

# PRESENTATION TO THE CITY OF SAN JOSE FEDERATED CITY EMPLOYEES' RETIREMENT SYSTEM AND POLICE & FIRE DEPARTMENT PLAN

November 24, 2015

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Principal

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Chief Investment Officer

Meketa Fiduciary Management, LLC

MEKETA INVESTMENT GROUP

BOSTON
MASSACHUSETTS

CHICAGO ILLINOIS MIAMI FLORIDA PORTLAND OREGON SAN DIEGO California LONDON UNITED KINGDOM

### **Table of Contents**

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

| Firm Overview   | 1  |
|---|----|
| Consulting Services Overview                                | 2  |
| Strategic Asset Allocation and Risk Management              | 3  |
| Tactical Asset Allocation and Global Macroeconomic Research | 4  |
| Public Markets Research                                     | 5  |
| Private Markets Research                                    | 6  |
| Operations, Performance Reporting, and Compliance           | 7  |
| Why Meketa Investment Group?                                | 8  |
| Appendices  |    |
| Presenters  | 9  |
| Representative Client List                                  | 10 |
| Contact Information   | 11 |



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

### **Presenters**



**Stephen P. McCourt, CFA** Managing Principal, Co-CEO

- 20 years industry experience
- Joined the firm in 1994, Shareholder
- Lead consultant on various public and private pension funds for both general and private markets consulting
- Speaker at numerous industry events
- Member of firm's Executive, Investment Policy, and Global Macro Economic Committees
- ALM in History from Harvard; BS in Economics and Political Science from University of Vermont



**Laura B. Wirick, CFA, CAIA** Principal

- 12 years industry experience
- Joined the firm in 2008, Shareholder
- Lead consultant on various public funds, private pensions, endowments, and foundations
- Member of the firm's Marketable Securities Investment Committee and Strategic Asset Allocation/Risk Management Committee
- BSBA in Finance and International Marketing from American University



**Rafi Zaman, CFA** CIO, Meketa Fiduciary Management

- 27 years industry experience
- Joined the firm in 2015
- Chief Investment Officer for Meketa Fiduciary Services
- Recently worked at DuPont Capital Management for 17 years in various senior roles including Head of Global Equities, Head of U.S. Equities, Head of Quantitative Equities, and Portfolio Manager
- MS in Industrial Engineering from Stanford University; BS in Engineering from REC Kurukshetra (India)





# **Key Firm Updates Since MIG Hired for Federated**

|                               | Then - August 31, 2009     | Now – November 15, 2015    |
|-------------------------------|----------------------------|----------------------------|
| Assets under Advisement       | In excess of \$250 billion | In excess of \$340 billion |
| Number of Clients             | 63                         | 110                        |
| Number of Public Clients      | 10                         | 34                         |
| Ownership Structure           | 6 owners                   | 20 owners                  |
| Number of Managing Principals | 6 Managing Principals      | 11 Managing Principals     |
| Number of Offices             | 2 offices                  | 6 offices                  |
| Number of Employees           | 84 employees               | 125 employees              |



# **Experienced, Independent Organization**

- Since 1978, Meketa Investment Group has served as an independent investment fiduciary
- Currently, we advise on over \$340 billion for 107 clients
- Our focus is on public and private defined benefit clients (over 95% of AUA and firm revenues)
- We are 100% independently owned by senior professionals of the firm
- We have global resources in six offices around the world: San Diego, Boston, Portland, Chicago, Miami, and London.

# **General Consulting Services**

- Initial Fund Review
- Investment Policy Design
- Asset Allocation
- Liability & Liquidity Studies
- Manager Evaluation & Selection
- Fund Coordination
- Fund Reporting & Analysis
- Client Education

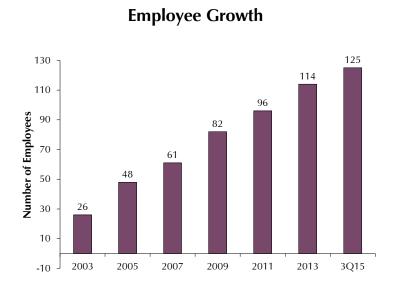
# **Private Markets Advisory Services**

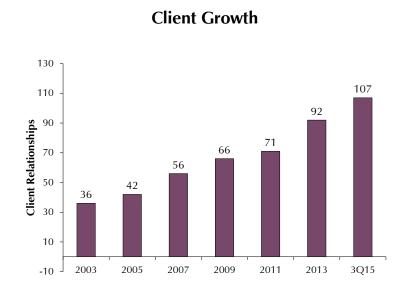
- Strategic Planning
- Pacing Analysis
- Partnership Analysis
- Legal Review
- Cash Flow Coordination
- Program Monitoring & Review
- Client Education



# **Deep & Growing Team**

- We have experienced consistent and controlled growth
- Staff of 125, including 75 investment professionals
- 32 Consultants with an average of over 10 years with the firm and 18 years in the industry
- Highly experienced staff, including: 24 CFA Charterholders, 14 CAIAs, 13 MBAs, 12 Masters, 2 JDs
- We maintain a low client to employee ratio, resulting in high client retention







City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan Firm Overview

# **Significant Public Fund Experience**

- We were hired by our first public fund client in 1998
- We currently advise over \$300 billion for 34 public fund clients throughout the nation
- Representative public fund clients:

City of Ann Arbor Employees' Retirement System

Arizona State Retirement System

Town of Arlington OPEB Trust

Austin Fire Fighters Relief and Retirement Fund

CalOptima

California Public Employees' Retirement System\*

California State Teachers' Retirement System

District of Columbia Retirement Board

El Paso Firemen & Policemen's Pension Fund

Employees' Retirement System

of the Government of the Virgin Islands

Fire and Police Retiree Health Care Fund, San Antonio

Hingham Contributory Retirement System

Town of Lexington Contributory Retirement System

City of Marlborough Contributory Retirement System

Maryland State Retirement and Pension System

Massachusetts Housing Finance Agency Employees' Retirement System

Massachusetts Housing Finance Agency Employees' OPEB Trust

Massachusetts Pension Reserves Investment Management Board\*\*

Municipal Employees' Retirement System of Louisiana

New Mexico Public Employees Retirement Association

Town of Norwood Retirement System

City of Phoenix Employees' Retirement System

Plymouth County Retirement Association\*\*\*

City of Quincy Retirement System

Rhode Island Resource Recovery Corporation

City and County of San Francisco Retiree Health Care Trust Fund

San Jose Federated City Employees' Retirement System

Santa Barbara County Employees' Retirement System

Town of Wellesley OPEB

Washington State Investment Board

Worcester Retirement System

\* Member of their specialty pool of consultants

\*\* Member of their real estate project consultant pool

\*\*\*Pending Contracts



# **Research Focused**

- Provide creative investment solutions for clients
- Analyze and review investment concepts and strategies
- Develop white papers
- Inform clients through custom studies, reports, and memoranda







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# **Differentiated Research: Concentrated Manager Programs**

- Traditional active management in public markets can introduce the following challenges:
  - Overemphasis on "benchmark risk"
  - High fees for mediocre performance
- What are "concentrated portfolios"?
  - Fewer holdings than traditional portfolios, only the manager's "best ideas," and no closet indexing
  - Longer-term, absolute return focused
- Why develop a program (4 to 6 managers) vs. just selecting a few managers?
  - Reduction in manager-specific risk, risk factor diversification, and exposure to different approaches
- Meketa Investment Group's concentrated manager programs have produced higher returns over time through the elimination of "portfolio filler" stocks that managers use for diversification. However, the programs require an intensive amount of manager due diligence during program construction, as well as in-depth ongoing monitoring.
- Meketa Investment Group's concentrated manager programs place emphasis on inefficient areas, like U.S. small cap and international small cap

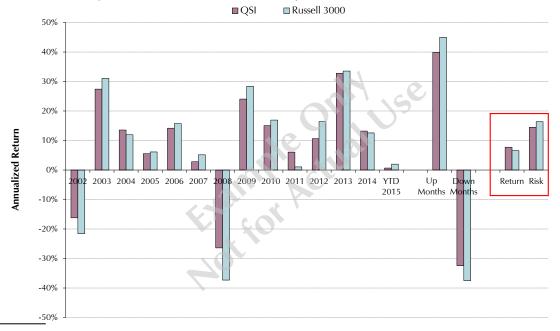
| Since Inception Performance as of June 30, 2015 <sup>1</sup> | MIG Concentrated<br>U.S. Small Cap<br>Portfolio | Russell 2000<br>Index |
|--|---|-----------------------|
| Annualized Return (%)  | 19.0%   | 16.3%                 |
| Annualized Volatility (%)                                    | 18.9%   | 20.5%                 |
| Sharpe Ratio   | 1.00  | 0.79                  |

<sup>1</sup> Performance is presented gross of manager and Meketa Investment Group fees. Inception date 7/31/09. Past performance does not guarantee future results.



# Differentiated Research: Quality, Stability & Income® ("QSI") Indexing

- Meketa Investment Group's research shows that portfolios of stocks with higher quality and lower volatility, as well as
  high and consistent dividends, have historically offered investors very attractive risk-adjusted returns. We developed a
  proprietary, rules-based methodology to create an index of stocks that share the characteristics of Quality, Stability &
  Income (QSI Index®). The QSI Index allows clients to gain inexpensive, passive exposure to domestic equity securities
  that share the QSI characteristics, as these stocks may help produce equity returns with lower risk.
- From August 2001 through June 2015, the QSI Index returned 7.7% with a standard deviation of 14.4%; compared to the Russell 3000, which returned 6.5% with a standard deviation of 16.4%.
- The QSI Index is available solely to Meketa Investment Group clients.



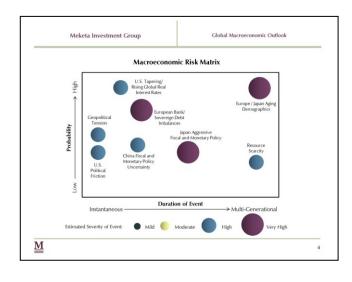
Source: Meketa Investment Group; QSI Index backtest from August 2001 through January 2011, actual results thereafter; risk is defined as the standard deviation of annual returns.



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## **Differentiated Research: Macroeconomic Research**

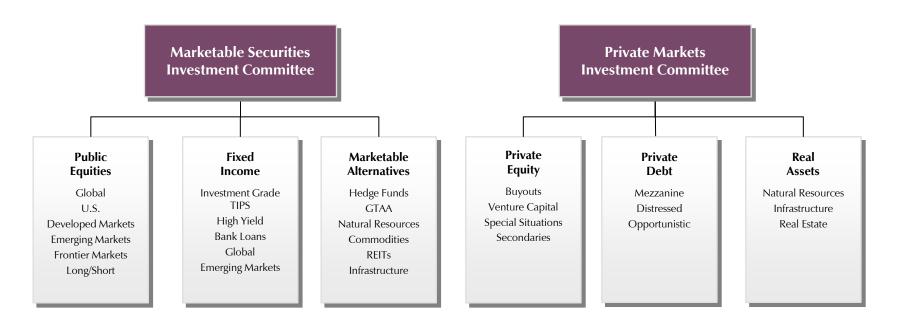




- Meketa Investment Group has a dedicated Global Macroeconomic Working Group and a Global Macroeconomic Advisory Committee (comprised of four outside economists).
- These groups are tasked with collecting information on, and insights into, the dynamic global economy.
- This allows us to better evaluate investment strategies and direct our clients' portfolios in a world increasingly governed by shifts in public policy and the perpetuation of large global economic imbalances.



# **Broad Manager Research Coverage**



### **Investment Committee Structure**

- We maintain dedicated resources across all public & private markets asset classes
- Our due diligence teams report to the firm's Marketable Securities and Private Markets Investment Committees
- Investment Committee structure draws on the expertise of the firm's senior professionals



# We Are Staffed to Provide an Intensive Level of Client Service



- Each of our clients is serviced by a team of consultants, analysts, and support staff
- We strive to provide timely and detailed responses to all inquiries from our clients

Note: General Consulting, Public Markets, Private Markets, and Defined Contribution counts include overlap of 26 professionals.

As of July 6, 2015.



# **Client Service Philosophy**

- Take an active role in the Funds we serve always fiduciaries
- Be proactive in bringing our best ideas to clients
- Provide continuing education on investment topics
  - Clients should only invest in strategies they understand
- Provide reports, analysis, and advice that are of the highest quality
- Maintain open dialog and communication with staff and Trustees



# **Community Stewardship and Social Responsibility**

- Promote an environment that encourages employee volunteerism and charitable giving
- Sponsor multiple employee-driven fundraisers
- Contribute regularly to a variety of charities
- Believe in and support a healthy living environment
- Green initiatives
- Corporate diversity initiatives



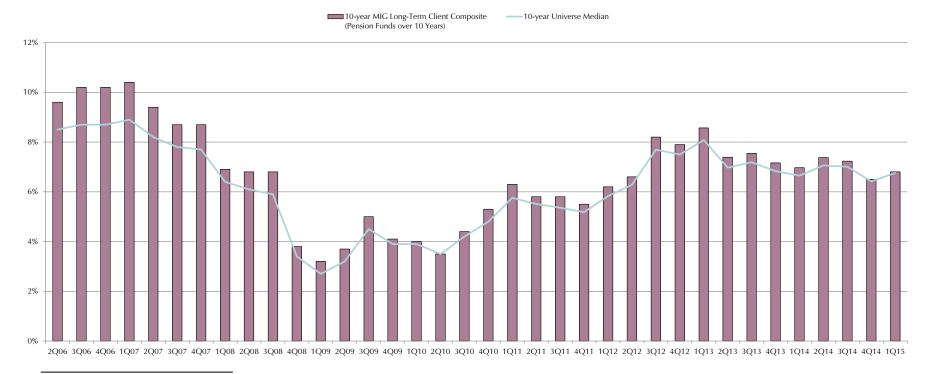
# **UN-PRI Signatory**

- As a signatory of the United Nations-backed Principles for Responsible Investment Initiative (PRI), Meketa Investment Group has joined a network of international investors working together to put the six Principles of Responsible investing into practice.
- The six Principles for Responsible Investment are:
  - We will incorporate Environmental, Social and Governance (ESG) issues into investment analysis and decision-making processes
  - We will be active owners and incorporate ESG issues into our ownership policies and practices
  - We will seek appropriate disclosure on ESG issues by the entities in which we invest
  - We will promote acceptance and implementation of the Principles within the investment industry
  - We will work together to enhance our effectiveness in implementing the Principles
  - We will report on our activities and progress towards implementing the Principles



# Performance Across Long-Term Pension Plan Clients Has Consistently Exceeded the Median Return of the Universe<sup>1</sup>

 From January 1, 2006 through March 31, 2015, the Meketa Composite beat or matched the 10-year trailing median return in 36 of 36 quarters<sup>2</sup>.



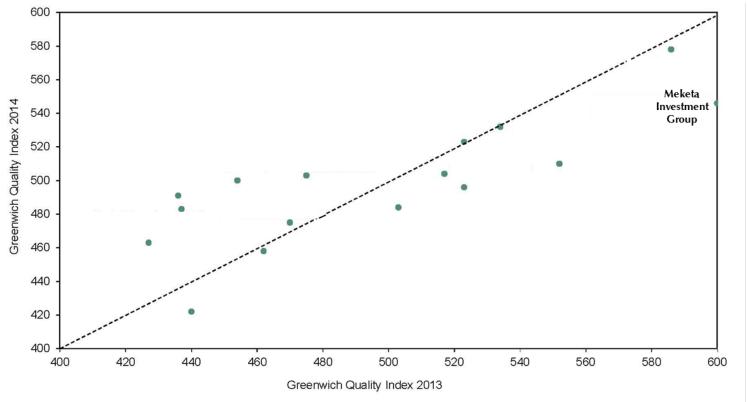
<sup>&</sup>lt;sup>1</sup> Performance shown represents all Meketa Investment Group's Pension Fund clients that have been general consulting clients of the firm for at least ten years. As of March 31, 2015, the composite represents approximately \$18.1 billion in assets. Past performance does not guarantee future results. The State Street Bank Master Trust Universe is a large and statistically robust universe, comprised of over \$2.7 trillion in total assets.

<sup>&</sup>lt;sup>2</sup> 2q2010 was the only quarter when Meketa's composite matched the median return.



# **Greenwich Quality Index – U.S. Client Evaluations**

• Independent firm Greenwich Associates surveyed over 1,000 U.S. institutions in 2013 and 2014 about their experience with investment consulting firms. Meketa Investment Group was one of only two consulting firms that rated in the top decile in both 2013 and 2014.



Source: Greenwich Associates, U.S. Swap 2014

Note: Results are based on interviews with U.S. institutions: 1,093 in 2013, and 1,277 in 2014. Greenwich Quality Index score ranges from 1,000="Excellent" to 0="Poor" with a population mean of 500.



**Consulting Services Overview** 

# **Investment Philosophy**

- Primary focus on strategic advice (i.e., a long-term approach to investing)
  - Asset allocation will be the largest determinant of a Retirement System's performance
- Diversify very broadly to protect against a wide variety of risks
- Avoid unnecessary risks
- Invest in primarily generative assets
- Be skeptical regarding new investment strategies or fads
- Create efficient, cost-effective portfolios
  - Focus active management on less efficient asset classes and passive management on more efficient asset classes
- Use best-in-class managers
- Minimize fees and other expenses



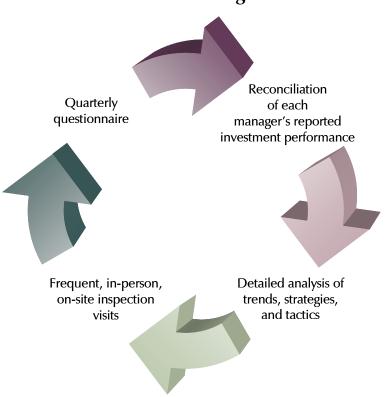
# **Investment Policy Development**

- Investment policy represents one of the most important governance tools for an asset pool.
  - Investment objectives and constraints are key elements to Investment Policy
- Well-developed investment policy represents the intersection of client-specific goals and concerns with the realities of the capital markets.
- Our role:
  - Assist clients in setting their objectives
  - Assist clients in achieving those objectives through the development of investment policies that reflect real-world experience
- Investment policy development includes:
  - Defining the objectives of the Retirement System (i.e., the purpose of the Retirement System's assets)
  - Defining the return and risk parameters
  - Identifying Retirement System-specific constraints
  - Defining governance structure



# Manager Evaluation, Selection & Monitoring

# Continuous Monitoring and Evaluation of Investment Managers



# Client Pension Fund Investment Manager Monitor

|                      | Guideline<br>Compliance<br>Checked<br>(Yes/No) | Significant<br>Events<br>(Yes/No) | Last Meeting<br>with<br>Investment Committee | Last Meeting<br>with<br>Meketa Investment<br>Group |
|----------------------|--|-----------------------------------|--|--|
| Public Securities Ma | anagers  |                                   |  |  |
| AllianceBernstein    | Yes  | No                                | June 1998                                    | October 2005                                       |
| Brandes              | Yes  | No                                | August 2003                                  | January 2006                                       |
| Chartwell            | Yes  | No                                | July 2002                                    | July 2006  |
| CIBC                 | Yes  | No                                | June 2005                                    | March 2006   |
| DFA                  | Yes  | Yes                               | April 2006                                   | April 2006   |
| Dodge & Cox          | Yes  | No                                | January 2006                                 | January 2006                                       |
| Jennison             | Yes  | No                                | March 2005                                   | December 2005                                      |
| J.P. Morgan          | Yes  | No                                |  | January 2006                                       |
| Loomis Sayles        | Yes  | No                                | August 2006                                  | September 2006                                     |
| Newgate              | Yes  | Yes                               | April 2006                                   | April 2006   |
| Payden & Rygel       | Yes  | No                                | March 2004                                   | April 2005   |
| PIMCO                | Yes  | No                                | August 2003                                  | May 2006   |
| SSgA                 | Yes  | No                                | August 2006                                  | August 2006  |
| T. Rowe Price        | Yes  | No                                | July 2002                                    | May 2006   |
| TimesSquare          | Yes  | No                                | January 2006                                 | June 2006  |
| Wellington           | Yes  | No                                | October 1999                                 | March 2006   |
| Private Equity Mana  | gers   |                                   |  |  |
| Charlesbank          | Yes  | No                                | January 2001                                 | October 2005                                       |
| Elevation Partners   | Yes  | No                                | March 2005                                   | November 2005                                      |
| Freeman Spogli       | Yes  | No                                | November 2002                                | May 2005   |
| JLL Partners         | Yes  | No                                | June 2005                                    | June 2005  |
| HarbourVest          | Yes  | No                                | July 2001                                    | January 2006                                       |
| Monitor Clipper      | Yes  | No                                | November 2003                                | October 2005                                       |
| Northstar            | Yes  | No                                | March 2005                                   | April 2005   |
| Onex                 | Yes  | No                                | December 2003                                | February 2006                                      |
| Paul Capital         | Yes  | No                                | March 2004                                   | November 2005                                      |
| Riverside            | Yes  | No                                | January 2001                                 | March 2006   |

Quarterly, Meketa Investment Group reviews the guideline compliance of each investment manager. Further, Meketa Investment Group evaluates significant events that occur at each investment management firm. Meketa Investment Group meets with each of the Fund's investment manager sregularly, both on-site and off-site, to ensure that Fund assets are invested as intended. The Investment Committee also meets with many of the Fund's investment managers regularly and generally at the manager's headquarters, to inspect the management of the Fund's assets.

Proposed by Makata Investment Court for the Client Pancian Fun

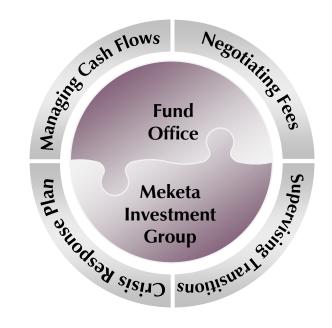
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City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Fund Coordination**

- Our services extend beyond providing investment advice
- We take an active role in the funds we serve and can operate as an extension of Staff
- We work with the Retirement System's professionals to efficiently implement Board Member decisions
- We provide these services in an attempt to increase returns by keeping costs low





City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

### **Consulting Services Overview**

# **Staff and Trustee Education**

- Meketa Investment Group Client Conference
- Customized Investment Retreats
  - Personalized for each client
  - Formal presentations on pertinent investment topics
  - Interactive with the opportunity to ask many questions
- Ongoing education at Committee and Board meetings
- Investment research papers on timely investment topics
- Interim memos to keep Staff and Trustees apprised of significant market and Retirement System-related events





# **Strategic Asset Allocation** and Risk Management

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Investment Policy Committee**

Asset allocation and risk management policy is determined by our Investment Policy Committee (IPC)



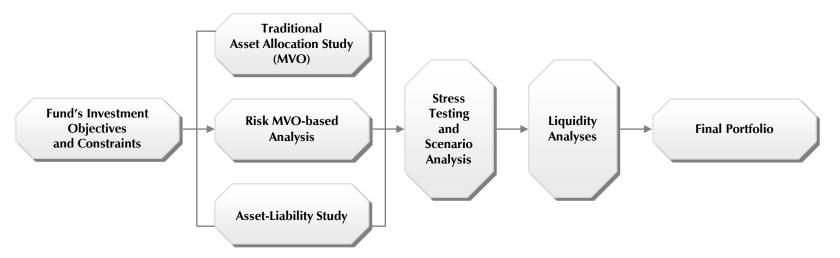


# **Asset Allocation and Risk Management**

- Asset Allocation represents the conscious decision to accept and manage specific risks
  - Hence, asset allocation and risk management should be intricately linked with one another
- Mean-Variance Optimization (MVO) is a useful tool, but it is flawed
  - Volatility is an imperfect measure of risk
  - Both volatility and correlations are unstable
  - The output is only as good as the input
  - MVO systematically obscures the dynamism and risk in capital markets
- Use other tools to build a more complete picture
  - Risk Budgeting
  - Economic Regime Analysis
  - Factor Analysis
  - Scenario Analysis
  - Liquidity Analysis



# **Asset Allocation Review Process**



# **Step 1: Mean-Variance Optimization**

Expected Return and Risk

### **Step 2:** MVO-Based Risk Analysis

- Risk Budgeting
- Return Probabilities
- Value-at-Risk

### **Step 3:** Stress Tests and Scenario Analysis

- Historical Scenario
- Factor Analysis
- Economic Shocks

### **Step 4: Liquidity Analyses**

- Liquidity Study
- Cash Flow Modeling

### **Step 5: Determine Asset Allocation Policy**

- Balance Objectives & Primary Risks
- Review and Revise
- Formalize in IPS
- Implement Changes



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Begin the Process with Traditional Mean-Variance Optimization**

|   | Current<br>Policy | Policy A | Policy B | Policy C | Proposed Target<br>Ranges |
|---|-------------------|----------|----------|----------|---------------------------|
| U.S. Equity                                 | 23%               | 19%      | 16%      | 20%      | +/- 7                     |
| Long-Only Equities                          | 23                | 17       | 16       | 17       | +/- 7                     |
| Long-Short Equities                         | 0                 | 2        | 0        | 3        | +/- 2                     |
| Foreign Equities                            | 19                | 18       | 18       | 19       | +/- 6                     |
| Developed Foreign Equity                    | 14                | 8        | 10       | 7        | +/- 5                     |
| Emerging Markets Equity                     | 5                 | 10       | 8        | 12       | +/- 5                     |
| Private Equity                              | 4                 | 6        | 4        | 8        | +/- 4                     |
| Investment Grade Bonds                      | 13                | 10       | 15       | 8        | +/- 6                     |
| TIPS  | 9                 | 10       | 12       | 7        | +/- 6                     |
| High Yield                                  | 7                 | 6        | 8        | 7        | +/- 4                     |
| Real Estate                                 | 10                | 10       | 10       | 10       | +/- 5                     |
| Private Real Estate                         | 5                 | 7        | 7        | 7        | +/- 4                     |
| REITs                                       | 5                 | 3        | 3        | 3        | +/- 3                     |
| Infrastructure                              | 0                 | 4        | 0        | 4        | +/- 3                     |
| Natural Resources                           | 7                 | 7        | 7        | 9        | +/- 5                     |
| Commodities                                 | 4                 | 5        | 4        | 5        | +/- 4                     |
| Hedge Funds                                 | 4                 | 5        | 6        | 3        | +/- 3                     |
| Expected Return                             | 7.8               | 8.0      | 7.6      | 8.4      |                           |
| Standard Deviation                          | 13.0              | 13.0     | 11.9     | 14.0     |                           |
| Probability of Achieving 7.5% over 20 Years | 53.3              | 56.9     | 51.1     | 60.7     |                           |

Expected return, standard deviation and correlation data based on Meketa Investment Group's 2014 Annual Asset Study.

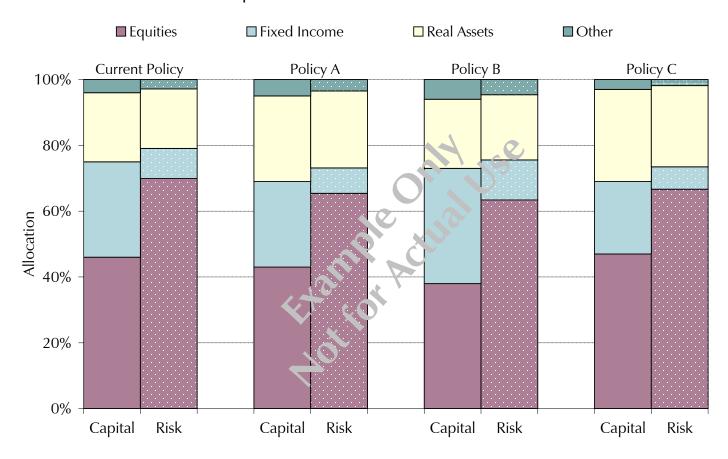
Example only. Asset allocation is determined on a client by client basis.



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# Risk Budgeting Analysis<sup>1</sup>

(Capital Allocation vs. Risk Allocation)



<sup>1</sup> Other includes Hedge Funds (except long-short equities), Tactical Asset Allocation, and Risk Parity strategies. Risk allocation is calculated by multiplying the weight of the asset class by its standard deviation and its correlation with the total portfolio and then dividing this by the standard deviation of the total portfolio.



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **MVO-Based Risk Analysis**

|   | Current<br>Policy | Policy A | Policy B | Policy C |
|---|-------------------|----------|----------|----------|
| Scenario  | (%)               | (%)      | (%)      | (%)      |
| Expected Return                                 | 7.8               | 8.0      | 7.6      | 8.4      |
| "Worst Case" Returns <sup>1</sup>               |                   |          |          |          |
| One Year  | -18.3             | -18.2    | -16.6    | -19.5    |
| Three Years (annualized)                        | -8.2              | -8.0     | -7.2     | -8.8     |
| Five Years (annualized)                         | -4.8              | -4.6     | -4.0     | -5.2     |
| Ten Years (annualized)                          | -1.3              | -1.1     | -0.8     | -1.4     |
| Probability of Experiencing Negative Returns    |                   |          |          |          |
| One Year  | 26.6              | 26.0     | 25.3     | 26.5     |
| Three Years                                     | 13.9              | 13.2     | 12.4     | 13.9     |
| Five Years                                      | 8.1               | 7.5      | 6.8      | 8.1      |
| Ten Years                                       | 2.4               | 2.1      | 1.8      | 2.4      |
| Probability of Achieving at least a 7.5% Return |                   |          |          |          |
| One Year  | 50.7              | 51.6     | 50.2     | 52.4     |
| Five Years                                      | 51.7              | 53.5     | 50.5     | 55.4     |
| Ten Years                                       | 52.4              | 54.9     | 50.8     | 57.6     |
| Twenty Years                                    | 53.3              | 56.9     | 51.1     | 60.7     |

<sup>&</sup>lt;sup>1</sup> "Worst Case" Return Projections encompass 99% of possible outcomes.



# Value at Risk<sup>1</sup>

| Scenario:                | <b>Current Policy</b> | Policy A | Policy B | Policy C |
|--------------------------|-----------------------|----------|----------|----------|
| Expected Return (%)      | 7.0                   | 7.3      | 6.9      | 7.7      |
| Value at Risk (%)        |                       |          |          |          |
| One Month                | -5.6                  | -5.5     | -4.8     | -6.3     |
| Three Months             | -8.8                  | -8.8     | -7.9     | -9.8     |
| One Year                 | -18.6                 | -18.8    | -17.1    | -20.4    |
| Three Years (annualized) | -8.8                  | -8.8     | -7.9     | -9.8     |
| Value at Risk (\$mm)     |                       |          |          |          |
| One Month                | -167                  | -166     | -145     | -188     |
| Three Months             | -264                  | -265     | -236     | -294     |
| One Year                 | -557                  | -563     | -512     | -612     |
| Three Years              | -724                  | -727     | -653     | -799     |
| Five Years               | -746                  | -743     | -657     | -830     |

 $<sup>^{\,1}\,</sup>$  Calculated with a 99% confidence level and based upon Meketa Investment Group's 2011 Annual Asset Study.



# **Historical Scenario Analysis**

(Cumulative Return)

| Scenario:                                      | Current Policy (%) | Policy A<br>(%) | Policy B<br>(%) | Policy C<br>(%) |
|--|--------------------|-----------------|-----------------|-----------------|
| Calendar Year 2008                             | -27.2              | -27.7           | -24.9           | -29.7           |
| Global Financial Crisis (4Q07 thru 1Q09)       | -30.5              | -30.0           | -26.4           | -32.2           |
| Interest Rate Spike (1994)                     | 2.5                | 2.6             | 2.2             | 3.4             |
| Crash of 1987 (September thru November 1987)   | -11.6              | -10.2           | -9.3            | -10.7           |
| Popping of the dot.com Bubble (2Q00 thru 3Q02) | -10.2              | -8.4            | -5.4            | -11.3           |
| Strong US Dollar (1Q81 through 3Q82)           | 0.7                | 1.0             | 2.0             | -0.1            |
| Weak US Dollar (January 1986 thru August 1987) | 28.9               | 27.6            | 26.7            | 29.1            |
| Stagflation (January thru March 1980)          | -5.4               | -5.2            | -5.2            | -5.0            |
| Stagflation (1Q73 thru 3Q74)                   | -19.2              | -17.0           | -15.8           | -19.0           |



# **Stress Testing: Impact of Market Movements**

(Expected Return under Stressed Conditions)<sup>1</sup>

| What happens if (over a 12-month period):  | Current Policy<br>(%) | Policy A<br>(%) | Policy B<br>(%) | Policy C<br>(%) |
|--|-----------------------|-----------------|-----------------|-----------------|
| 10-Year T-Bond rates rise 100 bp           | 10.1                  | 10.1            | 9.0             | 11.0            |
| 10-Year T-Bond rates rise 200 bp           | 11.0                  | 10.8            | 9.4             | 12.2            |
| 10-Year T-Bond rates rise 300 bp           | 3.0                   | 3.2             | 1.9             | 4.4             |
| BBB Spreads widen by 50 bp, HY by 200 bp   | 4.0                   | 4.3             | 4.0             | 4.2             |
| BBB Spreads widen by 300 bp, HY by 1000 bp | -25.4                 | -24.5           | -22.5           | -26.8           |
| Trade-weighted US\$ gains 10%              | 1.2                   | 1.1             | 1.7             | 0.6             |
| Trade-weighted US\$ gains 20%              | 2.4                   | 2.2             | 3.3             | 1.1             |
| Equities decline 10%                       | -6.4                  | -6.3            | -5.7            | -6.8            |
| Equities decline 25%                       | -16.1                 | -15.7           | -14.2           | -17.0           |
| Equities decline 40%                       | -25.7                 | -25.1           | -22.7           | -27.2           |

 $<sup>^{\</sup>mbox{\scriptsize 1}}$  Assumes that assets not directly exposed to the factor are effected nonetheless.



# **San Jose Federated Asset Allocation Policy History**

|                                     | Pre-Meketa<br>2009 | Adopted<br>1Q10 | Adopted<br>1Q12 | Adopted<br>3Q14 |
|-------------------------------------|--------------------|-----------------|-----------------|-----------------|
| Global Equity                       | 53%                | 49%             | 26%             | 28%             |
| Private Equity                      | 5                  | 6               | 9               | 9               |
| Core Fixed Income                   | 27                 | 15              | 5               | 5               |
| TIPS                                | 0                  | 0               | 5               | 5               |
| High Yield/Bank Loans/Global Credit | 9                  | 5               | 0               | 9               |
| Private Debt                        | 0                  | 5               | 5               | 5               |
| Real Estate                         | 6                  | 5               | 5               | 7               |
| Real Assets                         | 0                  | 10              | 20              | 16              |
| GTAA/Opportunistic                  | 0                  | 0               | 0               | 5               |
| Hedge Funds/Absolute Return         | 0                  | 5               | 25              | 11              |
| Total Portfolio                     | 100%               | 100%            | 100%            | 100%            |

• The Federated Plan's asset allocation has changed dramatically since Meketa Investment Group was first hired, most significantly as a result of recommendations made by the prior CIO in late 2011/early 2012.

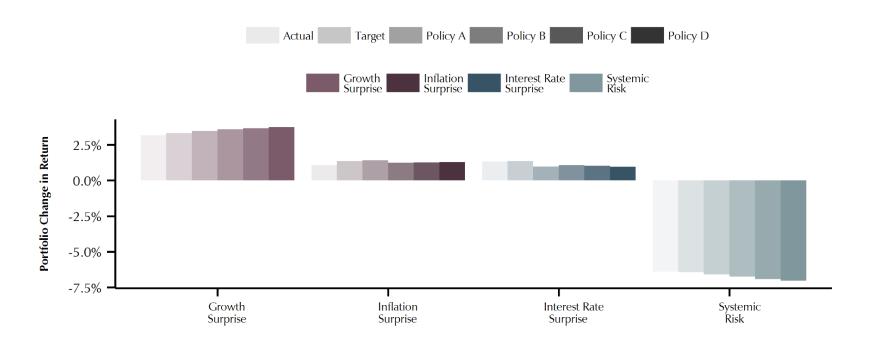


## **Economic Regime Management®**

- The Economic Regime Management® (ERM) approach focuses on understanding the dynamics of the most important macro level forces that drive returns across asset classes.
- We find the most important factors to be:
  - Interest Rate Surprise unexpected changes in the 10-year interest rate (related to Duration)
  - Inflation Surprise unexpected changes in the CPI growth rate
  - Growth Surprise unexpected changes in the Real GDP growth rate
  - Systemic Risk 'system-wide' risk that propagates through all asset classes (e.g., 2008)
- We focus on *surprises* because expectations matter.
  - What was considered 'low' inflation in the 1970s would be considered 'high' today.
- These factors explain the majority of volatility across asset classes.
  - Understanding these dynamics explain the 'why' not just the 'what.'



## **Portfolio Sensitivity Comparison**



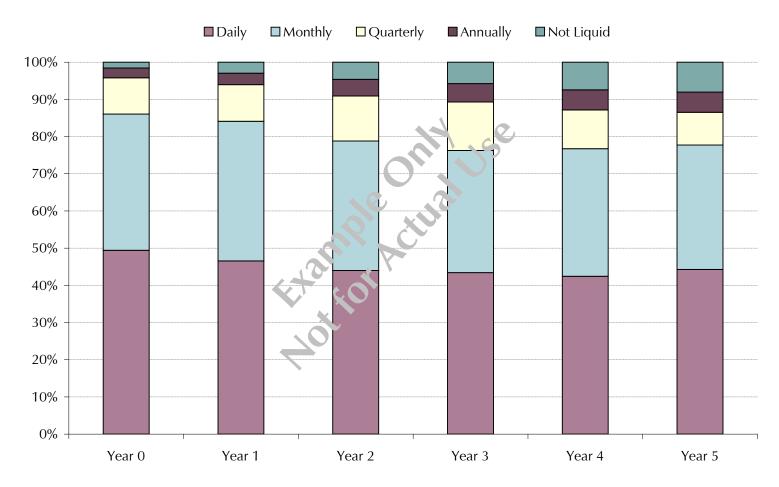
- The chart above shows the resulting change in portfolio return given a one standard deviation event in the respective risk factor.
- There is more concentration in Growth and Systematic Risk because these sources of risk tend to pay better (have higher expected returns) than the other risk factors.



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

## **Liquidity Stress Test: Impact on Liquidity**

(for Current Allocation)

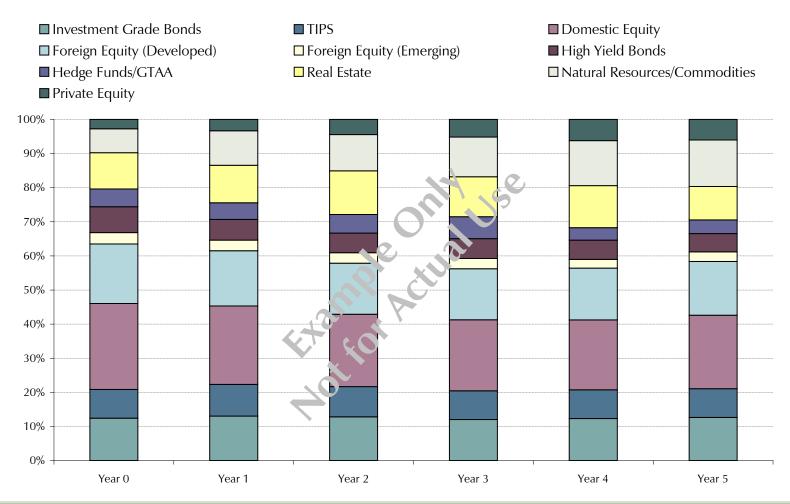




City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

## **Liquidity Stress Test: Impact on Asset Allocation**

(for Current Allocation)





## **Asset Allocation Summary**

- Asset Allocation represents the conscious decision to accept and manage risk.
  - Hence, asset allocation and risk management should be intricately linked with one another.
- Asset allocation and risk management encompass identifying risks, analyzing them and deciding what to do about them.
  - Use many different tools to build a robust picture, and thus understanding, of risk.

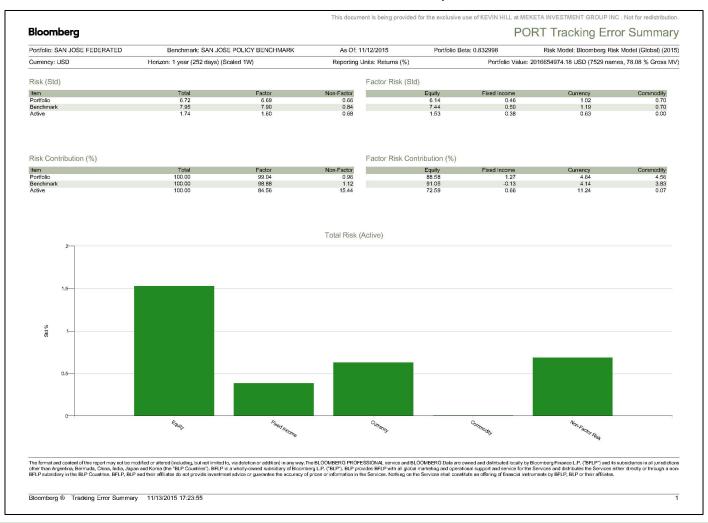


#### **Risk Management – How Do You Define Risk?**

- There are a number of different ways to define risk.
- Most risk management models and statistics are backward looking.
- It is critical for a Board to discuss and decide which risks are most important to them.
  - Losing money
  - Return volatility
  - Not achieving a 7.0% return
  - Underperforming peers
  - Losing purchasing power
  - Failing to meet benefit obligations

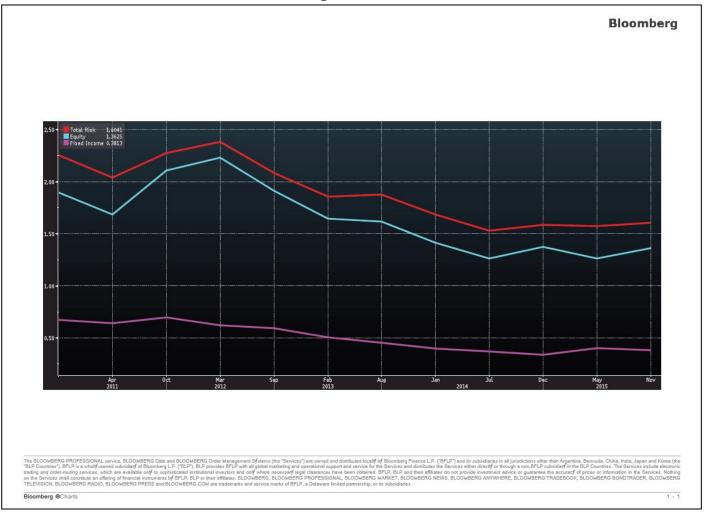


## **Active Risk Summary**





## **Rolling Active Risk**





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## **Equity Risk and Exposure**







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## **Country Risk and Exposure**



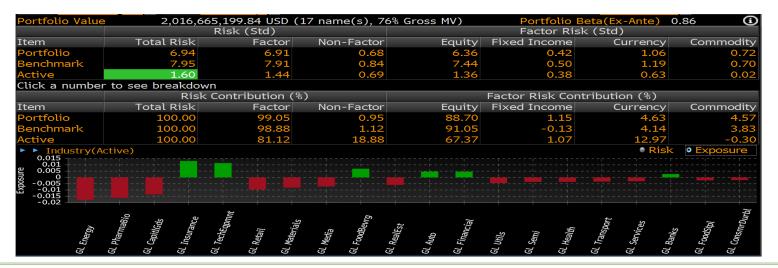
| Portfolio Value                     | 2,016,6                          | 665,199.84 USD                | (17 name(s), 7     | 6% Gross MV)  |                            |                     | 0.86                        |  |  |
|-------------------------------------|----------------------------------|-------------------------------|--------------------|---|----------------------------|---------------------|-----------------------------|--|--|
|                                     | Risk (Std)                       |                               |                    | Factor Risk (Std)                                   |                            |                     |                             |  |  |
| Item                                | Total Risk                       | Factor                        | Non-Factor         | Equity  | Fixed Income               | Currency            | Commodity                   |  |  |
| Portfolio                           | 6.94                             | 6.91                          | 0.68               | 6.36  | 0.42                       | 1.06                | 0.72                        |  |  |
| Benchmark                           | 7.95                             | 7.91                          | 0.84               | 7.44  | 0.50                       | 1.19                | 0.70                        |  |  |
| Active                              | 1.60                             | 1.44                          | 0.69               | 1.36  | 0.38                       | 0.63                | 0.02                        |  |  |
| Click a number to see breakdown     |                                  |                               |                    |   |                            |                     |                             |  |  |
|                                     | Risk Contribution (%)            |                               |                    | Factor Risk Contribution (%)                        |                            |                     |                             |  |  |
| Item                                | Total Risk                       | Factor                        | Non-Factor         | Equity  | Fixed Income               | Currency            | Commodity                   |  |  |
| Portfolio                           | 100.00                           | 99.05                         | 0.95               | 88.70   | 1.15                       | 4.63                | 4.57                        |  |  |
| Benchmark                           | 100.00                           | 98.88                         | 1.12               | 91.05   | -0.13                      | 4.14                | 3.83                        |  |  |
| Active                              | 100.00                           | 81.12                         | 18.88              | 67.37   | 1.07                       | 12.97               | -0.30                       |  |  |
| Country(Act                         | tive)                            |                               |                    |   |                            | • Risl              | c • Exposure                |  |  |
| 0.06<br>0.04<br>번 0.02              |                                  |                               |                    |   |                            |                     |                             |  |  |
| ⊋ 0 +                               |                                  |                               |                    | <del></del>   |                            |                     | <del></del>                 |  |  |
| 80 -0.02<br>-0.04<br>-0.06<br>-0.08 |                                  |                               |                    |   |                            |                     |                             |  |  |
| -0.08                               | <del></del>                      |                               |                    | <del></del>   |                            |                     |                             |  |  |
| tes                                 |                                  |                               |                    |   |                            |                     |                             |  |  |
| Sta                                 | 4.                               | -                             | lia                | ត់  | lp.                        | n<br>Ore            | pu                          |  |  |
| United States                       | <sup>Market</sup><br>Japan<br>UK | Switzer!<br>France<br>German: | India<br>Australia | <sup>Braz</sup> il<br>Frontier<br>Kor <sub>ea</sub> | China<br>Netherln<br>Spain | Sweden<br>Singapore | taly<br>Thailand<br>Finland |  |  |
| L Un                                | <sup>L</sup> Mar                 | 51 Sh.<br>51 Fr.<br>51 Ge     | 6 In<br>6 Au       | ol Br.<br>61 Fr.<br>61 Ko                           | si ch<br>si Ne<br>si Sp    | el Sy.              |                             |  |  |
| 5                                   | 5 5                              | 5                             | 6                  | 5 5   | 5                          | <i>5 5</i>          | 5                           |  |  |



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

## **Industry Risk and Exposure**



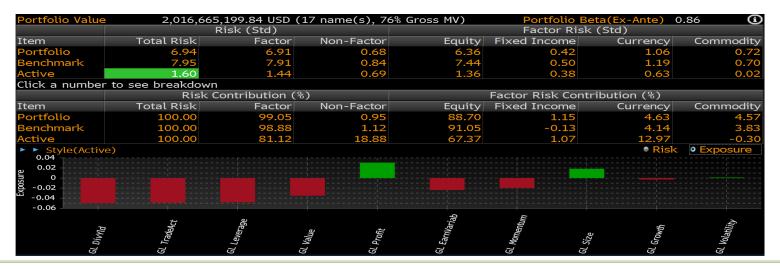




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## **Style Risk and Exposure**

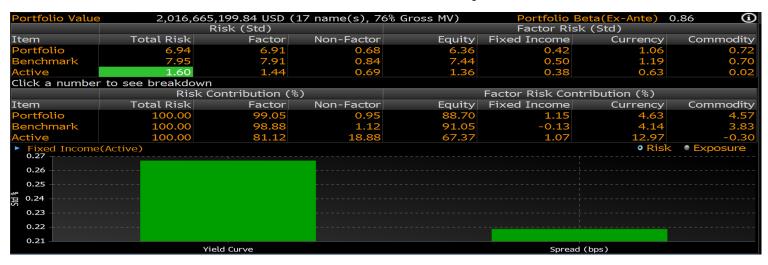


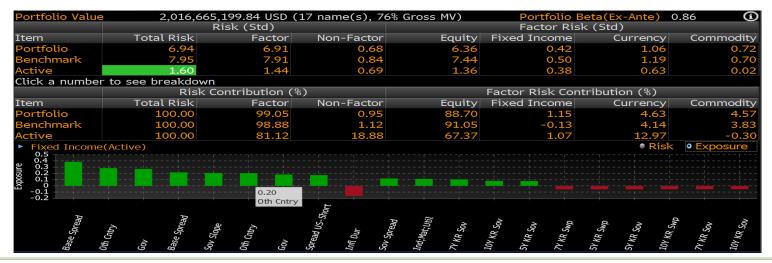




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#### **Fixed Income Risk and Exposure**







## **Factor-Based Scenario Analysis**

| Detail  | Portfolio: SAN JOSE FEDER           | As-of Date: 11/12/2015          |                                   |                         | Currency: USD           |                         |                         |
|---|-------------------------------------|---------------------------------|-----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Detail  | Profit and Loss percent             |                                 |                                   | Profit and Loss percent |
|   | (Greece Financial Crisis<br>- 2015) | (Oil Prices Drop - May<br>2010) | (Japan Earthquake in<br>Mar 2011) |                         | (Lehman Default - 2008) | (Equities up 10%)       | (VIX up 30%)            |
| SAN JOSE FEDERATED  | -2.32                               | -4.24                           | -2.17                             | -4.99                   | -9.42                   | 4.99                    | -0.71                   |
| ABERDEEN FRONTIER MARKETS                                       | -0.41                               | -6.54                           | -1.77                             | -6.06                   | -8.83                   | 6.06                    | -0.53                   |
| ABERDEEN FRONTIER MARKETS<br>ARTISAN GLOBAL VALUE SMA           | -0.41<br>-4.03                      | -6.54<br>-7.76                  | -1.77<br>-1.76                    | -6.06<br>-10.19         | -8.83<br>-13.29         | 6.06<br>10.19           | -0.53<br>-1.47          |
| ARTISAN GLOBAL VALUE SMA  | -4.03<br>-4.03                      | -7.76                           | -1.76                             | -10.19                  | -13.29                  | 10.19                   | -1.47                   |
| BLUEBAY EM SELECT BOND  | -1.62                               | -4.44                           | -0.47                             | -1.68                   | -13.23                  | 1.69                    | -0.29                   |
| BLUEBAY EM SELECT BOND  | -1.62                               | -4.44                           | -0.47                             | -1.68                   | -14.77                  | 1.69                    | -0.29                   |
| COVE STREET SMALL CAP VALUE S                                   | -5.92                               | -9.20                           | -2.55                             | -10.59                  | -26.03                  | 10.59                   | -1.53                   |
| COVE STREET SMALL CAP VALUE S                                   | -5.92                               | -9.20                           | -2.55                             | -10.59                  | -26.03                  | 10.59                   | -1.53                   |
| DBX BARC GLOBAGG 2C USD HDG                                     | 0.62                                | 0.87                            | 0.39                              | 0.09                    | 0.16                    | -0.09                   | 0.02                    |
| DBX BARC GLOBAGG 2C USD HDG                                     | 0.62                                | 0.87                            | 0.39                              | 0.09                    | 0.16                    | -0.09                   | 0.02                    |
| HFRI ED: Credit Arbitrage Inde                                  |                                     |                                 |                                   |                         |                         |                         |                         |
| HFRI ED: Credit Arbitrage Inde<br>HFRI Equity Hedge (Total) Ind |                                     |                                 |                                   |                         |                         |                         |                         |
| HFRI Equity Hedge (Total) Inde                                  |                                     |                                 |                                   |                         |                         |                         |                         |
| HFRI Relative Value (Total) In                                  |                                     |                                 |                                   |                         |                         |                         |                         |
| HFRI Relative Value (Total) In                                  |                                     |                                 |                                   |                         |                         |                         |                         |
| IPATH BLOOMBERG COMMODITY IN                                    | -2.86                               | -6.28                           | -2.81                             | -2.62                   | -10.69                  | 2.62                    | -0.61                   |
| IPATH BLOOMBERG COMMODITY IN                                    | -2.86                               | -6.28                           | -2.81                             | -2.62                   | -10.69                  | 2.62                    | -0.61                   |
| ISHARES RUSSELL 2000 ETF  | -4.99                               | -8.96                           | -1.92                             | -10.26                  | -22.50                  | 10.26                   | -1.48                   |
| ISHARES RUSSELL 2000 ETF  | -4.99                               | -8.96                           | -1.92                             | -10.26                  | -22.50                  | 10.26                   | -1.48                   |
| MSCI EAFE INDEX NL<br>MSCI EAFE INDEX NL                        | -5.36<br>-5.36                      | -6.65<br>-6.65                  | -13.10<br>-13.10                  | -10.50<br>-10.50        | -13.13<br>-13.13        | 10.50<br>10.50          | -1.41<br>-1.41          |
| MSCI EAFE INDEX NL<br>MSCI EAFE SMALL CAP                       | -5.36<br>-4.76                      | -6.52                           | -13.10                            | -9.66                   | -16.91                  | 9.66                    | -1.41                   |
| MSCI EAFE SMALL CAP   | -4.76                               | -6.52                           | -14.17                            | -9.66                   | -16.91                  | 9.66                    | -1.22                   |
| NT INTM GOVT 1-10 YEAR BOND                                     | 0.71                                | 1.09                            | 0.23                              | 0.17                    | -1.09                   | -0.17                   | 0.05                    |
| NT INTM GOVT 1-10 YEAR BOND                                     | 0.71                                | 1.09                            | 0.23                              | 0.17                    | -1.09                   | -0.17                   | 0.05                    |
| NT RUSSELL 3000 INDEX   | -3.46                               | -8.01                           | -1.17                             | -10.23                  | -17.90                  | 10.23                   | -1.49                   |
| NT RUSSELL 3000 INDEX   | -3.46                               | -8.01                           | -1.17                             | -10.23                  | -17.90                  | 10.23                   | -1.49                   |
| RHUMBLINE IS  | -0.10                               | -0.15                           | -0.06                             | -0.01                   | -0.03                   | 0.01                    | 0.00                    |
| RHUMBLINE IS  | -0.10<br>-7.68                      | -0.15<br>-10.51                 | -0.06                             | -0.01<br>-12.14         | -0.03<br>-24.22         | 0.01<br>12.14           | 0.00<br>-1.82           |
| RHUMBLINE NR SMA<br>RHUMBLINE NR SMA                            | -7.68<br>-7.68                      | -10.51                          | -1.91<br>-1.91                    | -12.14<br>-12.14        | -24.22                  | 12.14                   | -1.82                   |
| SAN JOSE REAL ESTATE AGG  | -7.08                               | -2.00                           | -0.28                             | -2.02                   | -24.22                  | 2.02                    | -0.27                   |
| SAN JOSE REAL ESTATE AGG  | -0.26                               | -2.00                           | -0.28                             | -2.02                   | -5.17                   | 2.02                    | -0.27                   |
| SPDR BARCLAYS 0-5 YEAR TIPS                                     | 0.15                                | -0.38                           | 0.06                              | -0.06                   | -1.99                   | 0.06                    | -0.01                   |
| SPDR BARCLAYS 0-5 YEAR TIPS                                     | 0.15                                | -0.38                           | 0.06                              | -0.06                   | -1.99                   | 0.06                    | -0.01                   |
| USD   | 0.00                                | 0.00                            | 0.00                              | 0.00                    | 0.00                    | 0.00                    | 0.00                    |
| US DOLLAR   | 0.00                                | 0.00                            | 0.00                              | 0.00                    | 0.00                    | 0.00                    | 0.00                    |
| VONTOBEL EMERGING MARKETS EQU<br>VONTOBEL EMERGING MARKETS EQU  | -3.59<br>-3.59                      | -8.41<br>-8.41                  | -0.79<br>-0.79                    | -9.24<br>-9.24          | -14.78<br>-14.78        | 9.24<br>9.24            | -1.16<br>-1.16          |
|   | -3.59                               | -8.41                           | -0.79                             | -9.24                   | -14.78                  | 9.24                    | -1.16                   |
| VOYA SECURITIZED CREDIT SMA                                     |                                     |                                 |                                   |                         |                         |                         |                         |



## **Risk Management Summary**

- Risk management is a culture, not a model
- A fund's risk cannot be summarized in a single statistic or number
  - A fund's risk is a mosaic of quantitative and qualitative factors
- The risks that truly matter are long-term risks
  - These are best managed through strategic asset allocation
  - Global systemic risks can be monitored and measured, and should be incorporated into investment decision-making
- Tactical asset allocation should be utilized when there is clear evidence that current market prices do not reflect true risks/opportunities



# Tactical Asset Allocation and Global Macroeconomic Research

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Tactical Asset Allocation / Global Macroeconomic Committee**

• Our Tactical Asset Allocation Committee incorporates the insights of our Global Macroeconomic Advisory Committee, along with a variety of other sources, to establish the firm's tactical views.



 Our Tactical Asset Allocation / Global Macroeconomic Investment Committees will produce shorter-term outlooks and tactical guidance.



#### **Research Focused**

- Global Macroeconomic Advisory Committee
  - Meketa Investment Group works with four outside economic advisors who provide information on, and insight into, the dynamic global economy. This allows us to better evaluate investment strategies and direct our clients' portfolios in a world increasingly governed by shifts in public policy and the perpetuation of large global economic imbalances.
    - Luis Valdivieso, 28-year tenure at the IMF, Former Ambassador Extraordinary and Plenipotentiary of Peru in the United States, Former Minister of Economy and Finance Peru in 2008 and 2009
    - James Hamilton, Professor in the Economics Department at the University of California at San Diego
    - Mark Elliott, Mark Schwartz Professor of Chinese and Inner Asian History, Department of East Asian Languages and Civilizations at Harvard University
    - Gordon Hanson, Professor of Economics in the Graduate School of International Relations and Pacific Studies and the Department of Economics at the University of California, San Diego
- Stanford University Global Infrastructure Forum
  - Meketa Investment Group has a collaborative relationship with Stanford University to focus on global infrastructure development, finance and policy.
  - In the last five years, Meketa Investment Group has sponsored an annual conference, The Stanford Investor Forum, at Stanford University covering a variety of investment topics.



## **Tactical Asset Allocation Philosophy**

- Global interest rates are at record lows and equity markets are near all-time highs
  - A traditional buy-and-hold approach may fall short of return targets
  - If used appropriately, tactical asset allocation can enhance risk-adjusted returns
- Each client's unique long-term strategic asset allocation serves as the portfolio's anchor
- Temporary market dislocations can provide attractive risk/reward opportunities
  - Behavioral biases
  - Overreactions
- Tactical asset allocation is as much about mitigating risk as exploiting opportunities
- Market expertise and risk management are critical



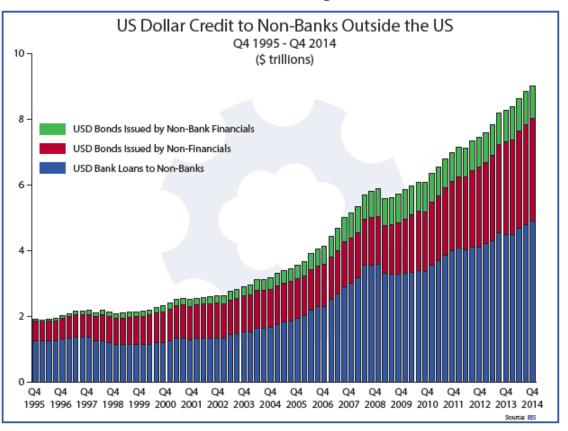
## A History of the U.S. Dollar



- The U.S. dollar has generally trended lower over the past 40 years with two major exceptions:
  - Paul Volcker dramatically raising interest rates to combat inflation in the early 1980s.
  - The tech boom of the late 1990s when U.S. productivity exceeded that of most other countries.
  - We may be in the midst of a third strong dollar cycle.



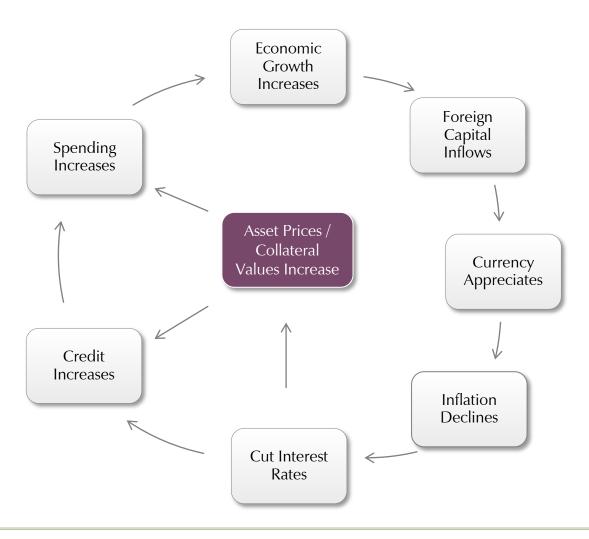
## **Dollar Strength**



- Continued dollar strength has a number of potentially negative implications.
- Cross-border lending in dollars has tripled over the last 10 years. This means dollar strength is the equivalent of monetary tightening for the rest of the world.

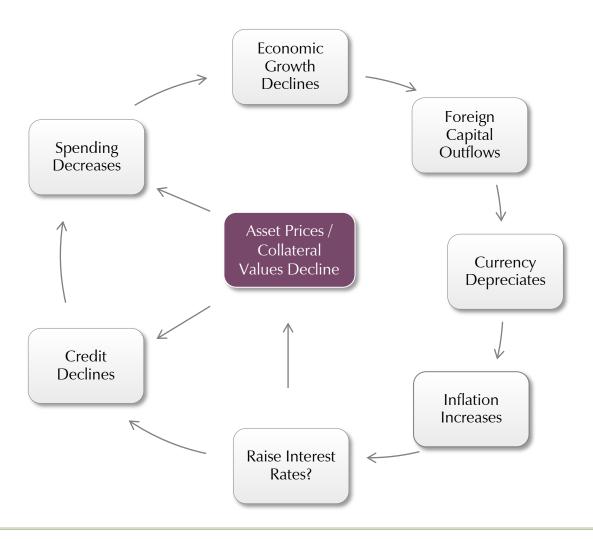


## **Emerging Markets Virtuous Cycle**



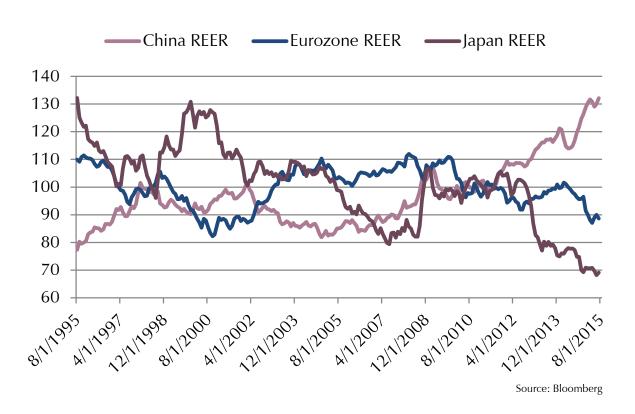


## **Emerging Markets Vicious Cycle**





#### China's Devaluation



- China's Real Effective Exchange Rate (REER) has increased sharply due to their peg to the U.S. dollar.
  - Their recent devaluation may be just the beginning.

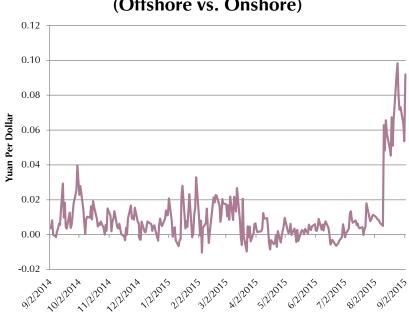


## **China's Capital Flight**

## Yuan/Dollar Exchange Rate (Offshore vs. Onshore)



## Yuan Spread (Offshore vs. Onshore)

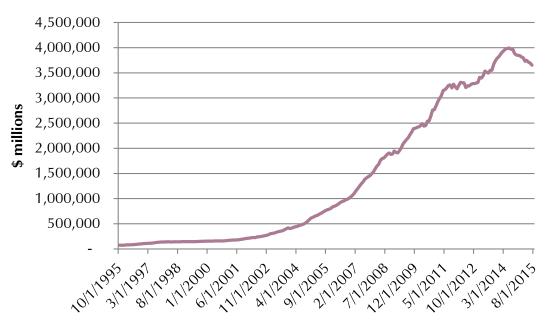


- The spread between the yuan's onshore and offshore exchange rate is one indicator of capital flight.
  - Since China's devaluation in August, the spread has spiked



#### **China's Capital Flight**

#### **China Foreign Currency Reserves**



- China has tried to prop up the yuan by selling dollars and buying yuan.
  - This removes yuan from the system (i.e., monetary tightening)
  - This puts downward pressure on U.S. Treasury prices
  - This is a very expensive strategy and can not last forever



## **Potential Impact on Global Capital Markets**

- China potentially "steals" growth from export competitors
  - Japan, Taiwan, Korea, Indonesia, etc.
- China's demand for imports declines
  - Emerging Asia
  - Commodities
  - U.S. and European multinationals
- Price of Chinese goods declines for the rest of the world
  - Deflationary pressure
- Perception of China's "rebalancing" may change
  - Heightened risk aversion
- Risk of an escalating "currency war"
- Stronger U.S. dollar





## **Public Markets Manager Research Overview**

- Public Markets Manager Research Organization
- Manager Evaluation, Selection and Monitoring 4 Phase Process
- Meketa Differentiators
  - Experience of team
  - Thoroughness of analysis
  - Robust vetting process
  - Integration with Private Markets research (where appropriate)
  - Concentrated Managers Program
  - Flexibility
  - Favorable Manager Selection Adds Value



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

## **Public Markets Manager Research Organization**

- Fifteen member team
- · Organized by six asset classes
- · Analysts build knowledge of specific universe
- Compare and contrast to ID strongest managers
- Leverage knowledge of Consultants
- MSIC oversees manager selection and monitoring





James Meketa Managing Principal Stephen McCourt, CFA Managing Principal Peter Woolley, CFA, CLU, ChFC Managing Principal

Alan Spatrick, CFA Managing Principal Frank Benham, CFA, CAIA Managing Principal Leandro Festino, CFA, CAIA Managing Principal

Mika Malone, CAIA Managing Principal Marc Fandetti, CFA, CFP® Senior Principal

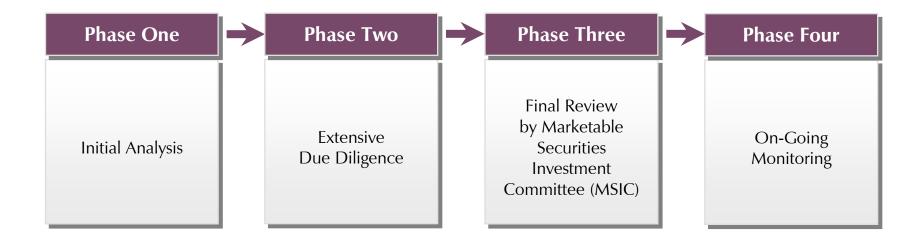
**Dan Dynan, CFA, CAIA** Principal Henry Jaung Executive Vice President Aneish Arora, CAIA Senior Vice President

Paul Cowie Richard O'Neill, CAIA
Senior Vice President Senior Vice President

Gus Bikkesbakker Vice President Mary Mustard, CFA Vice President Alli Wallace, CFA Vice President Larry Witt, CFA Vice President Aaron Lally, CFA Vice President

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

## Manager Evaluation, Selection and Monitoring Four-Phase Process





#### The Five Key Areas of the Meketa Investment Manager Evaluation Process

#### Organization

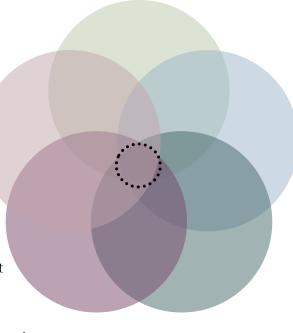
- Stability
- Focus
- Employee ownership
- Investment driven culture
- Operationally sound

#### **Performance & Fees**

- Validates process
- Long-term record
- Risk-adjusted returns
- Reasonable fees

## Investment Process & Risk Management

- Straightforward
- Level of due diligence
- Thought process assessment
- Communication
- Decision-making and portfolio construction
- Self-evaluation / lessons learned
- Risk controls



#### **Investment Team**

- Experience
- Depth of resources
- Team-oriented, performance driven
- Stock selection ability
- Investment intuition

#### **Investment Philosophy**

- Set of beliefs
- Security price determinants
- Reasons for mispricings
- How to add value
- Competitive edge



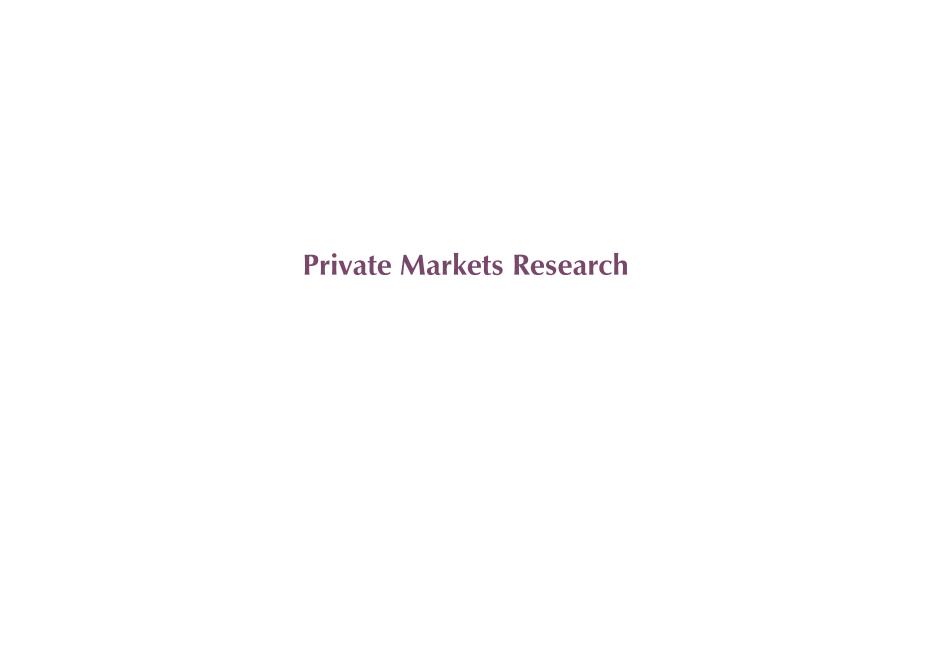
City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Federated Active Manager Selection Track Record**

| Active Manager                         | Hire Date | eVestment Peer Group        | Peer Ranking<br>Since Hire | Peer Group<br>Population |
|--|-----------|-----------------------------|----------------------------|--------------------------|
| Artisan Global Value                   | 2/11      | Global Equity               | 7                          | 135                      |
| Vontobel Emerging Markets              | 6/13      | Emerging Markets Equity     | 26                         | 204                      |
| Cove Street Small Cap Value            | 4/14      | U.S. Small Cap Value Equity | 45                         | 89                       |
| First Quadrant Risk Parity Commodities | 3/11      | Commodities                 | 26                         | 27                       |
| Credit Suisse Risk Parity Commodities  | 3/11      | Commodities                 | 1                          | 27                       |

- Meketa Investment Group's manager research process favors managers that are willing to take active risk and invest in concentrated, best-ideas portfolios. We seek to help our clients avoid paying active management fees for index-like portfolios.
- As of October 31, 2015, all five active managers that have been in the Federated portfolio for longer than a few months have performed above their respective peer group medians since they were hired. The active manager that ranks the lowest within its peer group (Cove Street) has been in the portfolio for less than 18 months.
- Aberdeen is not shown because the frontier markets peer group is too small to be representative.





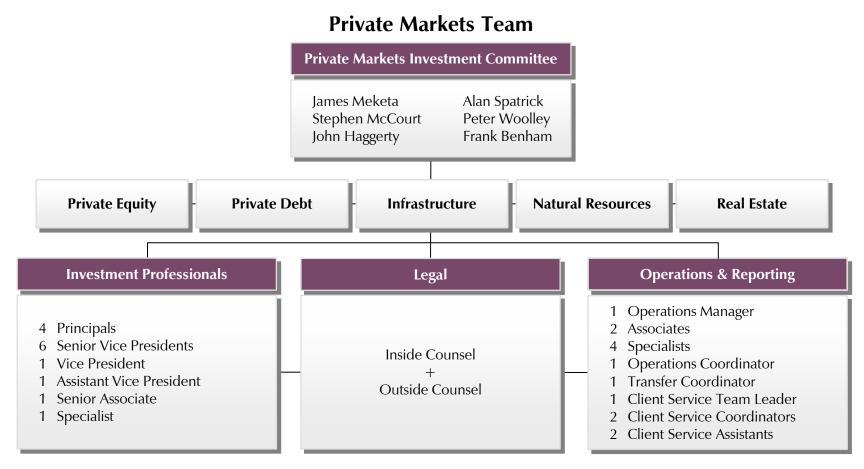
#### **Private Markets Advisory Services**

- We have been evaluating Private Markets strategies since 1999
- We have over 60 clients with over \$20 billion of commitments to Private Markets investments
- We track and monitor over 200 underlying vehicles that comprise our clients' Private Markets investments
- Our Private Markets strategies include:

  - Private Equity
     Private and Opportunistic Debt
  - Infrastructure
- Natural Resources

- Real Estate
- We provide a broad range of services including:
  - Discretionary investment management
  - Non-discretionary investment management
  - Cash flow coordination
  - Transition management
  - Comprehensive reporting
  - Education and training on Private Markets asset classes





- The Private Markets Investment Committee (PMIC) is composed of six of the firm's Managing Principals
- The Private Markets sub-groups utilize the experience of the PMIC members and draw on the dedicated pool of Private Markets resources
- The Private Markets Team works with our 40 General Consulting and Public Markets investment professionals



# **Private Markets Investment Philosophy**

- We apply a thoughtful approach to Private Markets investing utilizing our team's experience and our research
- In order to achieve Private Market's promise of high returns, we focus on identifying and investing with the top managers
- We favor managers with the following characteristics:
  - Ability to exploit market inefficiencies often through sector insights or relationships
  - Capability to add value to their assets help a company grow, adapt their strategy, upgrade systems or add management capabilities
  - Demonstrated track record of success in executing their investment strategy
- If appropriate for the client, we believe the Private Debt, Infrastructure and Natural Resources/Timber segments can provide additional portfolio diversification, uncorrelated returns and inflation hedging



# **Building a Private Markets Portfolio**

- We have a comprehensive set of services customized for the needs of the particular client
  - Fund "Roadmap" a multi-year, multi-sector investment plan customized for the client's portfolio
  - Pacing study an in depth investment model to project the client's exposure to the targeted private market sector allocation
- A well structured Private Markets portfolio can return at least 3% to 5% per year more than the broad public market portfolio
  - Build a strong portfolio with top managers
  - Diversify investment by sector and vintage year
  - We look across asset classes for best return/risk profile



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Sample Private Equity Pacing Study**

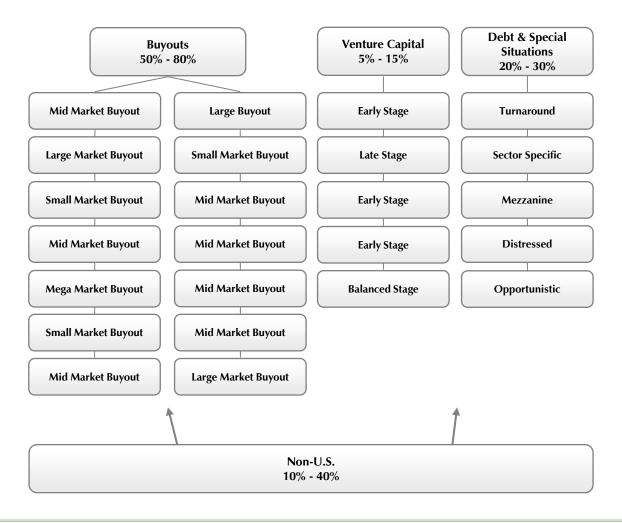


| (\$ in millions)            | 2009 | 2010 | 2011 | 2012E | 2013E | 2014E       | 2015E | 2016E | 2017E | 2018E       | 2019E | 2020E |
|-----------------------------|------|------|------|-------|-------|-------------|-------|-------|-------|-------------|-------|-------|
| Commitments by Vintage Year | 0    | 100  | 0    | 50    | 50    | 50          | 50    | 50    | 50    | 50          | 50    | 50    |
| Contributions               | 0    | 0    | -51  | -26   | -36   | <b>-</b> 45 | -46   | -48   | -48   | <b>-</b> 49 | -49   | -50   |
| Distributions               | 0    | 0    | 0    | 2     | 5     | 11          | 21    | 35    | 52    | 68          | 80    | 85    |
| Net Cash Flow               | 0    | 0    | -51  | -24   | -32   | -34         | -25   | -12   | 4     | 19          | 31    | 36    |
| Fair Market Value           | 0    | 0    | 57   | 87    | 127   | 173         | 216   | 250   | 272   | 281         | 279   | 272   |
| FMV % of Total Pension      | 0.0% | 0.0% | 3.5% | 5.2%  | 7.5%  | 10.1%       | 12.5% | 14.3% | 15.4% | 15.9%       | 15.8% | 15.5% |



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Sample Roadmap**





# Meketa Investment Group is an Appealing Source of Capital for General Partners

#### • Our clients' capital is appealing to them.

- Clients often have relatively small private equity allocation and, thus, have room and liquidity to commit more
- They are large, stable and have meaningful capital to commit in the future

#### We and our clients are long term investors.

- We seek to develop long-term relationships with General Partners and do not commit with the intention of doing just one fund
- Our history is, fortunately, one of numerous re-ups with successful General Partners

## • We are experienced investors in private markets.

- Knowledgeable investors are good to work with
- Have reasonable expectations and will react rationally to positive and negative events that the partnership may experience

#### We are known to be thoughtful and successful investors.

- General Partners are particularly interested in being selected after much thought and work has been dedicated to a due diligence process
- General Partners know that we run very concentrated portfolios and that our process is highly selective

# • We are an efficient aggregator of client commitments.

- We have discretion
- We handle cash flows centrally
- Our clients, collectively, will feel like one relationship to the General Partner



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

### **Private Markets Investment Review**

• We have strong flow of investment opportunities of which we select only a few for

our clients:

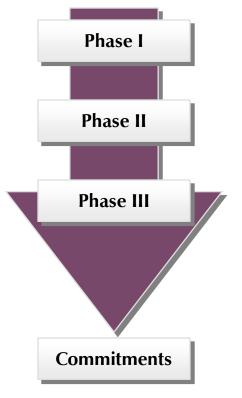
**Screen:** 400+ per year

**Phase I:** 350+ per year

Phase II: 35+ per year

**Phase III:** 25+ per year

**Commitments:** Approx. 20 per year



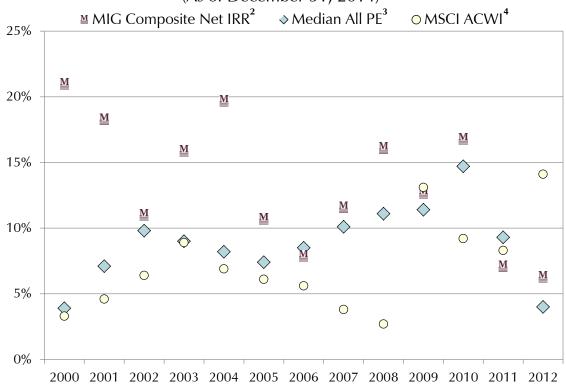
• We compare new managers with information in our proprietary Private Markets Manager Database with over 1,000 managers which is supplemented by outside databases including Thomson Reuters and Preqin



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Vintage Year Performance; All MIG Portfolios**

(As of December 31, 2014)<sup>1</sup>



<sup>&</sup>lt;sup>1</sup> MIG Portfolio Net IRR is the aggregate return for private equity, private debt, private equity natural resources return direct partnership investments made on a discretionary or effectively discretionary basis. Vintage year IRR is net of partnership fees and gross of Meketa Investment Group fees. Total IRR is net of partnership fees and net of Meketa Investment Group fees. These are calculated by MIG based on reconciled manager provided cash flows and market values. The market values for certain partnerships were either estimated or cash-flow adjusted from prior manager reported market values.

<sup>4</sup> Vintage Year 2013 and 2014 returns can be considered not yet meaningful due to partnership investments that are very early in their life cycle.



<sup>&</sup>lt;sup>2</sup> Cambridge Associates Global Private Equity and Venture Capital benchmark, as of 12/31/2014.

<sup>3</sup> Returns are the annualized returns from an investment in the MSCI All-Country World Index, including the reinvestment of dividends, from the beginning of each respective vintage year through 12/31/2014. (Source: Thomson Reuters)

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **MIG Private Equity Track Record**

(As of December 31, 2014)

| Inception (2000) through 12/31/2014        | Net IRR <sup>1</sup> | Net Multiple |
|--|----------------------|--------------|
| Total Portfolio                            | 11.6%                | 1.4x         |
| Cambridge Associates – Median <sup>2</sup> | 8.0                  | 1.3          |
| MSCI ACWI (Time Weighted Return)           | 3.3                  | NA           |

| MIG Portfolio     |                 |                         |  |   |                                     |
|-------------------|-----------------|-------------------------|--|---|-------------------------------------|
| Vintage Year      | Net<br>Multiple | Net<br>IRR <sup>1</sup> | Net Excess<br>Annualized Return<br>over Median | Cambridge Associates<br>Median <sup>2</sup> | MSCI ACWI<br>(Time Weighted Return) |
| 2000              | 2.1x            | 21.0%                   | +1,710bps                                      | 3.9%  | 3.3%                                |
| 2001              | 1.6             | 18.3                    | +1,120   | 7.1   | 4.6                                 |
| 2002              | 1.6             | 11.0                    | +120   | 9.8   | 6.4                                 |
| 2003              | 1.8             | 15.9                    | +690   | 9.0   | 8.9                                 |
| 2004              | 2.1             | 19.7                    | +1,150   | 8.2   | 6.9                                 |
| 2005              | 1.6             | 10.7                    | +330   | 7.4   | 6.1                                 |
| 2006              | 1.4             | 7.9                     | -60  | 8.5   | 5.6                                 |
| 2007              | 1.4             | 11.6                    | +150   | 10.1  | 3.8                                 |
| 2008              | 1.5             | 16.1                    | +500   | 11.1  | 2.7                                 |
| 2009              | 1.4             | 12.7                    | +130   | 11.4  | 13.1                                |
| 2010              | 1.4             | 16.8                    | +210   | 14.7  | 9.2                                 |
| 2011              | 1.1             | 7.1                     | -220   | 9.3   | 8.3                                 |
| 2012              | 1.1             | 6.3                     | +230   | 4.0   | 14.1                                |
| 2013 <sup>3</sup> | NM              | NM                      | NM   | NM  | NM                                  |
| 20143             | NM              | NM                      | NM   | NM  | NM                                  |

<sup>&</sup>lt;sup>1</sup> MIG Portfolio Net IRR is the aggregate return for private equity, private debt, private equity natural resources return direct partnership investments made on a discretionary or effectively discretionary basis. Vintage year IRR is net of partnership fees and gross of Meketa Investment Group fees. Total IRR is net of partnership fees and net of Meketa Investment Group fees. These are calculated by MIG based on reconciled manager provided cash flows and market values. The market values for certain partnerships were either estimated or cash-flow adjusted from prior manager reported market values.

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# **Operations, Performance Reporting, and Compliance**

# **Operations and Technology Resources**

- A successful company requires top quality support staff.
- Our robust operations department allows our investment consultants and professionals to focus on their key responsibility advising clients on creating and implementing successful investment portfolios.
- Extensive back office support allows us to customize our client reports to meet each client's needs.
  - Approximately 140 client reports are completed each quarter
  - 16 Data Analysts
  - 29 Support Staff Members
  - 8 Technology Staff Members



## **Tools**

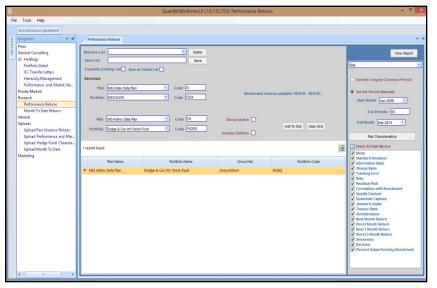
- Market Data
  - Bloomberg
  - Thomson Reuters
  - Barclays Live
  - NCREIF
- Manager Screening/Peer Universes
  - eVestment Alliance
  - Morningstar Direct
- Holdings-Based Analytics
  - QuantM (proprietary)
  - MSCI InvestorForce
  - Thomson Reuters
- Returns-Based Analytics
  - QuantM (proprietary)
  - MSCI InvestorForce
- Internal Information Sharing
  - MIG Central (proprietary)
- Alternatives
  - Vantage
  - PerTrac

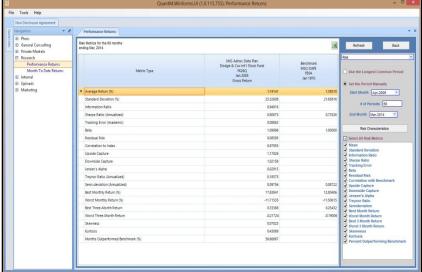


City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **QuantM**

- Meketa Investment Group employs a team of software developers who focus on our proprietary SQL database and reporting engine, QuantM
- QuantM is a tool that is utilized to:
  - Store clients' financial data, economic data, market index returns
  - Calculate holdings-based and returns-based characteristics for client portfolios as well as managers reviewed by the Manager Research Team
  - View market values, returns, fees, etc. by client, by investment management firm, and by investment product







#### **MSCI** InvestorForce

- Meketa Investment Group engages MSCI InvestorForce to enhance our performance reporting.
  - Assists in the aggregation of data from custodian banks and investment managers.
  - Provides tools for performance calculation and data reconciliation.
- MSCI InvestorForce incorporates data from their fifty institutional investment consultant relationships to provide one of the industry's most robust Plan Universe databases.
  - As of June 30, 2015, MSCI InvestorForce's Plan Universe database was composed of approximately 2,400 observations and \$3.5 trillion in assets.
  - A full set of net and gross observations are available.
- Meketa Investment Group can combine our extensive internal research with analytics from InvestorForce to create customized reports for our clients.

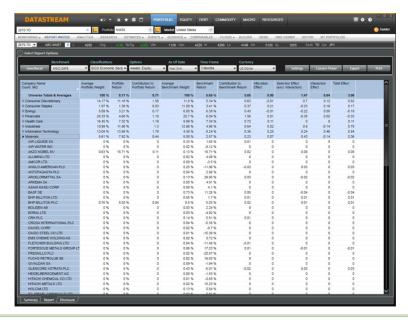


City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Thomson Reuters**

- Meketa Investment Group subscribes to Thomson Reuters Datastream and Portfolio Analytics platform for holdings-based analytics, as well as performance attribution
- Performance attribution is run for all client portfolios, as well as on an ad-hoc basis for investment products reviewed by our manager research team
- Datastream allows us to review performance attribution at the total portfolio level, as well as by sector, country, and individual companies



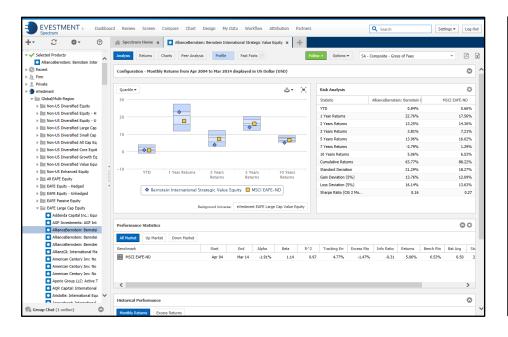


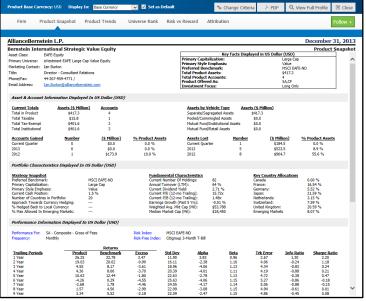


City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

### eVestment Alliance

- Third-party database that includes in-depth profiles of institutional investment managers, and represents over 1,100 investment managers and more than 6,100 investment products
- Meketa Investment Group has the capability to screen the universe using filters such as asset class, strategy type, management fees, and performance



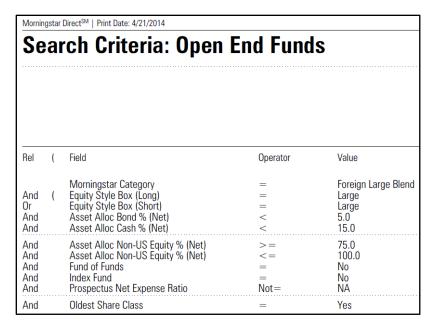


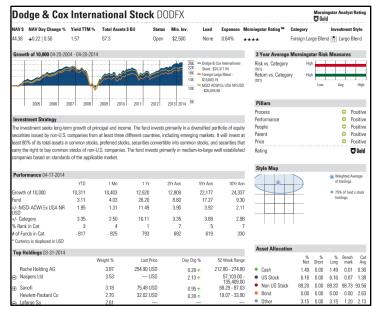


City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Morningstar Direct**

- Morningstar Direct provides us with information on approximately 6,000 mutual funds, as well as approximately 500 closed-end funds
- Allows for the creation of custom peer universes, as well as research on a robust manager universe data set







### **MIG Central**

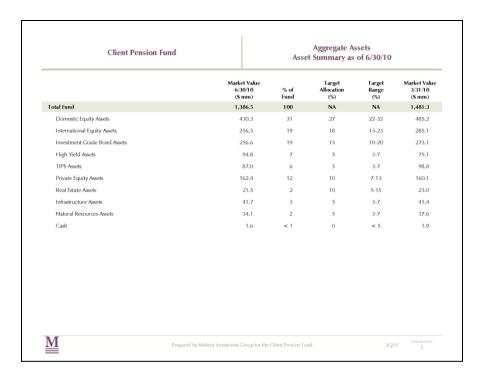
- Meketa Investment Group integrates research related to clients' current investment managers, new ideas, and "best ideas"
- We share manager research data internally using a proprietary SharePoint intranet site,
   MIG Central
- Extensive meeting notes from all manager meetings and conference calls can be searched and reviewed using the **Manager Meeting Notes Library**
- Quarterly questionnaires received from all clients' investment managers are also easily accessible via the Manager Dashboard



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

# **Performance Reporting & Analysis**

- Thorough analysis and summary of all key information for each client delivered quarterly
- Client reports address the following areas:
  - Aggregate Fund Performance, Peer Analysis, Asset Allocation, Plan Structure, Individual Manager Reviews, Current Topics

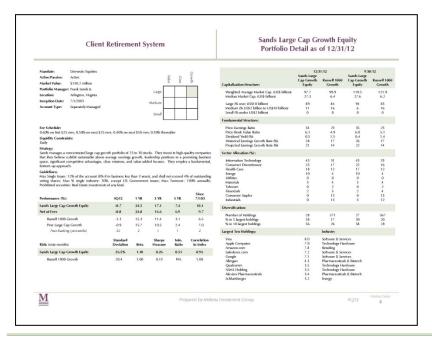


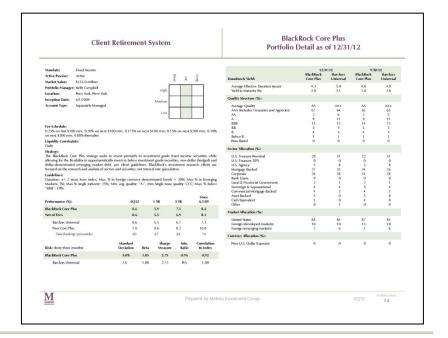


City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Portfolio Reviews**

- Meketa Investment Group's General Consulting clients are invested in over 900 unique public market investment products, for which we provide ongoing due diligence
- Ongoing due diligence includes an analysis of the portfolio's holdings, performance relative to benchmarks and peers, frequent conference calls and meetings with management firms, and examination of a quarterly questionnaire
- We provide a detailed review of each investment portfolio in our quarterly reports







# **Additional Reporting & Communication Services**

- Capital Markets Review/Outlook Quarterly
- Global Macroeconomic Review/Outlook Quarterly
- MIG Investment Perspectives Conference Call Series

   Quarterly or as needed
- Ongoing review of portfolio vs. Investment Policy Statement
- Global Macroeconomic Newsletter Quarterly
- Assistance with CAFR investment preparation
  - Extensive experience preparing investment related information for other public funds
- Asset Liability Studies every 3 years, or at client's request



# Compliance

- Adopted the CFA Institute's Code of Ethics and Standards of Professional Conduct in 1988
  - Standards cover fair dealings, priority of transactions, disclosure of referral fees, prohibition against use of material, non-public information
- Compliance Committee and Chief Compliance Officer Alan Spatrick
  - Includes eight professionals from various departments
  - Meets on a regular basis to review all areas of Company policies and procedures
  - Reviews marketing materials to ensure compliance with regulations
  - Provides an annual review of our procedures and policies
  - Monitors the personal security transactions policy
- Our Director of Research conducts a regular review of all consulting relationships, in order to ensure the advice being provided is consistent and in-line with Meketa's best ideas and IPC recommendations



# **Summary**

- Global firm, deep resources, and experienced consultants
- Meketa Investment Group stands apart from its peers
  - Long-term planning to ensure consistent success
  - Fiduciary role ensures independent advice
  - Comprehensive approach includes strategy and implementation
  - Research, focus and alternatives experience positions clients for success
- Our clients have achieved outstanding results



# **Competitive Advantages**

- Experienced, Stable Consulting Firm
- Fiduciary Responsibility
- Deep Resources
- Low Client-to-Consultant Ratio
- Full Service Consultant
- Objective, Independent Advice
- Research Focused Industry Thought Leaders
- Significant Public Fund Experience
- Customized Investment Solutions and Programs
- Strong Investment Results





City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Presenters**



#### Stephen P. McCourt, CFA – Managing Principal / Co-Chief Executive Officer

Mr. McCourt joined Meketa Investment Group in 1994 and has over 20 years of investment experience. Mr. McCourt is a Managing Principal and Co-Chief Executive Officer of the firm. He serves as the lead consultant for several institutional funds, with public, Taft-Hartley, endowment, and non-profit plan sponsors. His consulting work includes investment policy design, strategic and tactical asset allocation modeling, asset liability modeling, investment education, and investment manager analysis. In addition, Mr. McCourt is a member of the firm's Private Markets Investment Committee, Investment Policy Committee, Global Macroeconomic/Tactical Asset Allocation Committee, and manages the firm's external Global Macroeconomic Advisory Committee. Mr. McCourt sits on the Steering Committee of the University of California, San Diego (UCSD) Economics Roundtable.

He speaks at numerous industry events including the Investment Education Symposium, the Corporate Funds Summit, the Endowment and Foundation Forum, the Global Investing Summit, the Private Equity Summit, and the International Foundation of Employee Benefit Plans (IFEBP) Annual Employee Benefits Conference. Mr. McCourt's research papers entitled "Monitoring Investment Managers" and "Pension Fund Investing and the State of American Public Finance" have been published in the IFEBP's Employee Benefit Issues publication.

He received his graduate degree, a Master of Liberal Arts (ALM) in History, from Harvard University, and his undergraduate degree in Economics and Political Science from the University of Vermont. Mr. McCourt received the Chartered Financial Analyst designation from the CFA Institute and is a member of the CFA Society of San Diego. He is also a member of the International Foundation of Employee Benefit Plans.



#### Laura B. Wirick, CFA, CAIA - Principal

Ms. Wirick joined Meketa Investment Group in 2008. She serves as the lead consultant for Public, Endowment, and Foundation clients, with a focus on investment and asset allocation policy, investment manager selection, and oversight of client portfolios, in addition to asset liability modeling studies. Ms. Wirick is a member of Meketa Investment Group's Marketable Securities Investment Committee, the Strategic Asset Allocation/Risk Management Committee, the public markets research team, and the private debt team.

Prior to joining the firm, she was a Senior Investment Analyst for the Dartmouth College Endowment. While at Dartmouth, she participated in setting asset allocation policy, and selecting and monitoring both traditional and alternative investment managers for the Endowment. Prior to that, she worked with endowments and foundations as a Senior Consulting Associate at Cambridge Associates, where her responsibilities included both qualitative and quantitative analysis of client portfolios and research on fund governance issues.

Ms. Wirick received a bachelor's degree in Business Administration with concentrations in Finance and International Marketing from American University. She holds the Chartered Financial Analyst designation, and is a member of the CFA Society of San Diego. Ms. Wirick also holds the Chartered Alternative Investment Analyst (CAIA) designation and is a member of the CAIA Association.



#### Rafi Zaman, CFA - Chief Investment Officer of Meketa Fiduciary Management, LLC

Mr. Zaman joined Meketa Fiduciary Management in 2015, and has been in the financial services industry for 27 years. A Principal of the firm, Mr. Zaman serves as Chief Investment Officer and is directly involved in all aspects of the investment process, from strategic and tactical asset allocation to risk management and portfolio construction.

Prior to joining Meketa Fiduciary Management, Mr. Zaman spent 17 years at DuPont Capital Management. From 2007 to 2015 he served as Head of Global Equities, overseeing a team of 35 Portfolio Managers, Analysts and Traders, as well as over \$15 billion in assets. Previously, Mr. Zaman served as DuPont's Head of U.S. Equities and Head of Quantitative Equities. Throughout his career at DuPont, Mr. Zaman was also a Portfolio Manager for U.S. Large Cap, U.S. Mid Cap, U.S. Small Cap, International and Emerging Markets equity strategies, as well as Portfolio Manager for a Long/Short Equity strategy. In addition, Mr. Zaman spent 10 years as Chair of the DuPont Capital Management Investment Committee, which had fiduciary oversight of the DuPont pension fund, one of the largest pension funds in the United States.

Prior to joining DuPont, Mr. Zaman served as a Portfolio Manager at Martingale Asset Management and Director of Advanced Research at Mellon Equity Associates. Mr. Zaman began his career at BARRA, where he was responsible for developing the firm's first U.S. Small Cap risk model.

Mr. Zaman has a Bachelor of Science degree in Engineering from REC Kurukshetra in India, and a Master of Science degree in Industrial Engineering from Stanford University.



**Representative Client List** 

City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Representative Client List**

#### **Public**

City of Ann Arbor Employees' Retirement System

Arizona State Retirement System

Town of Arlington OPEB Trust

Austin Fire Fighters Relief & Retirement Fund

CalOptima

California Public Employees' Retirement System\*

California State Teachers' Retirement System

California's Valued Trust

District of Columbia Retirement Board

El Paso Firemen & Policemen's Pension Fund

Employees' Retirement System of the Government of the Virgin Islands

Fire and Police Retiree Health Care Fund, San Antonio

Hingham Contributory Retirement System

Town of Lexington Contributory Retirement System

City of Marlborough Contributory Retirement System

Maryland State Retirement and Pension System

Massachusetts Housing Finance Agency Employees' Retirement System

Massachusetts Housing Finance Agency Employees' OPEB Trust

Massachusetts Pension Reserves Investment Management Board\*\*

Municipal Employees' Retirement System of Louisiana

Town of Norwood Retirement System

City of Phoenix Employees' Retirement System

Plymouth County Retirement Association\*\*\*

City of Quincy Retirement System

Rhode Island Resource Recovery Corporation

City and County of San Francisco Retiree Health Care Trust Fund

San Jose Federated City Employees' Retirement System

Santa Barbara County Employees' Retirement System

Town of Wellesley OPEB

Washington State Investment Board

Worcester Retirement System

#### **Endowment, Foundation, and Non-Profit**

Albuquerque Academy

Arizona's Permanent State Land Funds Endowment

Arizona State University

Community College League of California

Group Health Cooperative

**Gumpert Foundation** 

Illinois Wesleyan University

Joint Center for Radiation Therapy Foundation, Inc.

League of Voluntary Hospitals and Homes

of New York Retired Employees

Massachusetts Medical Society

Neighborhood Health Plans of Rhode Island, Inc.

Pfaffinger Foundation

Rady Children's Hospital and Health Center

South Shore Hospital

University of Wyoming Foundation

**Utah State University** 

Utah Valley University

Warren Wilson College

Wells College

#### **Corporate and Other For Profit**

Boston Herald, Inc.

The Marnell Companies, LLC

Marnell Sher Companies Associates, Inc.

The O'Connell Companies, Inc.

Solymar

\* Member of their specialty pool of consultants. \*\* Member of their real estate project consultant pool.

\*\*\* Pending Contracts.



City of San Jose Federated City Employees' Retirement System and Police & Fire Department Plan

#### **Representative Client List**

#### **Multi-Employer and Taft-Hartley**

I.A.T.S.E. Local 33

I.A.T.S.E. National Benefit Funds

OCU Pension and Health & Welfare Trusts

SEIU 32BJ New England District 615

Airconditioning and Refrigeration Industry

Alaska United Food and Commercial Workers

American Federation of Musicians and Employers

American Federation of Television and Radio Artists

**Building Service 32BJ** 

Communication Workers of America

Heat & Frost Insulators Local 6

International Union of Operating Engineers Local No. 98

Iron Workers of Western Pennsylvania

Laborers' District Council and Contractors of Ohio

Local 6 Club Employees

Lucent Supplemental Healthcare Benefits Trust

for Formerly Represented Retirees

Massachusetts Laborers

Michigan Laborers

Minnesota Laborers

Minnesota Teamsters Construction Division

**New England Carpenters** 

New York State Nurses Association

New York State Teamsters

New York State Teamsters Council -

United Parcel Service Retiree Health Fund

Northwest Ohio Carpenters

Ohio Carpenters

#### **Multi-Employer and Taft-Hartley, (cont.)**

Painters and Allied Trades District Council No. 35

Plumbers & Pipefitters, Local Union #51

Plumbers Local Union No. 1

Producer-Writers Guild of America

Retail Food Employers and UFCW Local 711

**Rhode Island Carpenters** 

Service Employees 32BJ North

Sheet Metal Workers' Local No. 9

Social Service Employees Union Local 371

Southern California Pipe Trades

Southern California Plastering Institute

Southern California United Food & Commercial Workers Unions

Southern Nevada Carpenters

Teamsters Local 251

Teamsters National Pipe Line

**Teamsters Union 25** 

Teamsters Union Local 170

Twin City Iron Workers

UNITE HERE Local 25 and Hotel Association of Washington, D.C.

Western States Insulators and Allied Workers

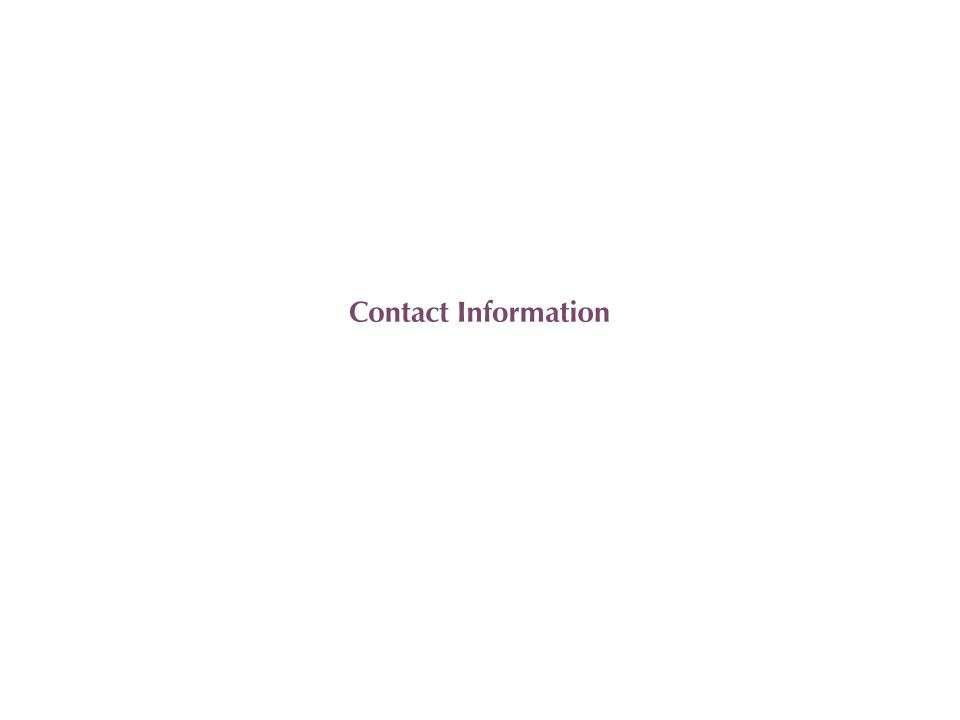
#### **VEBA**

Goodyear Retiree Healthcare Trust

National Steel Retiree VEBA Benefit Plan

VEBA for Retirees of Kaiser Aluminum





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