



NEPC, LLC

YOU DEMAND MORE. So do we.<sup>SM</sup>



## City of San Jose

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### Investment Consulting Presentation

November 24, 2015

Allan Martin, Partner

Dan LeBeau, Consultant

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## Top Criteria for Selecting Investment Consulting Firms

- **Relevant Resources and Capabilities - Public Fund Experience and Expertise**
- **Well-Articulated Investment Consulting Philosophy**
- **Qualifications of Team Responsible for Relationship**
- **Deep, Tenured Team of Research Specialists Across Traditional and Non-Traditional Asset Classes**
- **Past Investment Performance**
- **Competitive Fees**

### Resources

- Stable, diverse, and tenured team with knowledge across the institutional investment market
- High client service level - average of 6 clients per consultant
- 50 person dedicated team of research specialists, including large commitment to non-traditional asset classes

### Research

- Multi-faceted asset allocation process incorporating traditional and proprietary models
- Innovative, forward-thinking research culture with flexibility to create custom solutions
- Top down and bottom up idea generation

### Results

- Client performance has outperformed peer averages<sup>2</sup>
- Risk-adjusted performance is also superior
- Asset allocation and manager selection have added value
- Superior client satisfaction consistently documented by Greenwich Associates

<sup>1</sup>Greenwich Associates, 2014 Evaluations by U.S. Institutional Investors. Greenwich Associates is an independent research firm. Their rankings do not represent an endorsement of NEPC.

<sup>2</sup>Represented by the median fund in the \$3.5 trillion InvestorForce Universe (or the ICC Universe through 2011).

Past performance is no guarantee of future results. Please see additional information on the Disclosure page.

## NEPC's Commitment to the City of San Jose

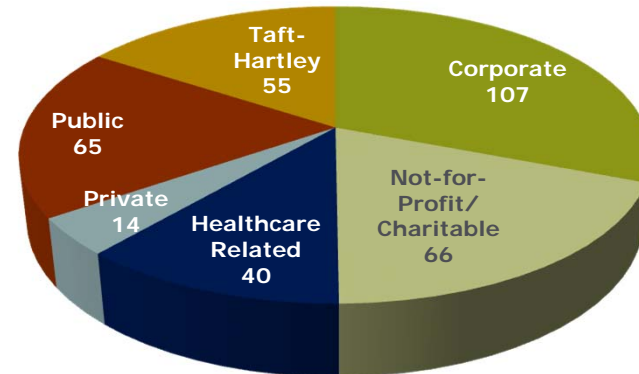
- **As Investment Staff has grown, we recognize that additional resources are required to continue to provide the highest level of client service**
- **Proposed consulting team provides complementary skill sets**
  - Acts as liaison to broader NEPC research platform
- **Reduction in number of clients allows Allan Martin to play a more active role in the relationship**
- **Recently hired new Consultant Support Analyst in Redwood City office**

# Introduction to NEPC

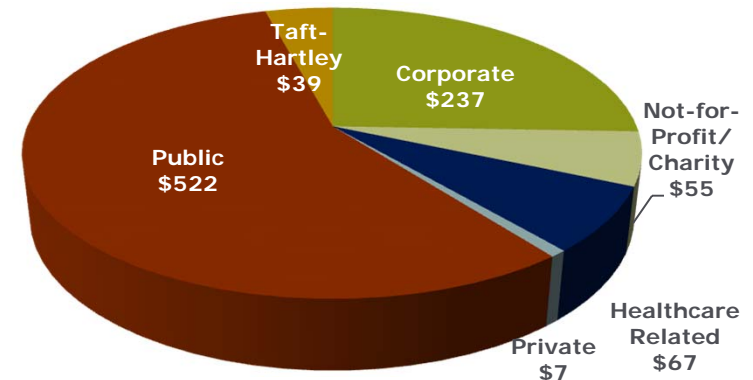


- Established in 1986 in Boston, MA
- 246 employees in 7 regional offices
- Employee-owned with 34 partners
- 100% of revenue from advisory and discretionary consulting services
- 347 institutional clients<sup>1</sup>
- \$927 billion assets under advisement<sup>1</sup>
  - Public funds account for over 56% of total assets
- Practice groups within NEPC deliver expertise by client type

Total Clients



Total Assets (\$ billions)



BOSTON | ATLANTA | CHARLOTTE | CHICAGO | DETROIT | LAS VEGAS | SAN FRANCISCO

## Hallmarks of NEPC

- **Trusted advisor**
  - Advisory and discretionary consulting are our sole lines of business
  - Independent business model
  - Firm stability and growth have allowed us to consistently reinvest in our business
  - More than 75% of the clients that have engaged NEPC as an investment advisor over the last 15 years are still clients today
- **Experienced professionals**
  - Destination for professionals impassioned to consult
  - One of the investment consulting industry's largest research teams
- **Proactive asset allocation advice and innovative investment solutions**
  - NEPC's collective client base has outperformed the InvestorForce/ICC median<sup>1</sup> in 25 of the 29 years since our founding in 1986
- **History of client and NEPC recognition<sup>2</sup>**

**YOU DEMAND MORE. *So do we.* <sup>SM</sup>**

<sup>1</sup>The median fund in the \$3.5 trillion InvestorForce Universe (or the ICC Universe through 2011) represents average performance among a nationwide sample of plan sponsor results.

<sup>2</sup>Each client account is individually managed thus actual holdings, performance and satisfaction will vary for each client and there is no guarantee that a particular client's account will have the same characteristics as described herein. Past performance is no guarantee of future results.

## NEPC's Recent Awards

- **2015 *CIO* World's Most Influential Investment Consultants**
  - KC Connors, CFA, CAIA, Partner (Specialist Consultant)
  - Tim McCusker, CFA, CAIA, FSA, CIO (Generalist Consultant)
- **2015 *Wealth & Finance International's* Alternative Investment Awards**
  - Sustained Excellence in Client Investment Management
  - Macro Strategy Specialist of the Year – USA
- **2014 *CIO* World's 25 Most Influential Investment Consultants**
  - KC Connors, CFA, CAIA, Partner
  - Tim McCusker, CFA, CAIA, FSA, CIO
- **2013 *CIO's* Industry Innovation Award – Consultant category**
- **2013 *CIO* World's 25 Most Influential Investment Consultants**
  - KC Connors, CFA, CAIA, Partner
- **2012 *CAIA Association's* inaugural CAIA Corporate Recognition Award**
- **2012 *InvestHedge's* Investor Excellence Award – Consultant category**
- **2012 *CIO* World's 25 Most Influential Investment Consultants**
  - Allan Martin, Partner
- **2012 *MMI's* Public Fund Consultant of the Year Award**
  - Kevin M. Leonard, Partner
- **2011 *CIO's* Industry Innovation Award – Consultant category**



## Dedicated Consulting and Research Teams

### NEPC employs 50 dedicated research professionals<sup>1</sup>

- Traditional manager research is a cornerstone of our efforts
- One of the largest alternative asset research groups in the industry
- Four actuaries on staff, one consultant with formal actuarial training, and one PhD specializing in risk budgeting and asset allocation



## Client Commitment



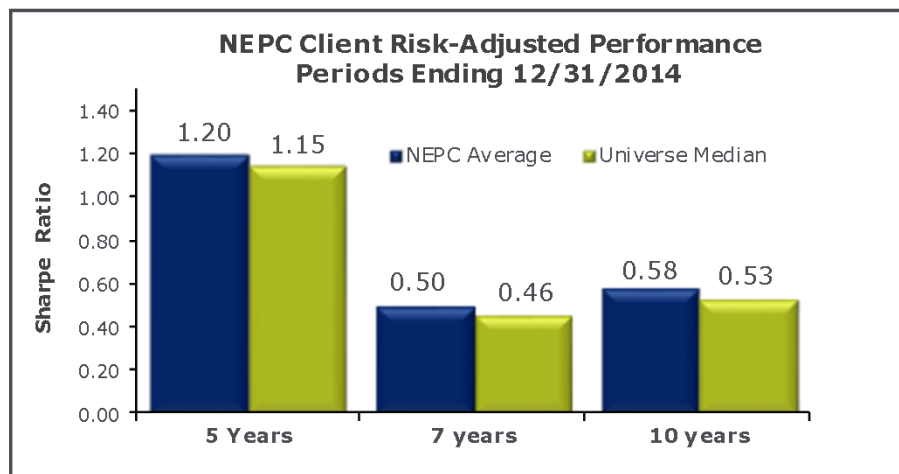
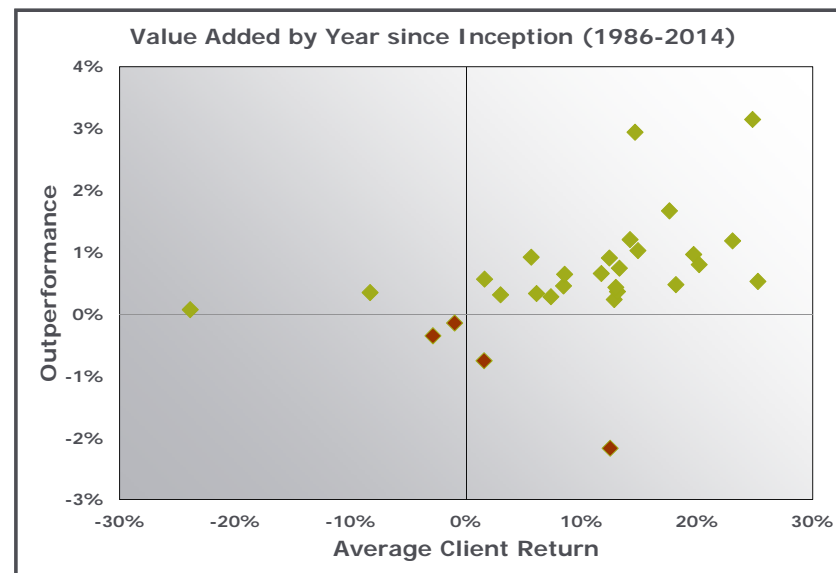
### Selective growth

- Balance resources, product and services
- Recognize increased servicing requirements
- Declined 152 RFPs in 2014



## Our Clients' Results – NEPC's Overall Composite

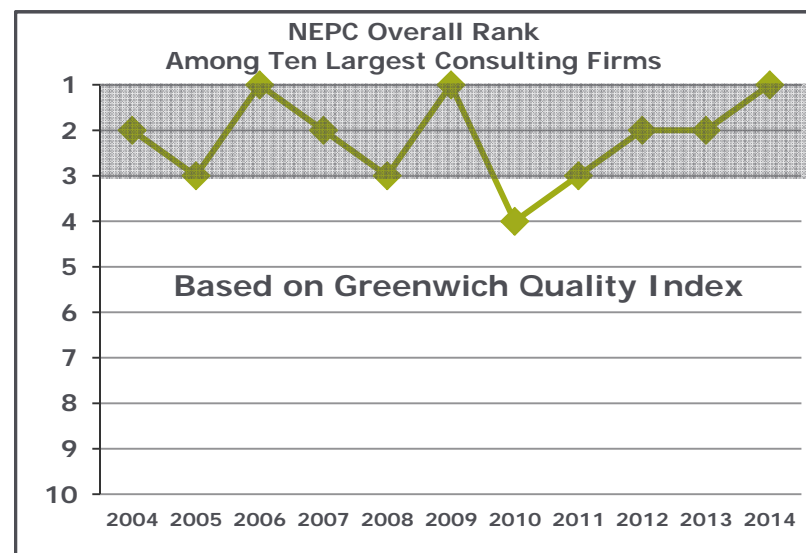
- Our collective client base has outperformed the InvestorForce/ICC median<sup>1</sup> in 25 of the 29 years since our founding in 1986



- Outperformance on a risk-adjusted basis, as measured by the Sharpe Ratio
- Reflects the impact of both asset allocation and manager performance

<sup>1</sup>The median fund in the \$3.5 trillion InvestorForce Universe (or the ICC Universe through 2011) represents average performance among a nationwide sample of plan sponsor results. NEPC and universe results are both gross of fees. Past performance is no guarantee of future results. Please see additional information on the Client Results Disclosure page.

- **Greenwich Associates surveys over 1,000 large plan sponsors regarding their investment consulting relationships.**
- **NEPC has consistently achieved favorable client satisfaction ratings among the ten largest firms:**
  - Ranked #1 overall in 2014 as measured by the overall Greenwich Quality Index (GQI) for the Investment Consulting Business
  - Only firm with GQI ranking in the top three in ten of the last 11 years
  - Ranked #1 in seven of 14 key success factors in 2014
- **NEPC compensates its non-partner employees with a supplemental Quality Bonus whenever our client ratings rank us in the top three among the ten largest investment consulting firms.**



Source: Greenwich Associates, 2014 Evaluations by U.S. Institutional Investors.

- Greenwich Associates is an independent research firm. Their rankings do not represent an endorsement of NEPC.
- Past performance is no guarantee of future results.
- See Appendix for important disclosures that should be viewed in connection with this exhibit.

## Key Success Factors

### Greenwich Associates U.S. Client Evaluations – Investment Consulting Business 2014 Rankings of 10 Largest Consultants: Key Success Factors

	NEPC	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I
<b>Market Position (# of Clients)</b>	<b>1</b>	2	3	4	5	6	7	7	9	10
<b>Overall Greenwich Quality Index</b>	<b>1</b>	4	6	2	8	9	5	10	3	7
<b>Investment Counseling</b>										
Understanding Clients' Goals & Objectives	<b>2</b>	2	6	2	7	9	10	7	5	1
Advice on Long-term Asset Allocation	<b>1</b>	2	9	8	5	6	4	10	7	3
Provision of Proactive Advice & Innovative Ideas	<b>2</b>	3	7	5	8	3	1	10	6	9
Capability of Consultant Assigned to Your Fund	<b>2</b>	4	5	3	5	9	8	9	7	1
Credibility with Investment Committee	<b>1</b>	6	4	2	8	10	9	6	4	3
Advice on DC Plan Structure and Design	<b>2</b>	5	7	3	1	8	4	9	6	10
<b>Manager Selection</b>										
Knowledge of Investment Managers	<b>1</b>	5	3	1	4	9	8	10	7	6
Satisfaction with Manager Recommendations	<b>3</b>	8	5	5	3	5	1	10	9	2
<b>Client Servicing</b>										
Responsiveness to Requests for Information	<b>1</b>	4	6	2	4	10	6	9	3	8
Personal Meetings	<b>1</b>	6	3	2	5	9	7	8	4	9
Usefulness of Written Investment Reviews	<b>1</b>	5	3	1	7	9	3	10	7	5
Sufficient Professional Resources to Meet Your Needs	<b>2</b>	2	5	1	4	10	7	9	7	6
Timeliness in Providing Written Information & Reports	<b>1</b>	7	6	2	8	2	5	10	4	9
<b>Commercial Arrangement</b>										
Reasonable Fees (Relative to Value Delivered)	<b>2</b>	5	7	4	10	7	6	9	3	1

Source: Greenwich Associates, 2014 Evaluations by U.S. Institutional Investors.

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## Representative Client List

### Public

Anne Arundel County  
**Arizona Public Safety Personnel Ret. System**  
**Arizona State Retirement System**  
 Baltimore County ERS  
 Boston Water and Sewer Commission  
 Braintree Retirement Board  
 Chicago Laborers' & Retirement Board  
 Employees' Annuity & Benefit Fund  
 Chicago Policemen's Annuity & Benefit Fund  
 City of Boston - Trust Funds  
 City of Detroit, Michigan  
**City of San Jose Police & Fire Dept. Ret. Plan**  
 Dallas Police & Fire Pension System  
 Fairfax County Uniformed Retirement System  
 Louisiana State Employees Retirement System  
 Massachusetts Water Resource Authority  
**New Mexico Educational Retirement Board**  
 NY City Metropolitan Transportation Authority  
 Ohio Public Employees Retirement System  
 Oklahoma State Pension Commission  
 Oklahoma Tobacco Settlement Trust  
 Omaha Schools Employees' Retirement System  
**Orange County ERS**  
 Regional Transportation Authority  
 San Antonio Fire & Police Pension Fund  
**San Bernardino County ERA**  
**San Francisco ERS**  
 St. Louis Public School Retirement System  
 State Boston Retirement System  
 State of Vermont  
 State Universities Retirement System of Illinois  
 Town of Belmont, Massachusetts  
 State of Wisconsin Investment Board  
**State of Wyoming Retirement System**  
**Ventura County ERA**  
 West Virginia Board of Treasury Investments

### Taft-Hartley

ABC-NABET  
 Boston Newspaper  
 Boston Plasterers' & Cement Masons' Local 534  
 Boston Shipping Association  
 Desert States UFCW Pension Fund  
 Fulton Fish Market  
 IBT Local 111  
 IUOE Locals 12 & 324  
 Sheet Metal Workers Local 40  
 Southern California IBEW-NECA  
 Teamsters Local 856  
 UFCW - Northern California  
 Western Pennsylvania Teamsters & Employers

### Healthcare Related

Blue Cross/Blue Shield of Kansas  
 Boston Medical Center  
 Care New England  
 Christus Health  
 Fallon Community Health Plan  
 Hebrew SeniorLife  
 Henry Ford Health System  
 Johns Hopkins Hospital  
 Lahey Clinic  
 MVP Health Care, Inc.  
 Rochester Regional Health  
 Rush University Medical Center  
 Shriners Hospitals for Children, Inc.  
 St. Barnabas Hospital  
 University of Maryland Medical System

### Corporate

Alliant Energy Corporation  
 Bose Corporation  
 Eversource Energy  
 Iberdrola USA Management Corp.  
 Invensys  
 JM Family Enterprises, Inc.  
 Maine General Hospital  
 National Grid  
 Ocean Spray Cranberries  
 SBC Holdings  
 United Airlines  
 United Technologies Corporation

### Endowments & Foundations

Community Foundation for SE Michigan  
 Dartmouth Hitchcock Hospital & Clinic  
 Hebrew Immigrant Aid Society (HIAS)  
 Hebrew SeniorLife  
 Kaleida Health  
 MaineGeneral Healthcare  
 Massachusetts SPCA  
 Several High-Net Worth Foundations  
 Unitarian Universalist Association

This client list is only a sample. It is not known whether or not the clients approve of the services received. It should not be considered an endorsement by any individual client listed.

Client Type	Retainer Clients	Funds less than \$1.5B	Funds greater than \$1.5B	Total Assets	Average Client Size	Median Client Size
Public Fund	65	27	38	\$522 billion	\$8.0 billion	\$2.0 billion

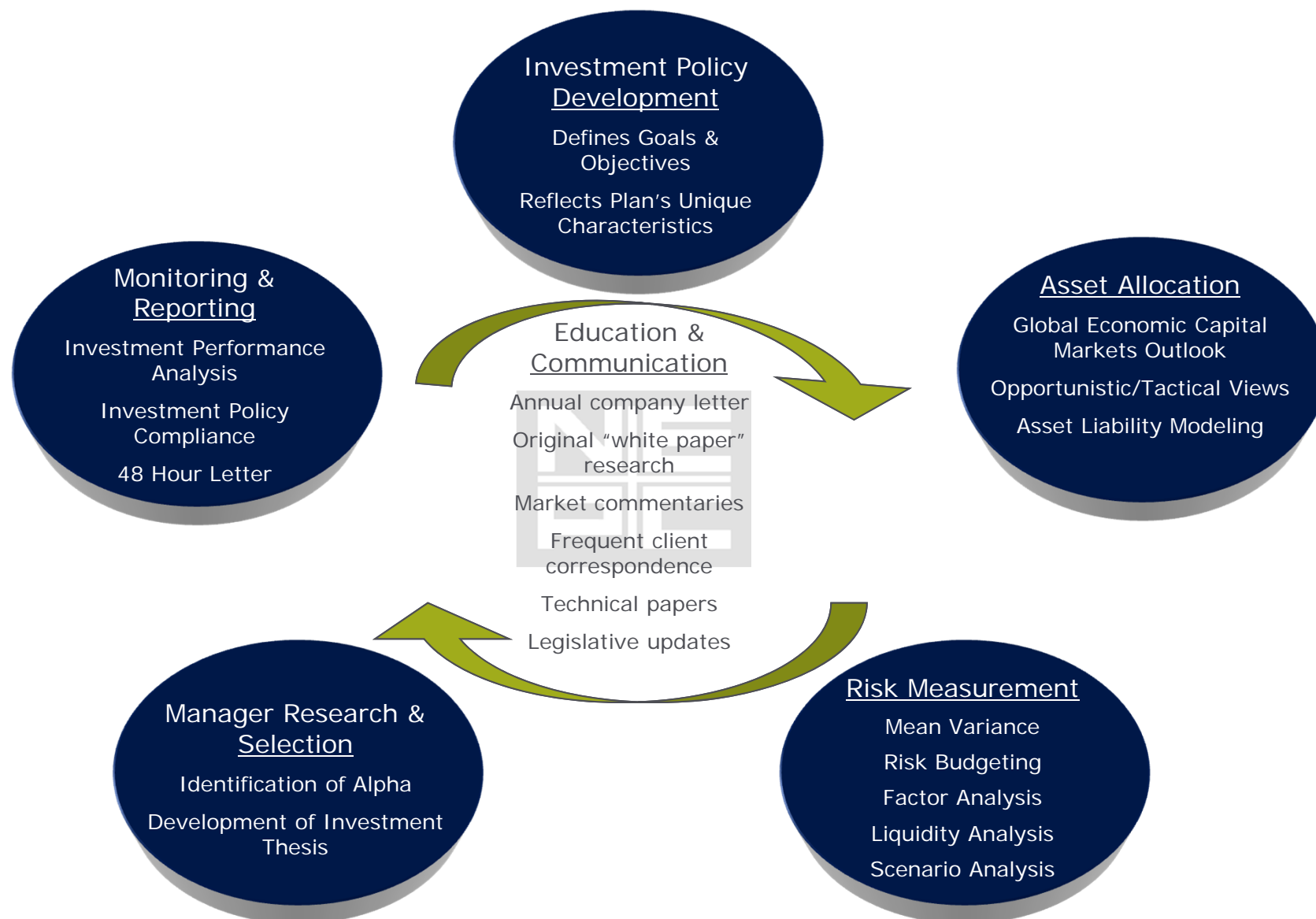


## Our Consulting Process

- **Focus of NEPC's consulting approach**
  - Building diversified portfolios
  - Demonstrate a clear understanding of the relevant risks within client portfolios
  - Asset allocation increasingly based on liabilities and spending needs
  - Prudent use of active, passive, and alternative strategies
  - Pursuit of higher risk-adjusted returns
- **Blend of strategic and tactical**
  - Long term strategic policy is the cornerstone
  - Opportunistically adjust the portfolio as conditions warrant
- **Client attributes require different solutions**
  - Required return and risk tolerance
  - Staffing and resource levels
  - Investment acumen of staff and committee members
  - Tolerance for legal complexities
  - Desired level of investment complexity

<sup>1</sup>Each client account is individually managed; thus, actual holdings, performance and satisfaction will vary for each client and there is no guarantee that a particular client's account will have the same characteristics or performance. Past performance is no guarantee of future results.

## Our Process – Managing a Plan



- **Dedicated Asset Allocation Team**

- Ongoing asset allocation research
- Asset-liability studies
- Asset class assumption development
- Risk budgeting development
- Scenario testing development
- Portfolio construction analysis

- **Asset Allocation Committee**

- Vets asset allocation assumptions
- Assesses current market risks
- Approves asset allocation assumptions
- Approves annual “General Actions for Clients”

- **Ongoing formal review**

- Compare current year recommendations with market trends
- Discuss roles of investments in portfolios
- Cover 22 traditional asset classes/strategies, 17 alternative strategies

### Asset Allocation Team

**Tim McCusker, FSA, CFA, CAIA,**  
**Chief Investment Officer;**  
*Partner\**

**Christopher Levell, ASA, CFA, CAIA,**  
**Client Strategy and Asset Allocation;**  
*Partner\**

**Phillip Nelson, CFA**  
*Director of Asset Allocation*

**John Minahan, PhD, CFA**  
*Senior Investment Strategist\*\**

**Lynda Dennen, ASA, EA**  
*Senior Consultant*

**Mark Cintolo, CAIA**  
*Consultant*

**Mario Tate**  
*Senior Analyst*

**Ian Spencer**  
*Research Analyst*

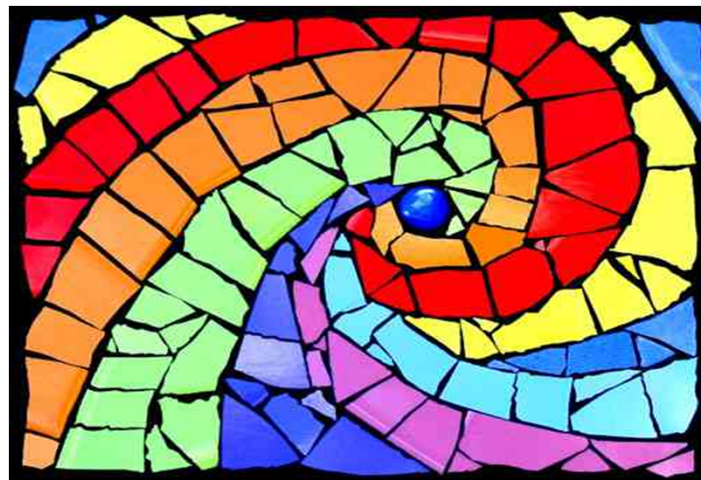
\*Ownership interest in NEPC (Partner)

\*\*Dr. John Minahan, a long-time employee of NEPC and current faculty member at MIT's Sloan School of Management, is engaged as an independent consultant to NEPC.

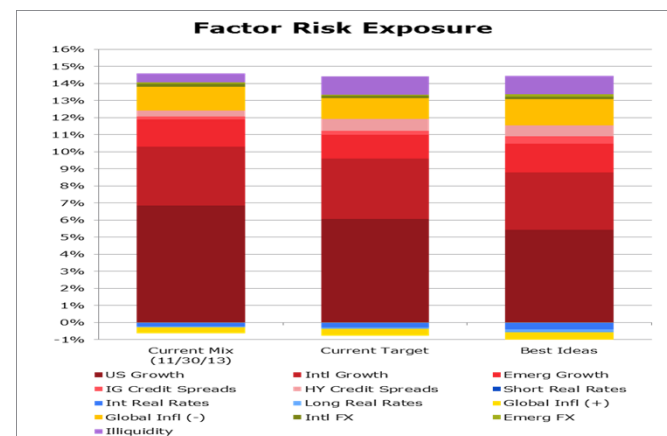
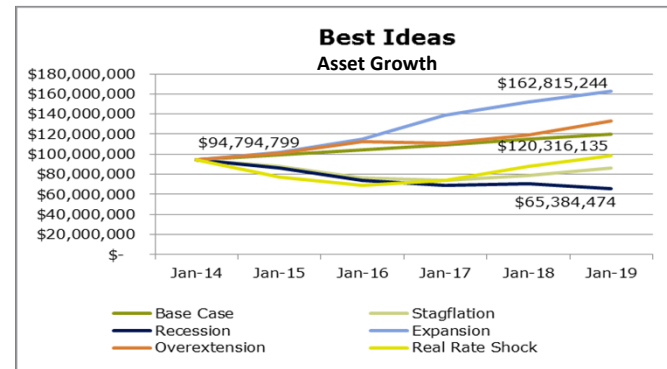
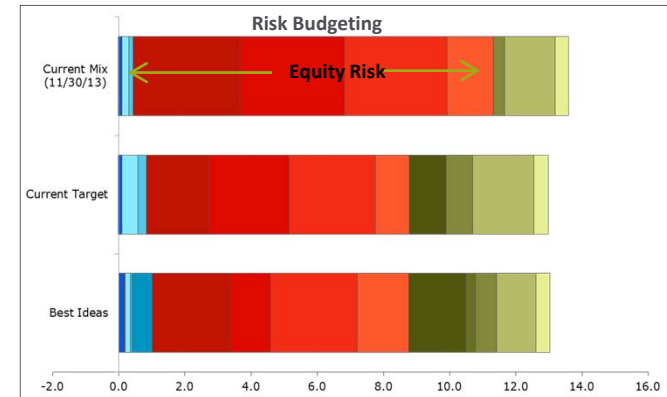


## Asset Allocation – A Progressive Approach

- **Use forward-looking, fundamental based assumptions for all forecasting**
  - Realistic outlook for plan changes over intermediate and long-term
  - Identify opportunities for enhancing portfolio structure
- **Build a Mosaic**
  - No single asset allocation approach or model has all the answers
  - All analytical tools have the potential to provide useful insights but also including shortcomings
  - Minimize exposure to the shortcomings of any individual approach by using multiple perspectives and approaches to build a more robust solution
- **Be Dynamic**
  - Build a long-term strategic allocation that can meet long-term objectives, BUT
  - Look for opportunities to tilt away from the strategic allocation to add value
  - Take advantage of market discrepancies across time horizons and markets



- **Use forward-looking, fundamental based assumptions for all forecasting**
  - Outlook for intermediate and long-term
  - Identify opportunities for enhancing portfolio structure shorter-term
- **Apply multiple models to build robust, objective driven asset allocation solutions**
  - Multiple perspectives on the portfolio provide a more comprehensive understanding of portfolio expectations and behavior in various environments
    - Mean-variance optimization
    - Risk budgeting
    - Liquidity analysis
    - Scenario analysis
    - Factor analysis
- **We embrace innovation in asset allocation**
  - Continuously work to develop new models to analyze and stress test current and potential allocations



- **Continuing education is an important part of our relationship with clients.**
  - NEPC's Annual Company Letter
  - Original "white paper" research (Since 2008, over 70 published white papers)
  - Market Commentary
  - Frequent Client Correspondence
  - Technical Papers
  - Legislative Updates
- **Annual Public Funds Workshop**
  - Two day workshop focused exclusively on public funds where NEPC clients, along with NEPC public fund consultants, members of NEPC research, Select Investment Managers and Other Industry Experts Address Issues Currently Facing Public Pension Plans as well as Investment Opportunities
  - Participants include Executive Directors, CIOs, Investment Staff, and Trustees
    - Limit of 3 representatives from each client ensures focus and fosters an environment that encourages participation from all
  - 2015 Agenda can be found in the appendix

*\*What has made this event so successful in the past is our focus on keeping it quaint and interactive, and that's exactly the positive feedback we hear from the participants each year.*

## Thoughts for City of San Jose

## Asset Allocation Comparison for City of San Jose

	SJP&F	FCERS
<b>Cash</b>	<b>1%</b>	<b>0%</b>
<b>Global Equity</b>	<b>31%</b>	<b>28%</b>
Long/Short Equity	0%	6%
<b>Private Equity</b>	<b>8%</b>	<b>9%</b>
<b>Total Equity</b>	<b>39%</b>	<b>37%</b>
<b>Global Fixed Income</b>	<b>16%</b>	<b>19%</b>
U.S. Core	0%	5%
Global Core	6%	0%
Non-Investment Grade Credit	5%	7%
Emerging Markets	5%	3%
TIPS	0%	5%
<b>Private Debt</b>	<b>11%</b>	<b>5%</b>
<b>Total Fixed Income</b>	<b>27%</b>	<b>24%</b>
<b>Real Assets</b>	<b>17%</b>	<b>23%</b>
Real Estate	7%	7%
Commodities	7%	6%
Natural Resources	0%	5%
Private Real Assets	3%	5%
<b>Absolute Return</b>	<b>6%</b>	<b>11%</b>
<b>Global Asset Allocation</b>	<b>10%</b>	<b>5%</b>
<b>Expected Return 5-7 year</b>	<b>6.6%</b>	<b>6.6%</b>
<b>Expected Return 30 year</b>	<b>7.7%</b>	<b>7.7%</b>
<b>Standard Dev of Asset Return</b>	<b>12.8%</b>	<b>12.4%</b>
<b>Sharpe Ratio</b>	<b>0.38</b>	<b>0.39</b>
<b>Probability of 1 Yr Return &lt; 0%</b>	<b>30.2%</b>	<b>29.8%</b>
<b>Probability of 5 Yr Return &lt; 0%</b>	<b>12.3%</b>	<b>11.8%</b>
<b>Probability of 1 Yr Return &gt; 7.0%</b>	<b>48.8%</b>	<b>48.7%</b>
<b>Probability of 5 Yr Return &gt; 7.0%</b>	<b>47.4%</b>	<b>47.1%</b>
<b>Estimated Fees (\$\$)</b>	<b>\$23,250,000</b>	<b>\$20,000,000</b>
<b>Estimated Fees (bps)</b>	<b>0.75%</b>	<b>0.80%</b>

- **We seek to improve risk-adjusted returns and reduce the portfolio's reliance on any one exposure to generate positive results**
  - However, we understand the importance of not compromising expected return
  - While we recommend reduced risk exposure to equity, we have advocated for increased risk budgets for some clients
- **NEPC believes that asset allocation is the main driver of return, but that portfolio construction is an important element**
  - As a result, we tend to favor managers with flexibility to allocate across market capitalization, country, asset class, etc.

*Note: Analysis completed using NEPC's 2015 Capital Market Assumptions*

*Note: We had to make assumptions with respect to how FCERS models asset allocation. Actual study may result in different results.*

## Summary of Changes to San Jose P&F Investment Program

- **Having been a client since 2008, San Jose P&F has incorporated many of the investment initiatives that we would typically discuss with prospective clients.**
  - Asset allocation is the single biggest decision trustees make with regard to the Plan's assets - Diversification is Paramount!
  - The Plan is much more diversified than it has been historically, reducing its reliance on any one asset class to generate positive returns.
- **Reduced and restructured public equity exposure**
  - 66.1% as of 4Q 2007 vs. 30.4% as of 6/30/2015
- **Reduced and restructured fixed income exposure**
  - Core fixed income - 24.2% as of 4Q 2007 vs. 5.8% as of 6/30/2015
  - Added corporate credit strategies and private debt/opportunistic credit strategies
  - Added emerging market debt
- **Reduced and diversified exposure to real assets, or inflation-hedging strategies**
- **Added exposure to global asset allocation and absolute return/hedge fund strategies**
  - Outlook for global growth remains a tail risk for financial markets
  - Divergence between central bank monetary policies and the dispersion of economic performance between countries and regions creates opportunities for these types of strategies
- **Continued to build out allocations to alternative assets**
  - Private Equity, Private Debt, and Private Real Estate, in particular
  - Illiquid Real Assets including Energy, Infrastructure, Timber, Natural Resources, etc. identified as potential investment opportunities

## San Jose P&F Investment Objectives

- **Achieve assumed rate of return over long-term**
- **Reduce overall Plan volatility**
- **Outperform policy benchmark on an absolute and risk-adjusted basis**
- **Outperform global 60/40 benchmark**



## San Jose P&F Investment Results

	Market Value	3 Mo Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	10 Yrs Rank	15 Yrs Rank	20 Yrs Rank	25 Yrs Rank	Return Since										
<b>Total Fund</b>	<b>\$3,144,799,209</b>	<b>0.7%</b>	<b>23</b>	<b>2.0%</b>	<b>89</b>	<b>-0.8%</b>	<b>98</b>	<b>7.5%</b>	<b>96</b>	<b>8.0%</b>	<b>96</b>	<b>5.7%</b>	<b>93</b>	<b>5.8%</b>	<b>41</b>	<b>7.6%</b>	<b>74</b>	<b>8.2%</b>	<b>65</b>	<b>8.7%</b>	<b>Mar-71</b>
<i>Policy Benchmark</i>		0.7%	24	1.9%	90	-1.0%	99	7.0%	98	8.4%	95	5.6%	93	5.3%	79	7.3%	88	--	--	--	Mar-71
<i>Allocation Index</i>		0.8%	19	1.9%	90	-0.8%	99	7.1%	97	7.9%	96	5.8%	91	5.5%	66	--	--	--	--	--	Mar-71
<i>60% MSCI ACWI IMI (net)/40% Citi WGBI</i>		-0.3%	92	0.3%	99	-3.2%	99	6.8%	99	7.8%	96	5.6%	94	4.7%	97	6.1%	97	--	--	--	Mar-71
<i>InvestorForce Public DB &gt; \$1B Gross Median</i>		0.4%		2.6%		3.2%		10.8%		10.9%		6.8%		5.7%		7.9%		8.3%		--	Mar-71

For the five-year period ending June 30, 2015, the Fund returned 8.0%, trailing the policy benchmark by 0.4%, outperforming the plan's actuarial assumed rate, and ranking in the 96<sup>th</sup> percentile of the InvestorForce Public Funds > \$1 Billion Universe. The Fund's volatility ranks in the 26<sup>th</sup> percentile over the five-year period.

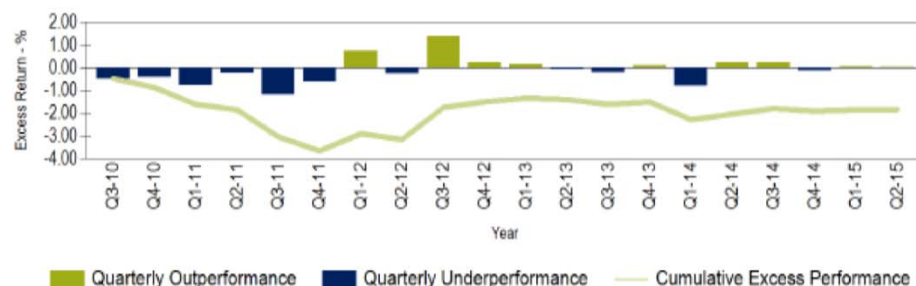
For the three-year period ending June 30, 2015, the Fund returned 7.5%, outperforming the policy benchmark by 0.5%, outperforming the actuarial assumed rate and ranking in the 96<sup>th</sup> percentile of its peers. The Fund's volatility ranks in the top quartile of its peer group for the period.

For the one year ending June 30, 2015, the Fund produced a net investment loss of \$26.5 million, which includes a net investment gain of \$23.3 million in the second calendar quarter. Assets decreased from \$3.21 billion one year ago to \$3.14 billion on June 30, 2015, with \$43.4 million in net distributions during the year.

For the one-year period ending June 30, 2015, the Fund returned -0.8%, outperforming the policy benchmark by 0.2%.

Please see the appendix for additional performance disclosures.

Quarterly and Cumulative Excess Performance



5 Years Ending June 30, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	8.0%	96	7.0%	26	1.1	97	1.9	88
Policy Benchmark	8.4%	95	6.9%	23	1.2	93	2.2	49
InvestorForce Public DB > \$1B Gross Median	10.9%	--	7.6%	--	1.4	--	2.2	--

3 Years Ending June 30, 2015

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank	Sortino Ratio	Rank
Total Fund	7.5%	96	4.5%	15	1.6	95	3.7	77
Policy Benchmark	7.0%	98	4.6%	19	1.5	97	3.6	80
InvestorForce Public DB > \$1B Gross Median	10.8%	--	5.2%	--	2.1	--	4.5	--



## Thoughts for San Jose P&F Going Forward – How Can NEPC Support Board and Staff?

- **Further develop and enhance Investment Policy Statement, specifically with respect rebalancing and risk management**
- **Continue expansion of Private Equity program**
- **Diversify Real Assets exposure across liquidity spectrum**
- **Continue diversification of Real Estate program**
- **Opportunistically add to Private Debt exposure**
- **Evaluate efficacy of Global Fixed Income exposure**
- **Assist with on-going identification of best in class investment managers with the goal of continuing to improve the risk-adjusted return of the Plan**
- **Assist with interpretation of third party risk diagnostics**

## San Jose FCERS Thoughts/Observations

- **San Jose FCERS has also incorporated many of the investment initiatives that we would typically discuss with prospective clients, but we have provided some considerations below.**
- **Consider expansion of Long/Short Equity allocation to include other alternative equity strategies that may not be long/short hedge funds.**
- **Consider increasing allocation to private debt to take advantage of continued but narrowing dislocation in credit markets**
- **Evaluate overall exposure to real assets, or inflation-hedging strategies**
  - 16% combined target to commodities, natural resources and infrastructure, in addition to 5% target to TIPS within fixed income allocation, equates to more than a 20% of the Plan's assets being allocated to real assets, or inflation-hedging strategies
  - Current passive exposure to liquid natural resources and infrastructure is highly correlated to public equity markets
  - Evaluate merits of diversifying commodities exposure
- **Evaluate overall exposure to absolute return/hedge fund strategies**
  - Existing exposure could limit ability to add hedged strategies within traditional asset classes
- **Continue to build out allocations to alternative assets**
  - Private Equity, Private Debt, and Private Real Estate, in particular
  - Replace existing passive, liquid exposure to natural resources and infrastructure with Private Real Assets including Energy, Infrastructure, Timber, Natural Resources, etc.

# Traditional & Alternative Asset Research

# NEPC's Research Team

**Tim McCusker, FSA, CFA, CAIA**  
*Chief Investment Officer\**

**Client Strategy & Asset Allocation**  
 Christopher Levell, ASA, CFA, CAIA, *Partner\**

**Traditional Research**  
 Timothy Bruce  
*Partner\**

**Alternatives Research**  
 Neil Sheth  
*Partner\**

**Operational Due Diligence**  
 William Bogle  
*Partner\**

## Client Strategy

### Alternative Investments

**Sean Gill, CFA, CAIA**  
*Partner\**

### Defined Contribution

**Ross Bremen, CFA**  
*Partner\**

## Asset Allocation

**Phillip Nelson, CFA**  
*Director of Asset Allocation*

**John Minahan, PhD, CFA**  
*Senior Investment Strategist\*\**

**Lynda Dennen, ASA, EA**  
*Senior Consultant*

**Mark Cintolo, CAIA**  
*Consultant*

**Mario Tate**  
*Senior Analyst*

**Ian Spencer**  
*Research Analyst*

## Traditional Research

**Stephen Gargano**  
*Senior Consultant*

**Jeff Markarian**  
*Senior Consultant*

**Donna Szeto, CFA**  
*Senior Consultant*

**Rosann Morello**  
*Manager Search Supervisor*

**Matthew Brady**  
*Analyst*

**Angela Dawson**  
*Analyst*

**Aidan Redmond**  
*Analyst*

### Research Associates

**Christopher Burrell**

**Taylor Furlong**

**John Lutz**

**Stephanie McMurray**

## Private Markets Research

**Sean Ruhmann**  
*Director of Private Markets\**

Private Equity  
**Eric Harnish**  
*Senior Consultant\**

**Jeffrey Roberts**  
*Senior Consultant*

**Chris Hill, CFA, CAIA**  
*Consultant*

**Melissa Mendenhall**  
*Consultant*

**Aarish Patell**  
*Consultant*

**Siddique Haq, CAIA**  
*Senior Analyst*

**Oliver Fadly, Analyst**

**Brad Rowbotham, Analyst**

Real Assets  
**Andrew Brett, CAIA**  
*Consultant*

**Michael Yang**  
*Consultant*

**Matthew Ritter, CAIA**  
*Senior Analyst*

**William Elcock, Analyst**

## Hedge Fund Research

**Kamal Suppal, CFA**  
*Senior Consultant*

**Seth Bancroft**  
*Consultant*

**Amanda Karlsson, CFA**  
*Consultant*

**Timothy O'Connell**  
*Consultant*

**Dulari Pancholi, CFA, CAIA**  
*Consultant*

**Reino Ecklord, CFA, CAIA**  
*Senior Analyst*

**Larissa Davy**  
*Analyst*

**Alissa Howard, CAIA**  
*Analyst*

**Victoria Margosian**  
*Analyst*

**Christian Pieri**  
*Analyst*

## Operational Due Diligence

**Erin Faccone, CFA, CAIA**  
*Consultant*

**Kevin Lau-Hansen**  
*Analyst*

\* Ownership interest in NEPC (Partner)

+ Principal designation for leadership within the Firm.

\*\* John Minahan, a long-time employee of NEPC and former faculty member at MIT's Sloan School of Management, is engaged as an independent consultant to NEPC.



## How the City of San Jose Might Benefit from NEPC Research

- **Thought Leadership and Market Insights**
  - White papers and original research (more than 70 published white papers since 2008)
  - Annual asset allocation views, quarterly market thoughts, ad hoc market commentary, client webinars and conferences
  - Annual public funds workshop
- **Blend of Strategic and Dynamic Asset Allocation Philosophy**
  - Strategic policy is the cornerstone
  - Capitalize on tactical opportunities available as a result of market dislocations (example: current energy dislocation)
- **Innovative, Forward-Thinking Research Culture with Flexibility to Create Custom Solutions**
  - Top down and bottom up idea generation
  - Managers often approach us to propose and evaluate new and/or custom solutions for clients
- **Collaborative Manager Research and Selection Process**
  - Recognize strength of our clients with respect to identifying new managers/strategies for evaluation in a timely, professional manner
- **Portfolio Construction and Risk Management Tools**
  - Active risk budgeting analysis
  - Implementation of BarraONE risk management platform
- **Prudent incorporation of active, passive and alternative strategies**
  - Flexible views on active/passive implementation
  - Alternative strategies can enhance return potential and provide diversification benefits
- **Discounted fees**
  - NEPC is able to leverage our collective client base and our clients often receive discounted fees, particularly when working with clients on opportunistic investments or custom investment solutions
- **Ongoing manager due diligence and monitoring**

## Total Searches & Reviews 875

### Searches by Asset Class

Large Cap Equity	31
Sm/Mid Cap & Mid Cap Equity	24
Small Cap Equity	29
All Cap Equity (includes MLP's)	13
Fixed Income	91
High Yield Bonds	8
Int'l Equity/Global Equity/Emerging	126
Global Bonds/Emerging Market Debt	122
LDI	5
<i>GAA/TAA (includes Risk Parity &amp; LifeCycle)</i>	<i>57</i>
<i>Commodities</i>	<i>11</i>
<i>Hedge Funds</i>	<i>52</i>
<i>Real Estate</i>	<i>48</i>
<i>Real Assets</i>	<i>47</i>
<i>Private Equity (includes Private Debt)</i>	<i>211</i>

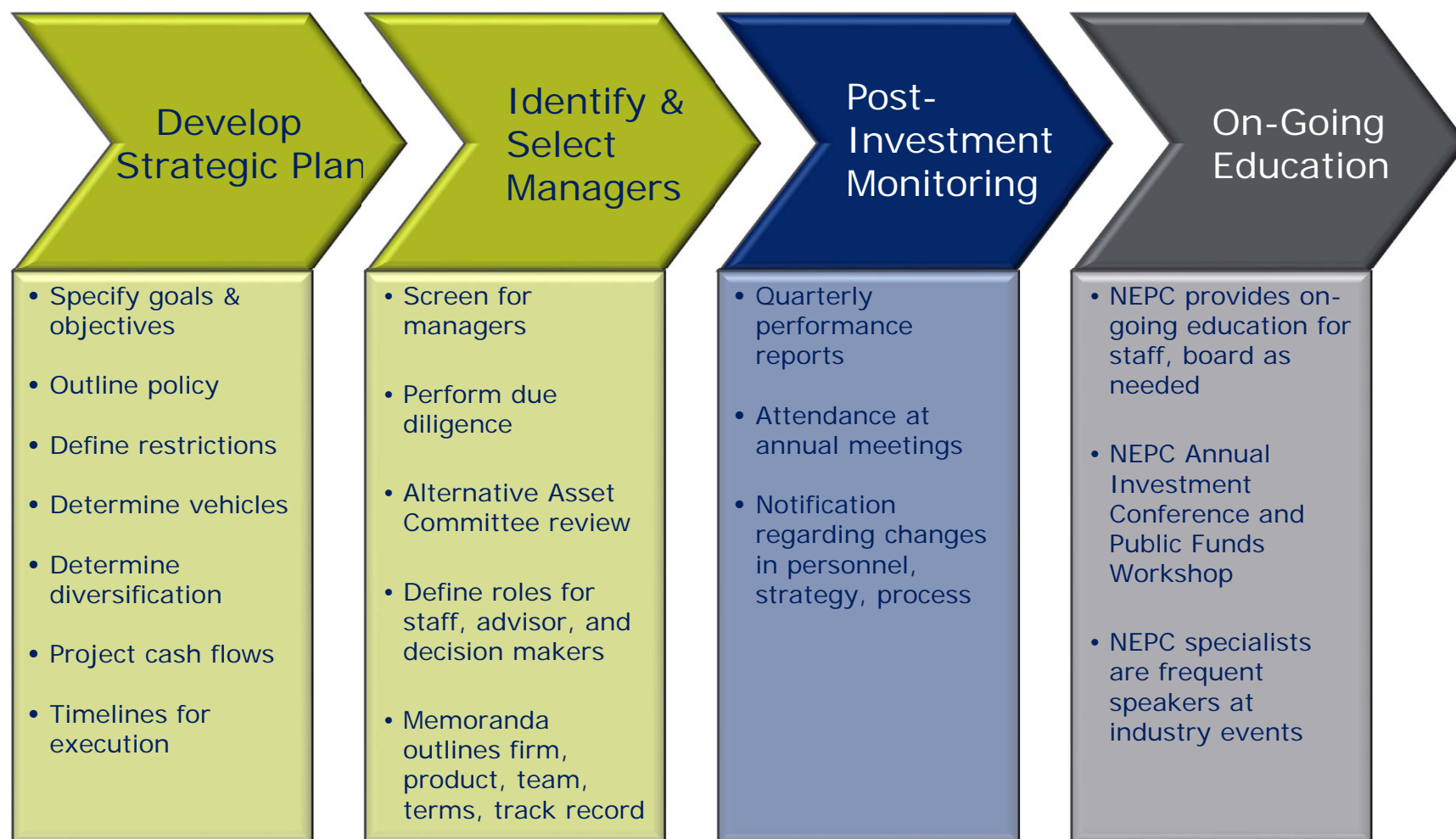
Nearly 46% of all searches and reviews were for non-traditional managers and strategies

**Total Search Assets \$32 billion**

## Alternative Assets Competitive Advantage

- **237 clients with \$83 billion in alternative assets<sup>1</sup>**
  - \$32 billion in hedge funds
  - \$33 billion in private equity
  - \$18 billion in real estate/real assets
- **Advising clients on alternative investments since 1994**
  - *Wealth & Finance International's* **Alternative Investment Awards** for Sustained Excellence in Client Investment Management and for Macro Strategy Specialist of the Year – USA (2015)
  - InvestHedge's **Investor Excellence Award** in the Consultant category (2012)
  - PLANSPONSOR's prestigious "**Alties**" **Award** in the Consultant category (2009)
- **29 professionals focused on alternative investments<sup>2</sup>**
  - 14 dedicated to hedge funds
  - 14 dedicated to private markets; *5 dedicated to private real estate and real assets*
  - Sean W.B. Gill, CFA, CAIA, Partner, Alternative Assets Client Strategist
  - 41 CAIA (Chartered Alternative Investment Analyst) designees firm wide
- **863 searches covering \$16.3 billion in assets over the last 3 years**

Strategy	Number of Searches
Hedge Funds	146
Private Equity	507
Real Estate and Real Assets	168








# Real Estate and Real Assets Consulting

## NEPC's Competitive Advantage in Real Estate and Real Assets

- **Experienced team**
  - Team of 5 research specialists dedicated to private real estate/real assets
  - Diverse backgrounds of senior real estate/real assets team including endowment management, real estate investment banking, and investment consulting
  - Integrated part of 50 person NEPC research team and broader NEPC platform
  - NEPC's Alternative Asset Committee reviews and votes on every investment idea
- **Diverse and meaningful client base**
  - 137 clients with real estate investments: \$11.5 billion of real estate NAV
  - 85 clients with real assets investments: \$6.8 billion of real assets NAV
- **Broad coverage of real estate/real assets**
  - Investment strategies, structures and geographies
- **Differentiated research approach customized for clients**
  - Best ideas approach based on market environment
  - Rigorous qualitative and quantitative analysis of strategies and managers
  - Average of 11 funds added to NEPC's Focused Placement List each year
- **Customized client facing service approach**
  - Client planning and investment pacing analysis
  - Quarterly client reporting
  - Ongoing fund monitoring
  - Special projects
  - Client and board education

## NEPC's Real Assets Research Team: Broad Coverage of Illiquid and Liquid Strategies

Investment Professional	Years Investment Experience	Prior Experience and Education	% of Time Dedicated to Real Assets/Focus Area	
 <b>Sean Ruhmann</b> Partner, Director of Private Markets Research	11	<ul style="list-style-type: none"> <li>Goldman Sachs &amp; Co. and Banc of America Securities</li> <li>MBA from the Tuck School of Business at Dartmouth; MS in Mechanical Engineering from Texas A&amp;M University; BS in Engineering from Trinity College</li> </ul>	100%	All Real Estate and Real Assets
 <b>Andrew Brett</b> , CAIA Research Consultant	9	<ul style="list-style-type: none"> <li>State Street</li> <li>BA in Economics from Union College</li> </ul>	100%	Private Real Estate and Real Assets
 <b>Michael Yang</b> Research Consultant	8	<ul style="list-style-type: none"> <li>General Investment &amp; Development Comp., AEW Capital Mgmt.</li> <li>MBA from F.W. Olin Graduate School of Business at Babson College; BS from Boston College, Carroll School of Management.</li> </ul>	100%	Private Real Estate and Real Assets
 <b>Matt Ritter</b> , CAIA Senior Research Analyst	5	<ul style="list-style-type: none"> <li>GMO and Brooke Private Equity Associates</li> <li>BS in Business Administration from Northeastern University</li> </ul>	100%	Private Real Estate and Real Assets
 <b>William Elcock</b> Research Analyst	4	<ul style="list-style-type: none"> <li>College of the Holy Cross Investment Office</li> <li>BA in Economics from the College of the Holy Cross</li> </ul>	100%	Private Real Estate and Real Assets
 <b>Timothy Bruce</b> Partner, Director of Traditional Research	9	<ul style="list-style-type: none"> <li>Partners Healthcare Investment Office</li> <li>MBA from The University of Chicago Booth School of Business, with concentrations in Finance and Strategic Management; BA in Economics from Brown University</li> </ul>	15%	Liquid Real Assets
 <b>Timothy O'Connell</b> Research Consultant	6	<ul style="list-style-type: none"> <li>Wainwright Investment Counsel</li> <li>BA from the University of California Berkeley</li> </ul>	15%	MLPs
 <b>Aidan Redmond</b> Research Analyst	5	<ul style="list-style-type: none"> <li>Atlantic Trust Private Wealth Management</li> <li>BS in Finance from Quinnipiac University</li> </ul>	60%	Commodities, Natural Resource Equities, MLPs

## Broad Manager Access; Selective Fund Recommendations

- **NEPC's scale provides complete access to all real estate/real assets managers and the ability to be extremely selective in identifying top funds for clients**
- **Only the very best ideas become part of the Firm's Focused Placement List**
  - An average of 7 funds per year added to NEPC's FPL across real estate strategies and 4 across real assets strategies
- **In addition, we have the ability to conduct due diligence on client generated ideas**

	2010	2011	2012	2013	2014
<b>Real Estate Summary</b>					
Detailed Real Estate Manager Meetings	81	165	213	210	225
Funds Added to NEPC's FPL *	7	6	5	10	7
FPL Funds Added as % of Detailed Meetings	8.6%	3.6%	2.3%	4.8%	3.1%
<b>Real Assets Summary</b>					
Detailed Real Assets Manager Meetings	42	107	86	92	123
Funds Added to NEPC's FPL *	4	3	3	4	6
FPL Funds Added as % of Detailed Meetings	9.5%	2.8%	3.5%	4.3%	4.9%

\*This number indicates new funds added in a calendar year; many of these funds have 12-18 month marketing windows so were also open in the subsequent calendar year (i.e. 2010 new FPL fund that was open in 2011).



## Wrap-Up

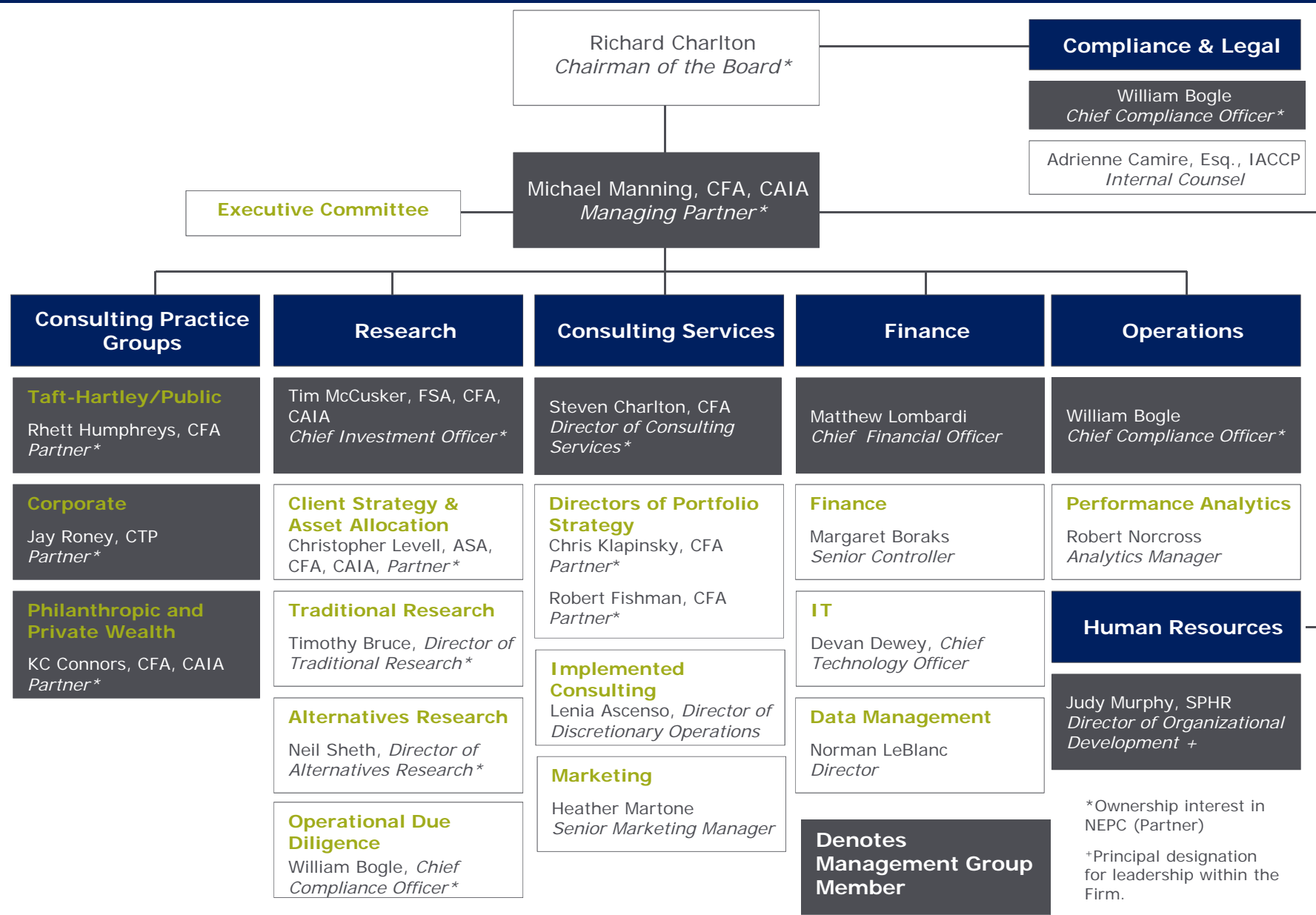
- True independence
- Informed innovation
- Robust customization
- Experienced team with public fund experience and expertise
- One of the largest research teams in the industry, covering traditional and alternative assets
- Well-articulated investment consulting philosophy & research-driven process
- Demonstrated results
- Competitive fees

# Appendix





# NEPC's Organizational Structure



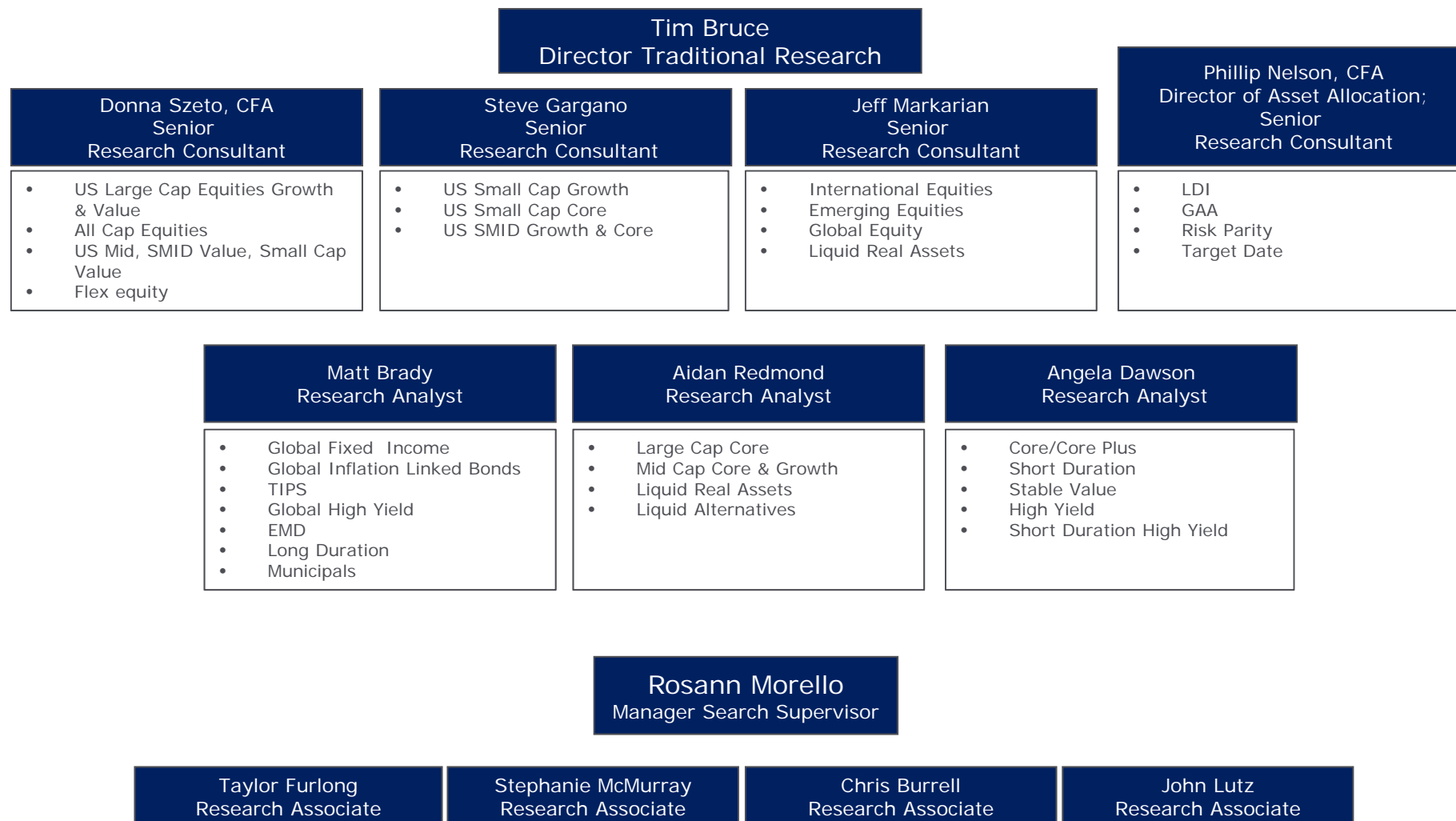
## NEPC's Consulting Services Team

Rhett Humphreys, CFA Partner*		Jay Roney, CTP Partner*		KC Connors, CFA, CAIA Partner*	
<b>Taft-Hartley</b>	<b>Public Fund</b>	<b>Defined Contribution</b>	<b>Corporate</b>	<b>Endowment and Foundation</b>	<b>Healthcare</b>
John Elliot Partner*	Kevin Leonard Partner*	Christine Loughlin, CFA, CAIA, AIF Partner*	Craig Svendsen, CFA Partner*	Catherine Konicki, CFA, CAIA Partner*	David Moore, ARM, CEBS, CPCU Partner*
Michael Cairns, CEBS Partner*	John Krimmel, CPA, CFA Partner*	Ross Bremen, CFA Partner*	Joseph Breitfelder, CPA Partner*	Chris Klapinsky, CFA Partner, Director of Portfolio Strategy*	Paul Kenney, Jr., CFA Partner*
Daniel Hennessy, CFA, CAIA Senior Consultant	Allan Martin Partner*	Brian Donoghue Partner*	Brad Smith, CFA, CEBS Partner*	Scott Perry, CAIA Partner*	James Reichert, CFA Partner*
John Shanklin, CFA, CAIA Senior Consultant	Douglas Moseley Partner*	Robert Fishman, CFA Partner, Director of Portfolio Strategy*	Carolyn Smith Partner*	Kristin Reynolds, CFA, CAIA Partner*	Eric Vallo, CFA Senior Consultant
Michael Sullivan Senior Consultant +	David Barnes, CFA, CAIA Senior Consultant	Ashwini Apte, CAIA, AIF Senior Consultant	Ronald Cavicchio, CFA Senior Consultant	Rich Harper, CFA, CAIA Senior Consultant +	Gary Wyniemko, CFA Consultant
John Teramana, CAIA Consultant	Kristin Finney-Cooke, CAIA Senior Consultant	Kevin Cress, CFA Senior Consultant	Wyatt Crumpler Senior Consultant +	Sheila Healy Berube, CFA Senior Consultant	<b>Senior Analysts</b> Sujatha Bhat, CFA, CAIA
<b>Senior Analysts</b> Jack Brodsky, CFA, CAIA	John Krakowiak Senior Consultant	Paul Kerry, ASA, EA Senior Consultant	Jeffrey Mitchell, CFA, CAIA Senior Consultant +	Sam Pollack Senior Consultant	Elton Thomaj, CAIA
Scott Freeman	Don Stracke, CFA, CAIA Senior Consultant	Tim Fitzgerald, CAIA Consultant	Kelly Regan Senior Consultant	Kristine Butler Consultant	Lina Zhao, CAIA
	Keith Stronkowsky, CFA Senior Consultant	Jason Gerda, CAIA Consultant	Brian Roberts, CAIA Senior Consultant	Sebastian Grzejka Consultant	
	Scott Driscoll Consultant	<b>Senior Analysts</b> Daniel Beaton	Michael Valchine, CAIA, CIPM Senior Consultant	Chenae White, CPA Consultant	
	Daniel LeBeau Consultant	Thomas Cook	Kevin Novak Consultant	<b>Senior Analysts</b> Brandon Parrish, CFA	
	<b>Senior Analysts</b> Shalini Brown	Deidre Pomerleau	Matthew Rowell Consultant	Asher Watson	
	Tony Ferrara, CAIA		<b>Senior Analysts</b> Carrie Bescoe		
	Will Forde		Scott Chandler, CFA		
	Kim Kaczor		Richard Chari		
	Michael Malchenko		Amanda Flemming		
			Daniel Peter, CFA		

\*Ownership interest in NEPC (Partner) +Principal designation for leadership within the Firm.



## Traditional Research Organizational Structure



## Private Equity Research Team and Coverage

**Sean Ruhmann**  
Director of Private Markets Research

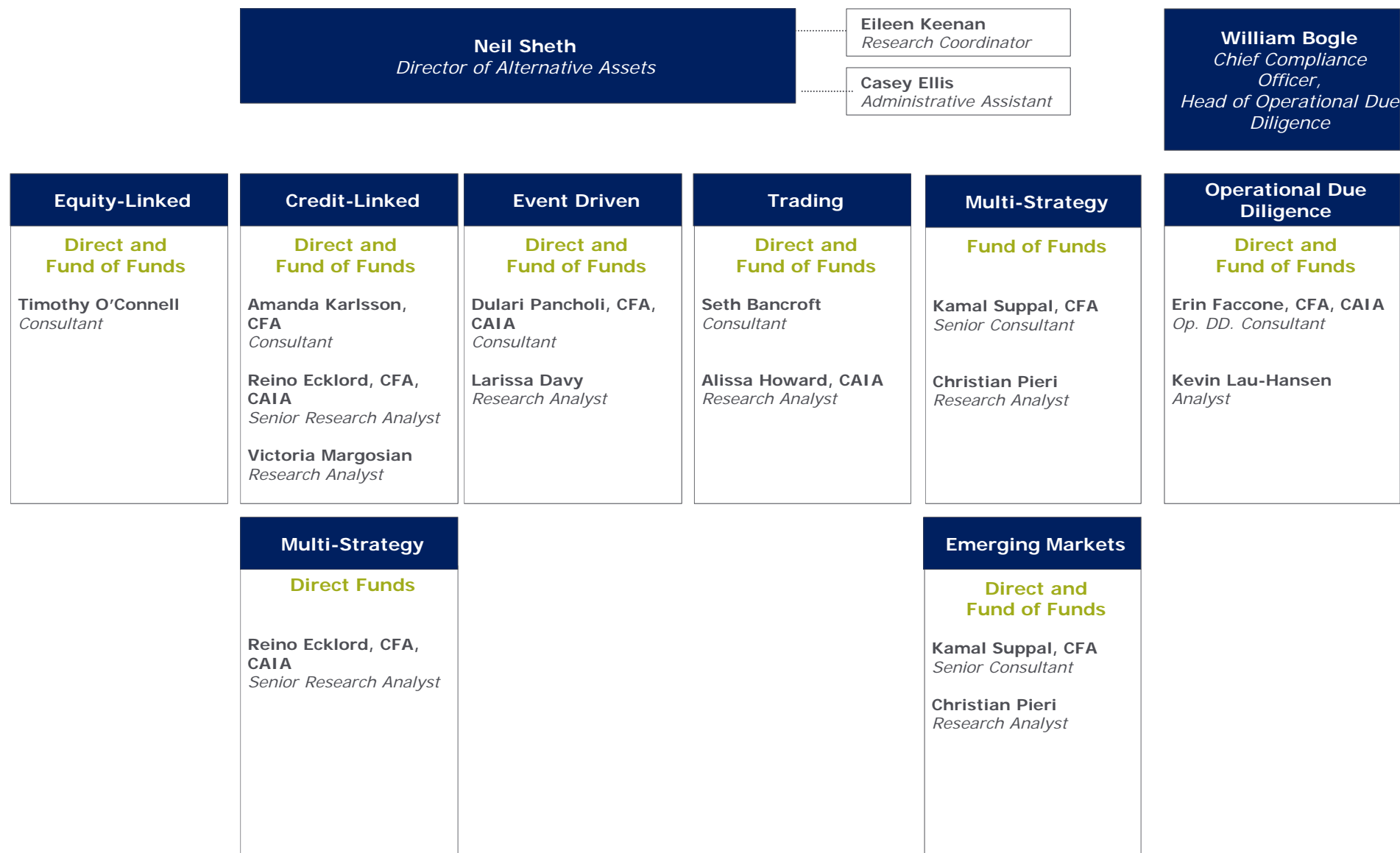
NA Buyouts	European Buyouts & Growth Equity	NA Growth Equity	NA & European Venture Capital	Asian & EM Private Equity
<b>Direct and Fund of Funds</b>	<b>Direct and Fund of Funds</b>	<b>Direct Funds</b>	<b>Direct and Fund of Funds</b>	<b>Direct and Fund of Funds</b>
Jeff Roberts <i>Senior Consultant Coverage Captain</i>	Melissa Mendenhall <i>Consultant Coverage Captain</i>	Melissa Mendenhall <i>Consultant Coverage Captain</i>	Chris Hill, CFA, CAIA <i>Consultant Coverage Captain</i>	Eric Harnish <i>Principal Coverage Captain</i>
Special Situations & Turnarounds	Distressed Debt & Opportunistic Credit	Mezzanine Debt & Direct Lending	Secondaries	Multi-Strategy Fund of Funds
<b>Direct Funds</b>	<b>Direct and Fund of Funds</b>	<b>Direct and Fund of Funds</b>	<b>Direct and Fund of Funds</b>	<b>Fund of Funds</b>
Jeff Roberts <i>Senior Consultant Coverage Captain</i>	Aarish Patell <i>Consultant Coverage Captain</i>	Siddique Haq, CAIA <i>Consultant Coverage Captain</i>	Eric Harnish <i>Principal Coverage Captain</i>	Chris Hill, CFA, CAIA <i>Consultant Coverage Captain</i>

**Supporting Team**

**Oliver Fadly  
Analyst**

**Brad Rowbotham  
Analyst**

# NEPC Hedge Fund Research Practice Structure



## **Appendix: 2015 Public Funds Workshop Agenda**

# 2015 Public Funds Workshop Agenda

2015 Public Funds Workshop  
Monday and Tuesday, January 12 and 13

## Workshop Agenda — January 12-13

### Monday, January 12

6:30a-7:45a:

Breakfast (at your leisure) in the cloister

7:45a:

Adjourn to meeting room (Palm D)

8:00a-9:30a:

#### **Opening Remarks/Fund Introductions**

Kevin Leonard of NEPC to provide opening remarks, followed by Allan Martin of NEPC and participants introducing their Fund and current key strategic initiatives

9:30a-10:30a:

#### **NEPC 2015 Capital Markets Update and Asset Allocation Thoughts**

Presentation and discussion of NEPC's 2015 Capital Markets and outlook

Tim McCusker, NEPC

10:30a-10:45a:

#### **Break**

10:45a-11:45a:

#### **Public Plan Trends, Threats and Challenges**

Hank Kim, Executive Director and Counsel, NCPERS

11:45a-12:45p:

#### **Investing in a Low Return World**

How to take smart risks in a low return world

Chris Levell, NEPC

12:45p-1:30p:

#### **LUNCH**

1:30p-3:00p:

#### **~~\$70--\$65--\$60...~~Oil—Global and Market Implications**

What will lower oil prices do to world economics?

Andrew Brett of NEPC to introduce Robert Sinnott, President, CEO and CIO, Kayne Anderson Capital Advisors and Jeff Rosenberg, Managing Director, BlackRock

3:00p-3:15p:

#### **Break**

3:15p-4:15p:

#### **European Credit Opportunities (Debt and Real Estate)**

Alternative Opportunities in Europe

Neil Sheth and Chris Hill from NEPC will be joined by Bob Jacksha of New Mexico Educational Retirement Board (NMERB), and Girard Miller of Orange County Employees' Retirement System (OCERS)

## 2015 Public Funds Workshop Agenda (continued)

**4:15p-5:15p:** **Fee Policy, Analysis and Rationalizing Fees for Alternative Investments**  
Cost effective fee management  
Sean Gill of NEPC will be joined by Jason Malinowski, Seattle City Employees' Retirement System (SCERS) and Sam Masoudi from Wyoming Retirement System

**5:15p:** **End of Day One**

**6:15p:** **Dinner – (Daniel Ivascyn, Group CIO from PIMCO—Michael Manning of NEPC to run a Q & A session)**

### Tuesday, January 13

**6:30a-7:45a:** Breakfast (at your leisure) in the cloister

**7:45a:** Adjourn to meeting room (Palm D)

**8:00a-8:45a:** **Asia Private Equity: Transformational Capital for the Transitional Decade**  
Melissa Ma, Co-Founder and Managing Partner, Asia Alternatives

**8:45a-9:30a:** **Investing in Asia**  
Neil Sheth and Sean Gill of NEPC will be joined by Jennifer Johnson of Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS)

**9:30a-9:45a:** **Break**

**9:45a-10:45a:** **Risk Management in a Dynamic World**  
Tim McCusker, NEPC and Seth Birnbaum from Bridgewater Associates to discuss Tail Risk Hedging, Smart Beta, Defensive Equity, Currency Risk, etc. Panel will also include Don Pierce, San Bernardino County Employees' Retirement Association (SBCERA) on Total Risk Management, including Intelligent Rebalancing.

**10:45a-11:45a:** **SPONSOR PANEL – Investments/Operations/Political Environment/Challenges**  
Kevin Leonard, NEPC will moderate a panel featuring Paul Matson of Arizona State Retirement System, Vincent Sunzeri of San Jose Police and Fire, and Matt Considine of the State of Vermont

**11:45a:** **Concluding Remarks (Rhett Humphreys, NEPC)**

**12:00p:** **Box lunch (seating available in the courtyard)**



## Appendix: Disclosures

- **Greenwich Associates is an independent research firm, which has surveyed plan sponsors with assets in excess of \$150 million for many years to document their opinions of their investment consulting relationships.**
  - Consultants receive the survey results in exchange for providing Greenwich with evaluations of investment managers who in turn compensate Greenwich for this market data.
  - The 2014 survey is based on interviews with 1,277 plan sponsors, 94 of whom retain NEPC.
  - The Greenwich Quality Index is based on collective client ratings over a number of qualitative categories, detailed on the “Key Success Factors” page.
  - The rankings presented are not necessarily representative of any single client’s experience, but rather represent the collective views of NEPC’s sampled clients toward the services and capabilities provided by NEPC. Rankings do not represent an endorsement of NEPC. Past performance is no guarantee of future results.
- **InvestorForce Plan Universe**
  - As of June 30, 2015, the InvestorForce Universe contained actual, custodian-supplied and audited data on over 2,279 plan sponsors, representing roughly \$3.5 trillion in assets. This data is drawn from 38 independent investment consulting firms, including NEPC.
- **ICC Universe**
  - Through 2011, universe rankings were based on the ICC Universe, which was populated by 12 independent investment consulting firms, including NEPC, and supplemented by many of the performance measurement clients of State Street Bank.
- **Certain information, including that relating to market indices, was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.**
- **This document may contain confidential or proprietary information and is intended only for the designated recipient(s). If you are not a designated recipient, you may not copy or distribute this document.**

- **Past performance is no guarantee of future results.**
- **NEPC acts in an advisory capacity only for many clients and does not have discretion over those client assets. As a result, a client's investment performance may not be attributable solely to NEPC's advice.**
- **Results are reported gross of NEPC advisory fees.**
  - NEPC's fees for advisory clients vary considerably depending on client size and complexity.
- **Methodology and criteria**
  - All returns are gross of underlying manager fees except hedge funds and private markets.
  - NEPC's Overall Composite is compiled from all Pension Plans, Endowments and Foundations for which NEPC is the sole full-retainer consultant. Plans are included in the Composite provided they have exposure to equities and fixed income (including alternatives) of at least 25% each, and no more than 20% to other assets such as cash and GICs.
  - New clients are added to the Overall Composite with the first full quarter of a new manager selected from an NEPC search, or after one year as an NEPC client, whichever comes first, provided that the plan is globally diversified.

- **It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds, real estate and private equity:**
  - Performance can be volatile and investors could lose all or a substantial portion of their investment.
  - Leverage and other speculative practices may increase the risk of loss.
  - Past performance may be revised due to the revaluation of investments.
  - These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms.
  - A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value.
  - These funds are not subject to the same regulatory requirements as registered investment vehicles.
  - Managers are not required to provide periodic pricing or valuation information to investors.
  - These funds may have complex tax structures and delays in distributing important tax information.
  - These funds often charge high fees.
  - Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy.

- **NEPC Client Private Equity Results**

- Past performance is no guarantee of future results.
- Investment results include those clients for which NEPC has discretionary authority as well as those where NEPC acts in an advisory capacity only. The performance results of non-discretionary clients are included when NEPC provided a positive recommendation for the investment and the client decided to invest. Investments that were recommended by NEPC but not acted upon by clients are not included, nor are investments that were made by NEPC clients without a positive NEPC recommendation.
- Each Internal Rate of Return (“IRR”) is net of management fees and carried interest (both paid and accrued) and is computed on an annualized, dollar-weighted basis. Aggregate returns are created by weighting client investments by the size of each client’s fund commitment.
- Vintage year classifications are made based upon the year of the client’s entry into the fund. Strategy classifications are made by NEPC based on a review of the stated strategy of each investment. Funds included are primarily limited partnerships, including funds-of-funds, but also include co-investments or direct investments in private companies. The investments include private equity, venture capital, energy, infrastructure, debt for control and other private equity strategies, but not non-control private debt, opportunistic credit, private real estate funds or hedge funds.
- Includes all types of clients and plans for whom NEPC serves or served as a consultant and provided advice on private equity.
- In situations where NEPC’s advisory relationship ended prior to the final liquidation of the partnership, the value of the investment at the end of NEPC’s relationship was treated as a liquidating distribution.
- The information in this report has been obtained from sources NEPC believes to be reliable. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.
- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.