |
| | ADM001 Minimum Adjustment | | 61.51798454% | $95.62 |
| | ADM001 Minimum Adjustment | | 38.47562664% | $59.80 |
| | ADM001 Minimum Adjustment | | 0.00638882% | $0.01 |
| | | | **100.00%** | **$155.43** |

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

GLEN ELLYN POLICE PENSION FUND

Billing period: 03/01/2019 - 03/31/2019
Invoice Number: 11541381
Invoice Date: 04/24/2019
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

CURRENT CHARGES ALLOCATED AND DIRECT DEBIT

| Account Detail | Volume | Rate | Portion of Year | Total Fees | Direct Debit | Net Due |
|---|---|---|---|---|---|---|
| **GLEN ELLYN POLICE PENSION FUND** | | | | | | |
| ADM001 ADMIN FEE - MV | 17,332,187.36 | | | $288.87 | ($288.87) | $0.00 |
| ADM001 Minimum Adjustment | | | | $95.62 | ($95.62) | $0.00 |
| **Subtotal** | | | | **$384.49** | **($384.49)** | **$0.00** |
| **GLEN ELLYN POLICE PEN - FIXED INCOME** | | | | | | |
| ADM001 ADMIN FEE - MV | 10,840,087.66 | | | $180.67 | ($180.67) | $0.00 |
| ADM001 Minimum Adjustment | | | | $59.80 | ($59.80) | $0.00 |
| **Subtotal** | | | | **$240.47** | **($240.47)** | **$0.00** |
| **GLEN ELLYN POLICE PEN - CD** | | | | | | |
| ADM001 ADMIN FEE - MV | 1,798.82 | | | $0.03 | ($0.03) | $0.00 |
| ADM001 Minimum Adjustment | | | | $0.01 | ($0.01) | $0.00 |
| **Subtotal** | | | | **$0.04** | **($0.04)** | **$0.00** |
| **TOTAL AMOUNT DUE** | | | | **$625.00** | **($625.00)** | **$0.00** |



The fees shown on this invoice are reflective of the most recent fee schedule or notice of fee adjustment provided by U.S. Bank.

usbank

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

GLEN ELLYN POLICE PENSION FUND

Billing period: 03/01/2019 - 03/31/2019
Invoice Number: 11541381
Invoice Date: 04/24/2019
Account Number:
Direct Inquiries To: ANTHONY LOSINIECKI
Phone: 414-765-6017

CURRENT CHARGES ALLOCATED AND DIRECT DEBIT

| Account Number | Account Name | Account Charged | Amount Charged |
|---|---|---|---|
| The Following Accounts will Be Charged: | | | |
| | GLEN ELLYN POLICE PENSION FUND | | ($384.49) |
| | GLEN ELLYN POLICE PEN - FIXED INCOME | | ($240.47) |
| | GLEN ELLYN POLICE PEN - CD | | ($0.04) |
| | | | **($625.00)** |



The fees shown on this invoice are reflective of the most recent fee schedule or notice of fee adjustment provided by U.S. Bank.

usbank
MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing Period: | 04/01/2019-04/30/2019 |
| Invoice Number: | 11595597 |
| Account Number: | |
| Invoice Date: | 05/23/2019 |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

GLEN ELLYN POLICE PENSION FUND
ATTN: CHRISTINA COYLE
535 DUANE ST.
GLEN ELLYN, IL 60137

**GLEN ELLYN POLICE PENSION FUND**

The following is a statement of transactions pertaining to your account. For further information, please review the attached.

## STATEMENT SUMMARY

| | |
|---|---|
| Unpaid Balance from Prior Fee Statements | $625.00 |
| Payments through 05/04/2019 | ($625.00) |
| Current Invoice (for detail see attached) | $625.00 |
| Direct Charges | ($625.00) |
| Balance Due | $0.00 |

All invoices are due upon receipt.

**Advice Only - Do Not Pay**

usbank

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing period: | 04/01/2019 - 04/30/2019 |
| Invoice Number: | 11595597 |
| Invoice Date: | 05/23/2019 |
| Account Number: | |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

**GLEN ELLYN POLICE PENSION FUND**

Accounts Included
In This Relationship:

**CURRENT CHARGES SUMMARIZED FOR ENTIRE RELATIONSHIP**

| Detail of Current Charges | Volume | Rate | Portion of Year | Total Fees |
|---|---|---|---|---|
| ADM001 ADMIN FEE - MV | 28,542,872.73 | 0.0002 | 8.33% | $475.71 |
| ADM001 Minimum Adjustment | | | | $149.29 |
| **Subtotal Administrative Fees** | | | | **$625.00** |
| **TOTAL AMOUNT CHARGED TO ACCOUNT** | | | | **$625.00** |

usbank

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing period: | 04/01/2019 - 04/30/2019 |
| Invoice Number: | 11595597 |
| Invoice Date: | 05/23/2019 |
| Account Number: | |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

## CURRENT CHARGES ALLOCATED

| Allocated Activities<br>Account Number | Basis | Volume | Allocation<br>Basis | Fees |
|---|---|---|---|---|
| **ADM001 ADMIN FEE - MV** | | | | |
| | ADM001 ADMIN FEE - MV | 17,676,325.66 | 61.92903506% | $294.60 |
| | ADM001 ADMIN FEE - MV | 10,864,745.16 | 38.06465195% | $181.08 |
| | ADM001 ADMIN FEE - MV | 1,801.91 | 0.00631299% | $0.03 |
| | | **28,542,872.73** | **100.00%** | **$475.71** |
| **ADM001 Minimum Adjustment** | | | | |
| | ADM001 Minimum Adjustment | | 61.92848584% | $92.45 |
| | ADM001 Minimum Adjustment | | 38.0652078% | $56.83 |
| | ADM001 Minimum Adjustment | | 0.00630636% | $0.01 |
| | | | **100.00%** | **$149.29** |



The fees shown on this invoice are reflective of the most recent fee schedule or notice of fee adjustment provided by U.S. Bank.

usbank

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing period: | 04/01/2019 - 04/30/2019 |
| Invoice Number: | 11595597 |
| Invoice Date: | 05/23/2019 |
| Account Number: | |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

GLEN ELLYN POLICE PENSION FUND

**CURRENT CHARGES ALLOCATED AND DIRECT DEBIT**

| Account Detail | Volume | Rate | Portion of Year | Total Fees | Direct Debit | Net Due |
|---|---|---|---|---|---|---|
| **GLEN ELLYN POLICE PENSION FUND** | | | | | | |
| ADM001 ADMIN FEE - MV | 17,676,325.66 | | | $294.60 | ($294.60) | $0.00 |
| ADM001 Minimum Adjustment | | | | $92.45 | ($92.45) | $0.00 |
| **Subtotal** | | | | **$387.05** | **($387.05)** | **$0.00** |
| **GLEN ELLYN POLICE PEN - FIXED INCOME** | | | | | | |
| ADM001 ADMIN FEE - MV | 10,864,745.16 | | | $181.08 | ($181.08) | $0.00 |
| ADM001 Minimum Adjustment | | | | $56.83 | ($56.83) | $0.00 |
| **Subtotal** | | | | **$237.91** | **($237.91)** | **$0.00** |
| **GLEN ELLYN POLICE PEN - CD** | | | | | | |
| ADM001 ADMIN FEE - MV | 1,801.91 | | | $0.03 | ($0.03) | $0.00 |
| ADM001 Minimum Adjustment | | | | $0.01 | ($0.01) | $0.00 |
| **Subtotal** | | | | **$0.04** | **($0.04)** | **$0.00** |
| **TOTAL AMOUNT DUE** | | | | **$625.00** | **($625.00)** | **$0.00** |

MK-WI-S300
1555 N. RiverCenter Dr. Ste 300
Milwaukee, WI 53212

| | |
|---|---|
| Billing period: | 04/01/2019 - 04/30/2019 |
| Invoice Number: | 11595597 |
| Invoice Date: | 05/23/2019 |
| Account Number: | |
| Direct Inquiries To: | ANTHONY LOSINIECKI |
| Phone: | 414-765-6017 |

GLEN ELLYN POLICE PENSION FUND

## CURRENT CHARGES ALLOCATED AND DIRECT DEBIT

| Account Number | Account Name | Account Charged | Amount Charged |
|---|---|---|---|
| **The Following Accounts will Be Charged:** | | | |
| | GLEN ELLYN POLICE PENSION FUND | | ($387.05) |
| | GLEN ELLYN POLICE PEN - FIXED INCOME | | ($237.91) |
| | GLEN ELLYN POLICE PEN - CD | | ($0.04) |
| | | | **($625.00)** |

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

10787-1

# Invoice

| Date | Invoice # |
|---|---|
| 6/7/2019 | 14810 |

Phone: (630) 620-0200
Fax: (239) 481-0634
Website: www.foster-foster.com

| Bill To |
|---|
| Village of Glen Ellyn<br>535 Duane St.<br>Glen Ellyn, IL 60137 |

**VILLAGE OF GLEN ELLYN**
**POLICE PENSION FUND**

| Description | Amount |
|---|---|
| Prepare January 1, 2019 Police pension valuation, including GASB 67/68 disclosure information | 6,180.00 |

| CODE | AMOUNT | APPROVAL | DATE |
|---|---|---|---|
| 90000-520830 | $3090.00 | @ | 6/18/19 |
| 134100-521055 | 3,090.00 | @ | |
| | | | |
| | | | |
| | | | |

Half Police Pension
Half Village

RFP done in 2014

*Thank you for your business!*

Please make all checks payable to:
Foster & Foster, Inc.
184 Shuman Blvd., Ste.305
Naperville, IL 60563

**Balance Due** **$6,180.00**

THE ROCKWOOD COMPANY
20 North Wacker Drive | Suite 960
Chicago, Illinois 60606

2254

Producer
Daniel J. Berman
312 621-2334

# ---------- INVOICE ----------

Village of Glen Ellyn Police Pension
535 Duane Street
Glen Ellyn, IL 60137

**Invoice Date** 04/23/19
**Invoice No.** 99155
**Bill-To Code** VILLGLEN
**Client Code** VILLGLEN
**Inv Order No.** 1*82366
**Amount Due:** $4,637.00
**Amount Remitted:** $

**Named Insured:** Village of Glen Ellyn Police Pens
**Policy No.** 106082905
Please return this portion with your payment

**Make checks payable to:** The Rockwood Company

| Effective Date | Policy Period | Coverage Description | Transaction Amount |
|---|---|---|---|
| 05/01/19 | 05/01/19 to 05/01/20 | Travelers Cas & Surety Co of America<br>Policy No. 106082905<br>Renewal - Comm Fiduciary | 4,637.00 |
| | | Invoice Number: 99155 Amount Due: | 4,637.00 |

| CODE | AMOUNT | APPROVAL | DATE |
|---|---|---|---|
| 90000 - 520880 | $4,637.00 | @ | 5/6/19 |
| | | | |
| | | | |
| | | | |

POLICE PENSION

*Payment Due Upon Receipt

SMP1 Page: 1 ORIGINAL INVOICE

Attachment: Vouchers July 2019 (4070 : Vouchers July 2019)

**Police Pension Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 07/17/19 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Personnel
Prepared By: Christina Coyle

SCHEDULED

**AGENDA ITEM (ID # 4066)** DOC ID: 4066

# 1. Motion to accept Erika Rodriguez into the Police Pension Fund, effective May 10, 2019. 2. Motion to commence the pension for William Holmer, effective August 5, 2019 with an initial monthly benefit of $7,610.63 (annually $91,327.60). 3. Motion to accept the retirement of Paul Baird retired effective June 30, 2019 and start his pension benefit effective 7/1/19 with an initial monthly benefit of $4,575.05 (annually $54,900.56). 4. Motion to approve a transfer of service for Jaroslaw Hampel to the Wheaton Police Pension Fund in the amount of $258,211.60.

**Membership Changes**

1. Erika Rodriguez was hired by the Village on May 10, 2019 and should be accepted into the Police Pension Fund.
2. Bradley Thompson resigned from the Glen Ellyn Police Department effective April 20, 2019.
3. Kyle Yaeger resigned from the Glen Ellyn Police Department effective May 22, 2019.
4. William Holmer retired from the police department effective January 11, 2018 but was not eligible at that time to begin his pension. He becomes eligible to start his pension on August 5, 2019. Based upon the calculation from the Department of Insurance's Benefit Calculator report, he is due an initial monthly benefit of $7,610.63 (annually $91,327.60). The pension calculation will be provided to the Board.
5. Paul Baird retired effective June 30, 2019. His effective benefit date is 7/1/19. Based upon the calculation from the Department of Insurance's Benefit Calculator report, he is due an initial monthly benefit of $4,575.05 (annually $54,900.56). The pension calculation will be provided to the Board.

**Contribution Refunds**

None.

**Transfers**

1. Jaroslaw Hampel has requested to transfer his pension from the Glen Ellyn Police

Department to the Wheaton Police Department. In order to complete this transfer, the Glen Ellyn Police Pension Fund must transfer $258,211.60 to the Wheaton Police Pension Fund.

**Action Requested**

1. Motion to accept Erika Rodriguez into the Police Pension Fund, effective May 10, 2019.
2. Motion to commence the pension for William Holmer, effective August 5, 2019 with an initial monthly benefit of $7,610.63 (annually $91,327.60).
3. Motion to accept the retirement of Paul Baird retired effective June 30, 2019 and start his pension benefit effective 7/1/19 with an initial monthly benefit of $4,575.05 (annually $54,900.56).
4. Motion to approve a transfer of service for Jaroslaw Hampel to the Wheaton Police Pension Fund in the amount of $258,211.60.

**Police Pension Board**
535 Duane Street
Glen Ellyn, IL 60137

Meeting: 07/17/19 07:30 PM
Department: Police Pension Board
Department Head: Christina Coyle
Category: Report
Prepared By: Christina Coyle

SCHEDULED

**AGENDA ITEM (ID # 4067)** DOC ID: 4067

# Motion to accept the 2018 actuary report for the Police Pension Fund

Background:
Each year, the police pension fund is required to obtain an actuarial report to provide the necessary disclosures for the annual audit as well as to determine funding for the preceding fiscal year.

Subject:
Notable items in this report include:

Page 5: The Village required contribution for 2019 will increase from $1.77 million to $1.92 million. For 2018, the Village is actually contributing $1.9 million, which is above the required $1.77 million. The reason for the increase is attributable to unfavorable plan experience and a change in assumptions. The investment return of 3.79% fell short of the assumed 6.5% (you may remember December to be a bad month for the market). Also, there were more retirements and turnover than expected.

Page 6: This page highlights changes in assumptions from the prior report.

- Mortality assumptions were updated to the most recent available table.

Page 9: This page shows the funded status of the plan, which under the new assumptions is 59.4%. The previous 2018 report showed a funded status of 61.1%.

Page 12 (I): This analysis highlights that our actual salary increases in comparison to the assumed rate. The actual experience for 2018 is in line with the contract that was approved and highlights the step/cola increases that officers receive in the first several years of the contract. Our actual payroll experience increase from 2017 to 2018 was 0.3%

Page 12 (I)(ii): This compares the actual investment return to the assumed return.

Page 32-49: This provides disclosure information which will be in the Village's annual audit report. The funded status of the plan on a GAAP basis is 55.19%. Page 35 highlights the effect that a 1% increase or decrease in the discount rate (or return) would have on the net pension liability.

Page 40: This page shows the actuarial smoothing of differences between projected and actual investment earnings. All years except 2017 show unfavorable returns

Page 41: This page highlights the annual money-weighted rate of return for the fund. The return for 2018 was -5.67%. The return for 2017 was 11.98%.

**ATTACHMENTS:**

- Valuation Report - Glen Ellyn Police - 2018 (PDF)

VILLAGE OF GLEN ELLYN
POLICE PENSION FUND

ACTUARIAL VALUATION
AS OF JANUARY 1, 2019

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2020

GASB 67/68 DISCLOSURE INFORMATION
AS OF DECEMBER 31, 2018

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

May 8, 2019

Ms. Christina Coyle
Finance Director
Village of Glen Ellyn
535 Duane St.
Glen Ellyn, IL 60137

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) – Village of Glen Ellyn Police Pension Fund

Dear Ms. Coyle:

We are pleased to present to the Village this report of the annual actuarial valuation of the Village of Glen Ellyn Police Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Board, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

184 Shuman Blvd, Suite 305 Naperville, IL 60563 · (630) 620-0200 · Fax (239) 481-0634 · www.foster-foster.com

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Village of Glen Ellyn, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glen Ellyn Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: Jason L. Franken

Jason L. Franken, FSA, EA, MAAA

By: Heidi Andorfer

Heidi E. Andorfer, FSA, EA, MAAA

By: Paul M. Baugher

Paul M. Baugher, FSA, EA, MAAA

JLF/lke
Enclosures

# TABLE OF CONTENTS

# SUMMARY OF REPORT

The regular annual actuarial valuation of the Village of Glen Ellyn Police Pension Fund, performed as of January 1, 2019, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2020.

The contribution requirements, compared with those set forth in the January 1, 2018 actuarial report, are as follows:

| | | |
|---|---|---|
| Valuation Date | 1/1/2019 | 1/1/2018 |
| Applicable to Fiscal Year Ending | 12/31/2020 | 12/31/2019 |
| Total Recommended Contribution | $2,278,462 | $2,116,079 |
| % of Projected Annual Payroll | 63.8% | 60.7% |
| Member Contributions (Est.) | 353,887 | 345,430 |
| % of Projected Annual Payroll | 9.9% | 9.9% |
| Village Recommended Contribution | 1,924,575 | 1,770,649 |
| % of Projected Annual Payroll | 53.9% | 50.8% |

As you can see, the Total Recommended Contribution shows an increase when compared to the results determined in the January 1, 2018 actuarial valuation report. The increase is attributable to unfavorable plan experience and a change of actuarial assumptions.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of unfavorable experience included an investment return of 3.79% (Actuarial Asset Basis) which fell short of the 6.50% assumption, more retirements than expected, and unfavorable turnover experience. These losses were offset in part by a gain associated with more inactive mortality than expected.

# CHANGES SINCE PRIOR VALUATION

## Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

## Actuarial Assumption/Method Changes Since Prior Valuation

The mortality rates were updated to reflect the PubS-2010 tables. Given the recent release of a report by the Society of Actuaries on public pension mortality, we feel that these tables are the most representative of the population in question. These tables are the first to consider only public plan mortality experience, analyzing the data from over 78 public pension plans which included 46 million life-years of exposure and around 580,000 deaths. To address expected future mortality improvement, we have projected the tables 5 years past the valuation date using the MP-2018 projection table which is the most recent table available for mortality projection.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

| | New Assump 1/1/2019 | Old Assump 1/1/2019 | 1/1/2018 |
|---|---|---|---|
| A. Participant Data | | | |
| Number Included | | | |
| Actives | 38 | 38 | 38 |
| Service Retirees | 29 | 29 | 28 |
| Beneficiaries | 3 | 3 | 3 |
| Disability Retirees | 3 | 3 | 3 |
| Terminated Vested | 6 | 6 | 7 |
| Total | 79 | 79 | 79 |
| Total Annual Payroll | $3,571,005 | $3,571,005 | $3,485,670 |
| Payroll Under Assumed Ret. Age | 3,571,005 | 3,571,005 | 3,485,670 |
| Annual Rate of Payments to: | | | |
| Service Retirees | 1,948,059 | 1,948,059 | 1,794,291 |
| Beneficiaries | 128,311 | 128,311 | 128,311 |
| Disability Retirees | 136,000 | 136,000 | 134,595 |
| Terminated Vested | 116,879 | 116,879 | 0 |
| B. Assets | | | |
| Actuarial Value | 31,371,025 | 31,371,025 | 30,118,735 |
| Market Value | 28,842,655 | 28,842,655 | 30,480,565 |
| C. Liabilities | | | |
| Present Value of Benefits | | | |
| Actives | | | |
| Retirement Benefits | 21,150,822 | 21,023,893 | 23,234,984 |
| Disability Benefits | 2,010,195 | 2,013,788 | 1,953,379 |
| Death Benefits | 221,190 | 384,299 | 389,536 |
| Vested Benefits | 2,064,183 | 2,081,289 | 1,933,943 |
| Service Retirees | 30,550,878 | 29,647,657 | 26,667,133 |
| Beneficiaries | 1,397,429 | 1,363,207 | 1,387,458 |
| Disability Retirees | 1,855,336 | 1,810,365 | 1,815,481 |
| Terminated Vested | 1,903,648 | 1,887,831 | 115,046 |
| Total | 61,153,681 | 60,212,329 | 57,496,960 |

| C. Liabilities - (Continued) | New Assump 1/1/2019 | Old Assump 1/1/2019 | 1/1/2018 |
|---|---|---|---|
| Present Value of Future Salaries | 40,457,054 | 40,343,132 | 36,843,243 |
| Present Value of Future Member Contributions | 4,009,294 | 3,998,004 | 3,651,165 |
| Normal Cost (Retirement) | 599,931 | 596,871 | 622,881 |
| Normal Cost (Disability) | 105,282 | 105,517 | 105,894 |
| Normal Cost (Death) | 10,265 | 16,359 | 16,382 |
| Normal Cost (Vesting) | 110,890 | 112,257 | 101,337 |
| Total Normal Cost | 826,368 | 831,004 | 846,494 |
| Present Value of Future Normal Costs | 8,349,089 | 8,393,856 | 8,172,139 |
| Accrued Liability (Retirement) | 14,875,452 | 14,773,164 | 17,062,127 |
| Accrued Liability (Disability) | 888,030 | 889,198 | 893,189 |
| Accrued Liability (Death) | 122,487 | 227,263 | 236,053 |
| Accrued Liability (Vesting) | 1,211,332 | 1,219,788 | 1,148,334 |
| Accrued Liability (Inactives) | 35,707,291 | 34,709,060 | 29,985,118 |
| Total Actuarial Accrued Liability | 52,804,592 | 51,818,473 | 49,324,821 |
| Unfunded Actuarial Accrued Liability (UAAL) | 21,433,567 | 20,447,448 | 19,206,086 |
| Funded Ratio (AVA / AL) | 59.4% | 60.5% | 61.1% |

| | New Assump 1/1/2019 | Old Assump 1/1/2019 | 1/1/2018 |
|---|---|---|---|
| D. Actuarial Present Value of Accrued Benefits | | | |
| Vested Accrued Benefits | | | |
| Inactives | 35,707,291 | 34,709,060 | 29,985,118 |
| Actives | 4,080,900 | 4,090,529 | 6,308,890 |
| Member Contributions | 3,153,467 | 3,153,467 | 3,420,534 |
| Total | 42,941,658 | 41,953,056 | 39,714,542 |
| Non-vested Accrued Benefits | 1,152,265 | 1,124,925 | 865,303 |
| Total Present Value Accrued Benefits | 44,093,923 | 43,077,981 | 40,579,845 |
| Funded Ratio (MVA / PVAB) | 65.4% | 67.0% | 75.1% |
| Increase (Decrease) in Present Value of Accrued Benefits Attributable to: | | | |
| Plan Amendments | 0 | 0 | |
| Assumption Changes | 1,015,942 | 0 | |
| New Accrued Benefits | 0 | 2,111,075 | |
| Benefits Paid | 0 | (2,179,786) | |
| Interest | 0 | 2,566,847 | |
| Other | 0 | 0 | |
| Total | 1,015,942 | 2,498,136 | |

| | New Assump | Old Assump | |
|---|---|---|---|
| Valuation Date | 1/1/2019 | 1/1/2019 | 1/1/2018 |
| Applicable to Fiscal Year Ending | 12/31/2020 | 12/31/2020 | 12/31/2019 |
| **E. Pension Cost** | | | |
| Normal Cost [1] | $880,082 | $885,019 | $901,516 |
| % of Total Annual Payroll [1] | 24.6 | 24.8 | 25.9 |
| Administrative Expenses [1] | 20,517 | 20,517 | 18,402 |
| % of Total Annual Payroll [1] | 0.6 | 0.6 | 0.5 |
| Payment Required to Amortize Unfunded Actuarial Accrued Liability over 22 years (as of 1/1/2019) [1] | 1,377,863 | 1,314,471 | 1,196,161 |
| % of Total Annual Payroll [1] | 38.6 | 36.8 | 34.3 |
| Total Recommended Contribution | 2,278,462 | 2,220,007 | 2,116,079 |
| % of Total Annual Payroll [1] | 63.8 | 62.2 | 60.7 |
| Expected Member Contributions [1] | 353,887 | 353,887 | 345,430 |
| % of Total Annual Payroll [1] | 9.9 | 9.9 | 9.9 |
| Expected Village Contribution | 1,924,575 | 1,866,120 | 1,770,649 |
| % of Total Annual Payroll [1] | 53.9 | 52.3 | 50.8 |

F. Past Contributions

| | |
|---|---|
| Plan Years Ending: | 12/31/2018 |
| Total Recommended Contribution | 2,166,493 |
| Village Requirement | 1,817,304 |
| Actual Contributions Made: | |
| Members (excluding buyback) | 349,189 |
| Village | 1,959,000 |
| Total | 2,308,189 |

G. Net Actuarial (Gain)/Loss 1,464,161

[1] Contributions developed as of 1/1/2019 displayed above have been adjusted to account for assumed interest.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

| Year | Projected Unfunded Accrued Liability |
|---|---|
| 2019 | 21,433,567 |
| 2020 | 21,448,886 |
| 2021 | 21,416,975 |
| 2026 | 20,369,004 |
| 2031 | 17,248,873 |
| 2036 | 10,973,577 |
| 2041 | 0 |

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

| | | Actual | Assumed |
|---|---|---|---|
| Year Ended | 12/31/2018 | 8.67% | 4.89% |
| Year Ended | 12/31/2017 | 4.92% | 5.57% |
| Year Ended | 12/31/2016 | 0.99% | 5.00% |

(ii) 3 Year Comparison of Investment Return on Actuarial Value

| | | Actual | Assumed |
|---|---|---|---|
| Year Ended | 12/31/2018 | 3.79% | 6.50% |
| Year Ended | 12/31/2017 | 5.64% | 6.50% |
| Year Ended | 12/31/2016 | 4.62% | 6.75% |

# DEVELOPMENT OF JANUARY 1, 2019 AMORTIZATION PAYMENT

| | | |
|---|---|---|
| (1) | Unfunded Actuarial Accrued Liability as of January 1, 2018 | $19,206,086 |
| (2) | Sponsor Normal Cost developed as of January 1, 2018 | 501,064 |
| (3) | Expected administrative expenses for the year ended December 31, 2018 | 17,279 |
| (4) | Expected interest on (1), (2) and (3) | 1,281,526 |
| (5) | Sponsor contributions to the System during the year ended December 31, 2018 | 1,959,000 |
| (6) | Expected interest on (5) | 63,668 |
| (7) | Expected Unfunded Actuarial Accrued Liability as of December 31, 2018, (1)+(2)+(3)+(4)-(5)-(6) | 18,983,287 |
| (8) | Change to UAAL due to Assumption Change | 986,119 |
| (9) | Change to UAAL due to Actuarial (Gain)/Loss | 1,464,161 |
| (10) | Unfunded Accrued Liability as of January 1, 2019 | 21,433,567 |
| (11) | UAAL Subject to Amortization (100% AAL less Actuarial Assets) | 21,433,567 |

| Date Established | Years Remaining | 1/1/2019 Amount | Amortization Amount |
|---|---|---|---|
| 1/1/2019 | 22 | 21,433,567 | 1,293,768 |

## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

| | | |
|---|---|---|
| (1) | Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2018 | $19,206,086 |
| (2) | Expected UAAL as of January 1, 2019 | 18,983,287 |
| (3) | Summary of Actuarial (Gain)/Loss, by component: | |
| | Investment Return (Actuarial Asset Basis) | 818,113 |
| | Salary Increases | 286,367 |
| | Active Decrements | 695,395 |
| | Inactive Mortality | (381,805) |
| | Other | 46,091 |
| | Change in UAAL due to (Gain)/Loss | 1,464,161 |
| | Assumption Changes | 986,119 |
| (4) | Actual UAAL as of January 1, 2019 | $21,433,567 |

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

| | | |
|---|---|---|
| (1) | Contribution Determined as of January 1, 2018 | $1,770,649 |
| (2) | Summary of Contribution Impact by component: | |
| | Change in Normal Cost | (16,497) |
| | Change in Assumed Administrative Expense | 2,115 |
| | Investment Return (Actuarial Asset Basis) | 52,593 |
| | Salary Increases | 18,409 |
| | New Entrants | - |
| | Active Decrements | 44,704 |
| | Inactive Mortality | (24,544) |
| | Data Corrections | - |
| | Contributions (More) or Less than Recommended | (9,405) |
| | Increase in Amortization Payment Due to Payroll Growth Assumption | 41,866 |
| | Change in Expected Member Contributions | (8,457) |
| | Assumption Change | 58,455 |
| | Other | (5,313) |
| | Total Change in Contribution | 153,926 |
| (3) | Contribution Determined as of January 1, 2019 | $1,924,575 |

# STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

| | New Assump | Old Assump | |
|---|---|---|---|
| Valuation Date | 1/1/2019 | 1/1/2019 | 1/1/2018 |
| Applicable to Fiscal Year Ending | 12/31/2020 | 12/31/2020 | 12/31/2019 |
| Actuarial Accrued Liability (PUC) | 50,487,731 | 49,486,720 | 47,021,904 |
| Actuarial Value of Assets | 31,371,025 | 31,371,025 | 30,118,735 |
| Unfunded Actuarial Accrued Liability (UAAL) | 19,116,706 | 18,115,695 | 16,903,169 |
| UAAL Subject to Amortization | 14,067,933 | 13,167,023 | 12,200,979 |
| Normal Cost [1] | $974,187 | $978,576 | $1,023,056 |
| % of Total Annual Payroll [1] | 27.3 | 27.4 | 29.3 |
| Administrative Expenses [1] | 20,517 | 20,517 | 18,402 |
| % of Total Annual Payroll [1] | 0.6 | 0.6 | 0.5 |
| Payment Required to Amortize Unfunded Actuarial Accrued Liability over 22 years (as of 1/1/2019) [1] | 904,361 | 846,446 | 759,881 |
| % of Total Annual Payroll [1] | 25.3 | 23.7 | 21.9 |
| Total Required Contribution | 1,899,065 | 1,845,539 | 1,801,339 |
| % of Total Annual Payroll [1] | 53.2 | 51.7 | 51.7 |
| Expected Member Contributions [1] | 353,887 | 353,887 | 345,430 |
| % of Total Annual Payroll [1] | 9.9 | 9.9 | 9.9 |
| Expected Village Contribution | 1,545,178 | 1,491,652 | 1,455,909 |
| % of Total Annual Payroll [1] | 43.3 | 41.8 | 41.8 |

Assumptions and Methods:

| | |
|---|---|
| Actuarial Cost Method | Projected Unit Credit |
| Amortization Method | 90% Funding by 2040 |

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

[1] Contributions developed as of 1/1/2019 displayed above have been adjusted to account for assumed interest.

# PROJECTION OF BENEFIT PAYMENTS

| Year | Payments for Current Actives | Payments for Current Inactives | Total Payments |
|---|---|---|---|
| 2019 | 91,938 | 2,207,290 | 2,299,228 |
| 2020 | 160,855 | 2,339,156 | 2,500,011 |
| 2021 | 218,671 | 2,394,761 | 2,613,432 |
| 2022 | 271,340 | 2,440,599 | 2,711,939 |
| 2023 | 317,643 | 2,484,466 | 2,802,109 |
| 2024 | 359,555 | 2,525,820 | 2,885,375 |
| 2025 | 398,663 | 2,577,579 | 2,976,242 |
| 2026 | 440,953 | 2,615,159 | 3,056,112 |
| 2027 | 500,012 | 2,648,365 | 3,148,377 |
| 2028 | 580,250 | 2,676,489 | 3,256,739 |
| 2029 | 723,799 | 2,698,835 | 3,422,634 |
| 2030 | 924,874 | 2,714,738 | 3,639,612 |
| 2031 | 1,113,004 | 2,723,603 | 3,836,607 |
| 2032 | 1,325,525 | 2,724,939 | 4,050,464 |
| 2033 | 1,543,073 | 2,718,405 | 4,261,478 |
| 2034 | 1,796,103 | 2,703,827 | 4,499,930 |
| 2035 | 2,030,992 | 2,681,175 | 4,712,167 |
| 2036 | 2,245,166 | 2,650,587 | 4,895,753 |
| 2037 | 2,443,787 | 2,612,294 | 5,056,081 |
| 2038 | 2,641,214 | 2,566,637 | 5,207,851 |
| 2039 | 2,835,933 | 2,513,993 | 5,349,926 |
| 2040 | 2,997,218 | 2,479,254 | 5,476,472 |
| 2041 | 3,151,745 | 2,437,266 | 5,589,011 |
| 2042 | 3,368,377 | 2,368,234 | 5,736,611 |
| 2043 | 3,528,982 | 2,294,028 | 5,823,010 |
| 2044 | 3,732,863 | 2,215,271 | 5,948,134 |
| 2045 | 3,870,309 | 2,132,574 | 6,002,883 |
| 2046 | 4,030,175 | 2,046,496 | 6,076,671 |
| 2047 | 4,190,755 | 1,957,514 | 6,148,269 |
| 2048 | 4,331,928 | 1,866,051 | 6,197,979 |
| 2049 | 4,521,355 | 1,772,417 | 6,293,772 |
| 2050 | 4,631,337 | 1,676,879 | 6,308,216 |
| 2051 | 4,741,177 | 1,579,674 | 6,320,851 |
| 2052 | 4,824,683 | 1,481,017 | 6,305,700 |
| 2053 | 4,894,610 | 1,381,144 | 6,275,754 |
| 2054 | 4,952,300 | 1,280,482 | 6,232,782 |
| 2055 | 4,999,132 | 1,179,625 | 6,178,757 |
| 2056 | 5,034,258 | 1,079,318 | 6,113,576 |
| 2057 | 5,058,138 | 980,486 | 6,038,624 |
| 2058 | 5,068,909 | 884,157 | 5,953,066 |

# ACTUARIAL ASSUMPTIONS AND METHODS

| | |
|---|---|
| Interest Rate | 6.50% per year compounded annually, net of investment related expenses. |
| Mortality Rate | ***Active Lives:*** PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2018. 10% of active deaths are assumed to be in the line of duty.<br><br>***Inactive Lives:*** PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>***Beneficiaries:*** PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>***Disabled Lives:*** PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>The mortality assumptions sufficiently accommodate anticipated future mortality improvements. |
| Retirement Age | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Disability Rate | See table later in this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Termination Rate | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |

| | |
|---|---|
| Salary Increases | See table below. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |

| Salary Scale | |
|---|---|
| Service | Rate |
| 0 | 11.00% |
| 1 | 10.75% |
| 2 | 8.75% |
| 3 | 8.50% |
| 4 | 7.00% |
| 5 | 6.25% |
| 6 | 5.25% |
| 7 | 4.25% |
| 8 - 16 | 4.00% |
| 17 - 32 | 3.75% |
| 32+ | 3.50% |

| | |
|---|---|
| Inflation | 2.50%. |
| Cost-of-Living Adjustment | Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.<br><br>Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement. |
| Marital Status | 80% of Members are assumed to be married. |
| Spouse's Age | Males are assumed to be three years older than females. |
| Funding Method | Entry Age Normal Cost Method. |
| Actuarial Asset Method | Investment gains and losses are smoothed over a 5-year period. |
| Funding Policy Amortization Method | The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets. |
| Payroll Growth | 3.50% per year. |
| Administrative Expenses | Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year. |

## Decrement Tables

% Terminating During the Year

| Age | Rate |
|---|---|
| 20 | 14.00% |
| 25 | 10.40% |
| 30 | 5.60% |
| 35 | 3.10% |
| 40 | 1.90% |
| 45 | 1.50% |
| 50 | 1.50% |
| 56+ | 0.00% |

% Becoming Disabled During the Year

| Age | Rate |
|---|---|
| 20 | 0.000% |
| 25 | 0.030% |
| 30 | 0.140% |
| 35 | 0.260% |
| 40 | 0.420% |
| 45 | 0.590% |
| 50 | 0.710% |
| 55 | 0.900% |
| 60 | 1.150% |

% Retiring During the Year (Tier 1)

| Age | Rate |
|---|---|
| 50 - 51 | 15% |
| 52 - 54 | 20% |
| 55 - 64 | 25% |
| 65 - 69 | 40% |
| 70+ | 100% |

% Retiring During the Year (Tier 2)

| Age | Rate |
|---|---|
| 50 - 54 | 5% |
| 55 | 40% |
| 56 - 64 | 25% |
| 65 - 69 | 40% |
| 70+ | 100% |

# GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2041. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

# DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. Whenever possible, the recommended assumptions in this report reflect conservatism to allow for some margin of unfavorable future plan experience. However, it is still possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.

- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.

- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.

- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- Contribution risk: Risks associated with the items outlined above will inherently create varying liabilities and assets resulting in volatility in contributions. Actuarial losses on assets and liabilities will lead to higher contribution amounts, while actuarial gains on assets and liabilities will lead to lower contribution amounts.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modelling, as well as the identification of additional risks, can be provided at the request of the reader.

# STATEMENT OF FIDUCIARY NET POSITION
December 31, 2018

| ASSETS | MARKET VALUE |
|---|---|
| Cash and Cash Equivalents: | |
| Money Market | 484,702 |
| Total Cash and Equivalents | 484,702 |
| Receivables: | |
| From Other Funds | 886 |
| Accrued Past Due Interest | 84,460 |
| Total Receivable | 85,346 |
| Investments: | |
| Municipal Obligations | 30,209 |
| Corporate Bonds | 6,334,544 |
| U.S. Gov't and Agency Obligations | 4,312,138 |
| Insurance Company Contracts | 2,095,688 |
| Mutual Funds | 15,500,503 |
| Total Investments | 28,273,082 |
| Total Assets | 28,843,130 |
| LIABILITIES | |
| Liabilities: | |
| Payable: | |
| Expenses | 475 |
| Total Liabilities | 475 |
| Net Assets: | |
| Active and Retired Members' Equity | 28,842,655 |
| NET POSITION RESTRICTED FOR PENSIONS | 28,842,655 |
| TOTAL LIABILITIES AND NET ASSETS | 28,843,130 |

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED December 31, 2018
Market Value Basis

| | | |
|---|---|---|
| ADDITIONS | | |
| Contributions: | | |
| Member | 349,189 | |
| Village | 1,959,000 | |
| Total Contributions | | 2,308,189 |
| Investment Income: | | |
| Net Realized Gain (Loss) | 30,855 | |
| Unrealized Gain (Loss) | (2,550,405) | |
| Net Increase in Fair Value of Investments | | (2,519,550) |
| Interest & Dividends | | 855,293 |
| Less Investment Expense [1] | | (82,791) |
| Net Investment Income | | (1,747,048) |
| Total Additions | | 561,141 |
| DEDUCTIONS | | |
| Distributions to Members: | | |
| Benefit Payments | 2,152,083 | |
| Refund of Contributions/Transfers | 27,703 | |
| Total Distributions | | 2,179,786 |
| Administrative Expenses | | 19,265 |
| Total Deductions | | 2,199,051 |
| Net Increase in Net Position | | (1,637,910) |
| NET POSITION RESTRICTED FOR PENSIONS | | |
| Beginning of the Year | | 30,480,565 |
| End of the Year | | 28,842,655 |

[1] Investment Related expenses include investment advisory, custodial and performance monitoring fees.

# ACTUARIAL ASSET VALUATION
December 31, 2018

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Gains/(Losses) Not Yet Recognized

| Plan Year | | Amounts Not Yet Recognized by Valuation Year | | | | |
|---|---|---|---|---|---|---|
| Ending | Gain/(Loss) | 2019 | 2020 | 2021 | 2022 | 2023 |
| 12/31/2015 | (1,829,216) | (365,843) | 0 | 0 | 0 | 0 |
| 12/31/2016 | (194,370) | (77,748) | (38,874) | 0 | 0 | 0 |
| 12/31/2017 | 1,501,145 | 900,687 | 600,458 | 300,229 | 0 | 0 |
| 12/31/2018 | (3,731,832) | (2,985,466) | (2,239,099) | (1,492,733) | (746,366) | 0 |
| Total | | (2,528,370) | (1,677,515) | (1,192,504) | (746,366) | 0 |

Development of Investment Gain/Loss

| | |
|---|---|
| Market Value of Assets, 12/31/2017 | 30,480,565 |
| Contributions Less Benefit Payments & Administrative Expenses | 109,138 |
| Expected Investment Earnings[1] | 1,984,784 |
| Actual Net Investment Earnings | (1,747,048) |
| 2018 Actuarial Investment Gain/(Loss) | (3,731,832) |

[1] Expected Investment Earnings = 6.50% x (30,480,565 + 0.5 x 109,138)

Development of Actuarial Value of Assets

| | |
|---|---|
| Market Value of Assets, 12/31/2018 | 28,842,655 |
| (Gains)/Losses Not Yet Recognized | 2,528,370 |
| Actuarial Value of Assets, 12/31/2018 | 31,371,025 |
| (A) 12/31/2017 Actuarial Assets: | 30,118,735 |
| (I) Net Investment Income: | |
| 1. Interest and Dividends | 855,293 |
| 2. Realized Gains (Losses) | 30,855 |
| 3. Change in Actuarial Value | 339,795 |
| 4. Investment Expenses | (82,791) |
| Total | 1,143,152 |
| (B) 12/31/2018 Actuarial Assets: | 31,371,025 |
| Actuarial Asset Rate of Return = (2 x I) / (A + B - I): | 3.79% |
| Market Value of Assets Rate of Return: | -5.72% |
| 12/31/2018 Limited Actuarial Assets: | 31,371,025 |
| Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) | (818,113) |

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2018
Actuarial Asset Basis

| | | |
|---|---|---|
| **INCOME** | | |
| Contributions: | | |
| Member | 349,189 | |
| Village | 1,959,000 | |
| Total Contributions | | 2,308,189 |
| Earnings from Investments | | |
| Interest & Dividends | 855,293 | |
| Net Realized Gain (Loss) | 30,855 | |
| Change in Actuarial Value | 339,795 | |
| Total Earnings and Investment Gains | | 1,225,943 |
| **EXPENSES** | | |
| Administrative Expenses: | | |
| Investment Related[1] | 82,791 | |
| Other | 19,265 | |
| Total Administrative Expenses | | 102,056 |
| Distributions to Members: | | |
| Benefit Payments | 2,152,083 | |
| Refund of Contributions/Transfers | 27,703 | |
| Total Distributions | | 2,179,786 |
| Change in Net Assets for the Year | | 1,252,290 |
| Net Assets Beginning of the Year | | 30,118,735 |
| Net Assets End of the Year[2] | | 31,371,025 |

[1] Investment Related expenses include investment advisory, custodial and performance monitoring fees.
[2] Net Assets may be limited for actuarial consideration.

## STATISTICAL DATA [1]

| | 1/1/2016 | 1/1/2017 | 1/1/2018 | 1/1/2019 |
|---|---|---|---|---|
| Actives - Tier 1 | | | | |
| Number | 32 | 29 | 27 | 24 |
| Average Current Age | N/A | 40.4 | 41.9 | 41.6 |
| Average Age at Employment | N/A | 25.4 | 25.5 | 25.5 |
| Average Past Service | N/A | 15.0 | 16.4 | 16.1 |
| Average Annual Salary | N/A | $98,152 | $102,584 | $105,527 |
| Actives - Tier 2 | | | | |
| Number | 6 | 11 | 11 | 14 |
| Average Current Age | N/A | 26.9 | 27.2 | 27.5 |
| Average Age at Employment | N/A | 25.1 | 24.9 | 24.9 |
| Average Past Service | N/A | 1.8 | 2.3 | 2.6 |
| Average Annual Salary | N/A | $59,474 | $65,082 | $74,168 |
| Service Retirees | | | | |
| Number | 25 | 28 | 28 | 29 |
| Average Current Age | N/A | 66.2 | 67.2 | 66.8 |
| Average Annual Benefit | $57,466 | $62,467 | $64,082 | $67,174 |
| Beneficiaries | | | | |
| Number | 7 | 4 | 3 | 3 |
| Average Current Age | N/A | 77.3 | 72.1 | 73.1 |
| Average Annual Benefit | $27,646 | $36,095 | $42,770 | $42,770 |
| Disability Retirees | | | | |
| Number | 3 | 3 | 3 | 3 |
| Average Current Age | N/A | 61.3 | 62.3 | 63.3 |
| Average Annual Benefit | $43,612 | $44,080 | $44,865 | $45,333 |
| Terminated Vested | | | | |
| Number | 0 | 7 | 7 | 6 |
| Average Current Age | N/A | 34.1 | 35.6 | 40.9 |
| Average Annual Benefit [2] | N/A | N/A | N/A | $58,440 |

[1] Foster & Foster does not have enough historical data to include complete data prior to 1/1/2017. We will add historical data going forward.

[2] Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

| AGE | 0 | 1 | 2 | 3 | 4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 - 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 - 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 25 - 29 | 2 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 30 - 34 | 0 | 1 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 6 |
| 35 - 39 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 8 |
| 40 - 44 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 0 | 11 |
| 45 - 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 - 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| 55 - 59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 60 - 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65+ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 3 | 3 | 3 | 1 | 0 | 4 | 10 | 10 | 2 | 1 | 1 | 38 |

# VALUATION PARTICIPANT RECONCILIATION

1. Active lives

| | |
|---|---|
| a. Number in prior valuation 1/1/2018 | 38 |
| b. Terminations | |
| i. Vested (partial or full) with deferred benefits | (1) |
| ii. Non-vested or full lump sum distribution received | (1) |
| iii. Transferred service to other fund | 0 |
| c. Deaths | |
| i. Beneficiary receiving benefits | 0 |
| ii. No future benefits payable | 0 |
| d. Disabled | 0 |
| e. Retired | (2) |
| f. Continuing participants | 34 |
| g. New entrants | 4 |
| h. Total active life participants in valuation | 38 |

2. Non-Active lives (including beneficiaries receiving benefits)

| | Service Retirees, Vested Receiving Benefits | Receiving Death Benefits | Receiving Disability Benefits | Vested Deferred | Total |
|---|---|---|---|---|---|
| a. Number prior valuation | 28 | 3 | 3 | 7 | 41 |
| Retired | 2 | 0 | 0 | 0 | 2 |
| Vested Deferred | 0 | 0 | 0 | 1 | 1 |
| Death, With Survivor | 0 | 0 | 0 | 0 | 0 |
| Death, No Survivor | (1) | 0 | 0 | 0 | (1) |
| Disabled | 0 | 0 | 0 | 0 | 0 |
| Refund of Contributions | 0 | 0 | 0 | (2) | (2) |
| Rehires | 0 | 0 | 0 | 0 | 0 |
| Expired Annuities | 0 | 0 | 0 | 0 | 0 |
| Data Corrections | 0 | 0 | 0 | 0 | 0 |
| Hired/Termed in Same Year | 0 | 0 | 0 | 0 | 0 |
| b. Number current valuation | 29 | 3 | 3 | 6 | 41 |

SUMMARY OF CURRENT PLAN

| | |
|---|---|
| Article 3 Pension Fund | The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code. |
| Plan Administration | The Plan is administered by a Board of Trustees comprised of:<br>a) Two members appointed by the Municipality,<br>b) Two active Members of the Police Department elected by the Membership, and<br>c) One retired Member of the Police Department elected by the Membership. |
| Credited Service | Complete years of service as a sworn police officer employed by the Municipality. |
| Normal Retirement | |
| Date | **Tier 1**: Age 50 and 20 years of Credited Service.<br>**Tier 2:** Age 55 with 10 years of Credited Service. |
| Benefit | **Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is $1,000 per month.<br>**Tier 2**: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is $1,000 per month. |
| Form of Benefit | **Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.<br>**Tier 2**: Same as above, but with 66 2/3% of benefit continued to spouse. |
| Early Retirement | |
| Date | **Tier 1**: Age 60 and 8 years of Credited Service.<br>**Tier 2:** Age 50 with 10 years of Credited Service. |
| Benefit | **Tier 1:** Normal Retirement benefit with no minimum.<br>**Tier 2**: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit. |
| Form of Benefit | Same as Normal Retirement. |

Disability Benefit

| | |
|---|---|
| Eligibility | Total and permanent as determined by the Board of Trustees. |
| Benefit Amount | A maximum of:<br><br>a.) 65% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.<br><br>For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service. |

Cost-of-Living Adjustment

**Tier 1:**

*Retirees:* An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

*Disabled Retirees*: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

**Tier 2**: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

| | |
|---|---|
| Service Incurred | 100% of salary attached to rank held by Member on last day of service. |
| Non-Service Incurred | A maximum of:<br><br>a.) 50% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.<br><br>For non-service deaths with less than 10 years of service, a refund of member contributions is provided. |

<u>Vesting (Termination)</u>

| | |
|---|---|
| Vesting Service Requirement | **Tier 1:** 8 years. |
| | **Tier 2**: 10 years. |
| Non-Vested Benefit | Refund of Member Contributions. |
| Vested Benefit | Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service. |

<u>Contributions</u>

| | |
|---|---|
| Employee | 9.91% of Salary. |
| Municipality | Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability. |

## SUMMARY OF PARTICIPANT DATA

Plan Membership:

| | 1/1/2019 | 1/1/2018 |
|---|---|---|
| Inactive Plan Members or Beneficiaries Currently Receiving Benefits | 35 | 34 |
| Inactive Plan Members Entitled to But Not Yet Receiving Benefits | 6 | 7 |
| Active Plan Members | 38 | 38 |
| Total | 79 | 79 |
| Covered Payroll | $3,571,005 | $3,485,670 |

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY

| | | |
|---|---|---|
| GASB 68 Reporting Period Ending | 12/31/2018 | 12/31/2017 |
| Measurement Date | 12/31/2018 | 12/31/2017 |
| Total Pension Liability | | |
| Service Cost | 868,643 | 936,254 |
| Interest | 3,154,921 | 3,206,541 |
| Changes of Benefit Terms | - | - |
| Differences Between Expected and Actual Experience | 664,880 | (176,284) |
| Changes of Assumptions | 993,650 | (705,405) |
| Benefit Payments, Including Refunds of Employee Contributions | (2,179,786) | (2,141,300) |
| Net Change in Total Pension Liability | 3,502,308 | 1,119,806 |
| Total Pension Liability - Beginning | 48,758,493 | 47,638,687 |
| Total Pension Liability - Ending (a) | $ 52,260,801 | $ 48,758,493 |
| | | |
| Plan Fiduciary Net Position | | |
| Contributions - Employer | 1,959,000 | 1,613,000 |
| Contributions - Employee | 349,189 | 347,262 |
| Net Investment Income | (1,747,048) | 3,275,894 |
| Benefit Payments, Including Refunds of Employee Contributions | (2,179,786) | (2,141,300) |
| Administrative Expense | (19,265) | (17,278) |
| Net Change in Plan Fiduciary Net Position | (1,637,910) | 3,077,578 |
| Plan Fiduciary Net Position - Beginning | 30,480,565 | 27,402,987 |
| Plan Fiduciary Net Position - Ending (b) | $ 28,842,655 | $ 30,480,565 |
| | | |
| Net Pension Liability - Ending (a) - (b) | $ 23,418,146 | $ 18,277,928 |
| | | |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 55.19% | 62.51% |
| | | |
| Covered Payroll | $ 3,571,005 | $ 3,485,670 |
| Net Pension Liability as a Percentage of Covered Payroll | 655.79% | 524.37% |

*Changes reflected in December 31, 2018 results:*

The results reflect the assumption changes noted in the assumptions section of the report.

GASB 68

## STATEMENT OF CHANGES IN NET PENSION LIABILITY

| | Increase (Decrease) | | |
|---|---|---|---|
| | Total Pension Liability (a) | Plan Fiduciary Net Position (b) | Net Pension Liability (a)-(b) |
| Balances at December 31, 2017 | $ 48,758,493 | $ 30,480,565 | $ 18,277,928 |
| Changes for a Year: | | | |
| Service Cost | 868,643 | - | 868,643 |
| Interest | 3,154,921 | - | 3,154,921 |
| Differences Between Expected and Actual Experience | 664,880 | - | 664,880 |
| Changes of Assumptions | 993,650 | - | 993,650 |
| Changes of Benefit Terms | - | - | - |
| Contributions - Employer | - | 1,959,000 | (1,959,000) |
| Contributions - Employee | - | 349,189 | (349,189) |
| Net Investment Income | - | (1,747,048) | 1,747,048 |
| Benefit Payments, Including Refunds of Employee Contributions | (2,179,786) | (2,179,786) | - |
| Administrative Expense | - | (19,265) | 19,265 |
| Net Changes | 3,502,308 | (1,637,910) | 5,140,218 |
| Balances at December 31, 2018 | $ 52,260,801 | $ 28,842,655 | $ 23,418,146 |

*Sensitivity of Net Pension Liability to changes in the Discount Rate:*

| | 1% Decrease 5.50% | Current Discount Rate 6.50% | 1% Increase 7.50% |
|---|---|---|---|
| Sponsor's Net Pension Liability | $ 31,470,325 | $ 23,418,146 | $ 16,918,581 |

*Pension Plan Fiduciary Net Position*

Detailed information about the Pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
YEAR-END DECEMBER 31, 2018

For the year ended December 31, 2018, the Sponsor will recognize a pension expense of $3,176,157. On December 31, 2018, the Sponsor reported deferred outflows of resources and deferred Inflows of Resources related to pensions from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---|---|---|
| Differences between actual and expected experience | 839,937 | 160,656 |
| Changes of assumptions | 2,039,470 | 1,092,166 |
| Net difference between projected and actual earnings on pension plan investments | 2,528,368 | 0 |
| Total | $5,407,775 | $1,252,822 |

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

| Year-ended December 31: | |
|---|---|
| 2019 | $1,467,300 |
| 2020 | $958,601 |
| 2021 | $418,836 |
| 2022 | $836,350 |
| 2023 | $236,933 |
| Thereafter | $236,933 |

# COMPONENTS OF PENSION EXPENSE
# YEAR-END DECEMBER 31, 2018

| | Net Pension Liability | Deferred Inflows | Deferred Outflows | Pension Expense |
|---|---|---|---|---|
| Beginning Balance | $ 18,277,928 | $ 2,832,245 | $ 3,064,137 | |
| Total Pension Liability Factors: | | | | |
| Service Cost | 868,643 | - | - | 868,643 |
| Interest | 3,154,921 | - | - | 3,154,921 |
| Changes in Benefit Terms | - | - | - | - |
| Differences Between Expected and Actual Experience With Regard to Economic or Demographic Assumptions | 664,880 | - | 664,880 | - |
| Current Year Amortization | - | (53,641) | (184,995) | 131,354 |
| Changes in Assumptions About Future Economic or Demographic Factors or Other Inputs | 993,650 | - | 993,650 | - |
| Current Year Amortization | - | (324,866) | (809,957) | 485,091 |
| Benefit Payments, Including Refunds of Employee Contributions | (2,179,786) | - | - | - |
| Net Change | 3,502,308 | (378,507) | 663,578 | 4,640,009 |
| Plan Fiduciary Net Position: | | | | |
| Contributions - Employer | 1,959,000 | - | - | - |
| Contributions - Employee | 349,189 | - | - | (349,189) |
| Projected Net Investment Income | 1,984,784 | - | - | (1,984,784) |
| Difference Between Projected and Actual Earnings on Pension Plan Investments | (3,731,832) | - | 3,731,832 | - |
| Current Year Amortization | - | (300,229) | (1,151,085) | 850,856 |
| Benefit Payments, Including Refunds of Employee Contributions | (2,179,786) | - | - | - |
| Administrative Expenses | (19,265) | - | - | 19,265 |
| Net Change | (1,637,910) | (300,229) | 2,580,747 | (1,463,852) |
| Ending Balance | $ 23,418,146 | $ 2,153,509 | $ 6,308,462 | $ 3,176,157 |

# AMORTIZATION SCHEDULE – EXPERIENCE

| | | | Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year Base Established | Differences Between Expected and Actual Experience | Recognition Period (Years) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| 2018 | $ 664,880 | 7 | $ 94,982 | $ 94,983 | $ 94,983 | $ 94,983 | $ 94,983 | $ 94,983 | $ 94,983 | $ - | $ - | $ - | $ - |
| 2017 | $ (176,284) | 6 | $ (29,381) | $ (29,381) | $ (29,381) | $ (29,381) | $ (29,381) | $ - | $ - | $ - | $ - | $ - | $ - |
| 2016 | $ 540,079 | 6 | $ 90,013 | $ 90,013 | $ 90,013 | $ 90,013 | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2015 | $ (140,172) | 5.78 | $ (24,260) | $ (24,260) | $ (18,872) | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Net Increase (Decrease) in Pension Expense | | | $ 131,354 | $ 131,355 | $ 136,743 | $ 155,615 | $ 65,602 | $ 94,983 | $ 94,983 | $ - | $ - | $ - | $ - |

## AMORTIZATION SCHEDULE – CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

| Year Base Established | Effects of Changes in Assumptions | Recognition Period (Years) | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2018 | $ 993,650 | 7 | $ 141,950 | $ 141,950 | $ 141,950 | $ 141,950 | $ 141,950 | $ 141,950 | $ 141,950 | $ - | $ - | $ - | $ - |
| 2017 | $ (705,405) | 6 | $ (117,568) | $ (117,568) | $ (117,568) | $ (117,568) | $ (117,568) | $ - | $ - | $ - | $ - | $ - | $ - |
| 2016 | $ (1,243,789) | 6 | $ (207,298) | $ (207,298) | $ (207,298) | $ (207,298) | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2015 | $ 3,830,149 | 5.78 | $ 668,007 | $ 668,007 | $ 519,763 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Net Increase (Decrease) in Pension Expense | | | $ 485,091 | $ 485,091 | $ 336,847 | $ (182,916) | $ 24,382 | $ 141,950 | $ 141,950 | $ - | $ - | $ - | $ - |

## AMORTIZATION SCHEDULE – INVESTMENTS

| Year Base Established | Differences Between Projected and Actual Earnings | Recognition Period (Years) | Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments: 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|
| 2018 | $ 3,731,832 | 5 | $ 746,368 | $ 746,366 | $ 746,366 | $ 746,366 | $ 746,366 | $ - |
| 2017 | $ (1,501,145) | 5 | $ (300,229) | $ (300,229) | $ (300,229) | $ (300,229) | $ - | $ - |
| 2016 | $ 194,370 | 5 | $ 38,874 | $ 38,874 | $ 38,874 | $ - | $ - | $ - |
| 2015 | $ 1,829,215 | 5 | $ 365,843 | $ 365,843 | $ - | $ - | $ - | $ - |
| Net Increase (Decrease) in Pension Expense | | | $ 850,856 | $ 850,854 | $ 485,011 | $ 446,137 | $ 746,366 | $ - |

SCHEDULE OF CONTRIBUTIONS

| Plan Year-End | Actuarially Determined Contribution | Contributions in Relation to the Actuarially Determined Contributions | Contribution Deficiency (Excess) | Covered Payroll | Contributions as a Percentage of Covered Payroll |
|---|---|---|---|---|---|
| 12/31/2018 | 1,817,304 | 1,959,000 | (141,696) | 3,571,005 | 54.86% |
| 12/31/2017 | 1,613,000 | 1,613,000 | - | 3,485,670 | 46.28% |

The following assumptions were used to determine the Actuarially Determined Contribution as of January 1, 2017:

| | |
|---|---|
| Calculation Timing | The Actuarially Determined Contribution is calculated as of January 1 two years prior to the year in which contributions are reported. |
| Interest Rate | 6.75% |
| Mortality Rate | RP 2014 Mortality Table with a blue collar adjustment, projected to the valuation date using improvement scale MP-2015. |
| Disabled Mortality Rate | RP 2014 Disabled Mortality Table, projected to the valuation date using improvement scale MP-2015. |
| Assumptions | All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the January 1, 2017 Actuarial Valuation Report for the Village of Glen Ellyn Police Pension Fund prepared by Foster & Foster. |

## SCHEDULE OF INVESTMENT RETURNS

For the year ended December 31, 2018, the annual money-weighted return on Pension Plan investments, net of pension plan investment expense, was -5.67 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

| Plan Year-End | Annual Money-Weighted Rate of Return Net of Investment Expense |
|---|---|
| 12/31/2018 | -5.67% |
| 12/31/2017 | 11.98% |

## ASSUMPTIONS – TOTAL PENSION LIABILITY

The valuation reflects the following assumption changes :

- The mortality rates were updated to reflect the PubS-2010 tables.

The following assumptions were used to determine the Net Pension Liability:

| | |
|---|---|
| Valuation Date | January 1, 2019 |
| Measurement Date | December 31, 2018 |
| GASB 68 Expense Measurement Period | January 1, 2018 - December 31, 2018 |
| Reporting Period | January 1, 2018 - December 31, 2018 |
| Discount Rate | 6.50% |
| Interest Rate | 6.50% per year compounded annually, net of investment related expenses. |
| Mortality Rate | ***Active Lives:***<br>PubS-2010 Employee mortality, projected 5 years past the valuation date with Scale MP-2018. 10% of active deaths are assumed to be in the line of duty.<br><br>***Inactive Lives:***<br>PubS-2010 Healthy Retiree mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>***Beneficiaries:***<br>PubS-2010 Survivor mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>***Disabled Lives:***<br>PubS-2010 Disabled mortality, projected 5 years past the valuation date with Scale MP-2018.<br><br>The mortality assumptions sufficiently accommodate anticipated future mortality improvements. |
| Retirement Age | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Disability Rate | See table later in this section. 60% of the disabilities are assumed to be in the line of duty. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |

| | |
|---|---|
| Termination Rate | See table later in this section. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |
| Salary Increases | See table below. This is based on a 2017 experience study performed for the State of Illinois Department of Insurance. |

| Salary Scale | |
|---|---|
| Service | Rate |
| 0 | 11.00% |
| 1 | 10.75% |
| 2 | 8.75% |
| 3 | 8.50% |
| 4 | 7.00% |
| 5 | 6.25% |
| 6 | 5.25% |
| 7 | 4.25% |
| 8 - 16 | 4.00% |
| 17 - 32 | 3.75% |
| 32+ | 3.50% |

| | |
|---|---|
| Inflation | 2.50%. |
| Cost-of-Living Adjustment | Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.<br><br>Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement. |
| Marital Status | 80% of Members are assumed to be married. |
| Spouse's Age | Males are assumed to be three years older than females. |
| Funding Method | Entry Age Normal Cost Method. |
| Actuarial Asset Method | Investment gains and losses are smoothed over a 5-year period. |
| Funding Policy Amortization Method | The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets. |
| Payroll Growth | 3.50% per year. |

## Decrement Tables

% Terminating During the Year

| Age | Rate |
|---|---|
| 20 | 14.00% |
| 25 | 10.40% |
| 30 | 5.60% |
| 35 | 3.10% |
| 40 | 1.90% |
| 45 | 1.50% |
| 50 | 1.50% |
| 56+ | 0.00% |

% Becoming Disabled During the Year

| Age | Rate |
|---|---|
| 20 | 0.000% |
| 25 | 0.030% |
| 30 | 0.140% |
| 35 | 0.260% |
| 40 | 0.420% |
| 45 | 0.590% |
| 50 | 0.710% |
| 55 | 0.900% |
| 60 | 1.150% |

% Retiring During the Year (Tier 1)

| Age | Rate |
|---|---|
| 50 - 51 | 15% |
| 52 - 54 | 20% |
| 55 - 64 | 25% |
| 65 - 69 | 40% |
| 70+ | 100% |

% Retiring During the Year (Tier 2)

| Age | Rate |
|---|---|
| 50 - 54 | 5% |
| 55 | 40% |
| 56 - 64 | 25% |
| 65 - 69 | 40% |
| 70+ | 100% |

NOTES TO THE FINANCIAL STATEMENTS

*Support for Long-Term Expected Rate of Return*

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by target asset allocation percentage and by adding expected inflation.

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation adopted as of December 31, 2018, as provided by Marquette Associates, are summarized in the following table:

| Asset Class | Target Allocation | Long Term Expected Real Rate of Return |
|---|---|---|
| Fixed Income | 35.0% | 1.1% |
| US Equity | 30.0% | 5.3% |
| International Equity | 20.0% | 5.2% |
| Global Tactical | 5.0% | 3.6% |
| Real Estate - Core | 10.0% | 4.9% |
| Total | 100.0% | |

| | |
|---|---|
| Inflation rate of investment advisor | 2.30% |

*Concentrations*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's fiduciary net position.

*Discount Rate*

The Discount Rate used to measure the Total Pension Liability was 6.50 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate ant that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments (6.50 percent) was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For the purpose of this valuation, the expected rate of return on pension plan investments is (6.50 percent. The municipal bond rate is 4.10 percent (based on the weekly rate closest to, but not later than the measurement date of the Bond Buyer 20-Bond Index as published by The Bond Buyer). The resulting single discount rate is 6.50 percent.

SUMMARY OF CURRENT PLAN

| | |
|---|---|
| Article 3 Pension Fund | The Plan is established and administered as prescribed by "Article 3. Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code. |
| Plan Administration | The Plan is administered by a Board of Trustees comprised of:<br>a) Two members appointed by the Municipality,<br>b) Two active Members of the Police Department elected by the Membership, and<br>c) One retired Member of the Police Department elected by the Membership. |
| Credited Service | Complete years of service as a sworn police officer employed by the Municipality. |
| Normal Retirement | |
| Date | **Tier 1**: Age 50 and 20 years of Credited Service.<br><br>**Tier 2:** Age 55 with 10 years of Credited Service. |
| Benefit | **Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is $1,000 per month.<br><br>**Tier 2**: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is $1,000 per month. |
| Form of Benefit | **Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member's benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.<br><br>**Tier 2**: Same as above, but with 66 2/3% of benefit continued to spouse. |
| Early Retirement | |
| Date | **Tier 1**: Age 60 and 8 years of Credited Service.<br><br>**Tier 2:** Age 50 with 10 years of Credited Service. |
| Benefit | **Tier 1:** Normal Retirement benefit with no minimum.<br><br>**Tier 2**: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit. |
| Form of Benefit | Same as Normal Retirement. |

Disability Benefit

| | |
|---|---|
| Eligibility | Total and permanent as determined by the Board of Trustees. |
| Benefit Amount | A maximum of:<br>a.) 65% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.<br><br>For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service. |
| Cost-of-Living Adjustment | **Tier 1:**<br><br>*Retirees:* An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.<br><br>*Disabled Retirees*: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.<br><br>**Tier 2**: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later. |

Pre-Retirement Death Benefit

| | |
|---|---|
| Service Incurred | 100% of salary attached to rank held by Member on last day of service. |
| Non-Service Incurred | A maximum of:<br>a.) 50% of salary attached to the rank held by Member on last day of service, and;<br>b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.<br><br>For non-service deaths with less than 10 years of service, a refund of member contributions is provided. |

Vesting (Termination)

| | |
|---|---|
| Vesting Service Requirement | **Tier 1:** 8 years. |
| | **Tier 2**: 10 years. |
| Non-Vested Benefit | Refund of Member Contributions. |
| Vested Benefit | Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service. |

Contributions

| | |
|---|---|
| Employee | 9.91% of Salary. |
| Municipality | Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability. |