

*LSV*  
*Asset Management*

# **Howard County**

*U.S. Large Cap Value Equity*

October 25, 2018

**Scott S. Kemper**

Partner & Director, Client Portfolio Services

P: (312) 327-4334

# Organizational Update

## LSV's Key Organizational Strengths

- Academic foundation
- 25+ years of research
- Successfully applied model for over 20 years
- Value equity focus- our sole business
- Consistency of people, philosophy & portfolio
- Employee ownership

## All Strategies Built From Same Model

- \$121.7 billion in firm-wide assets under management
- Limited capacity offerings

United States		International (Non-U.S.)		Global	
<b>Large Cap Value</b>	<b>\$34.9 B</b>	Developed Markets Large Cap Value	\$13.5 B	Developed Markets Global Value	\$9.5 B
Mid Cap Value	\$3.2 B	All-Country Large Cap Value	\$10.5 B	All-Country Global Value	\$9.8 B
Small/ Mid Cap Value*	\$4.2 B	Developed Markets Small Cap Value*	\$4.4 B	Global Small Cap Value*	\$2.0 B
Small Cap Value*	\$3.9 B	Emerging Markets Value	\$6.7 B	Managed Volatility	\$3.6 B
Micro Cap Value*	\$0.5 B	Emerging Markets Small Cap Value*	\$1.7 B	Concentrated Value	\$0.6 B
Enhanced Index	\$0.6 B	Regional Strategies - Large & Small Cap - Europe, Asia, Canada, Japan, Australia	\$3.0 B		
Managed Volatility	\$5.0 B	Managed Volatility	\$0.1 B		
		Concentrated Value	\$1.2 B		

## Value Equity

*Investment Specialists*

Data as of 9/30/18

\*Denotes strategies that are currently closed to new investors.

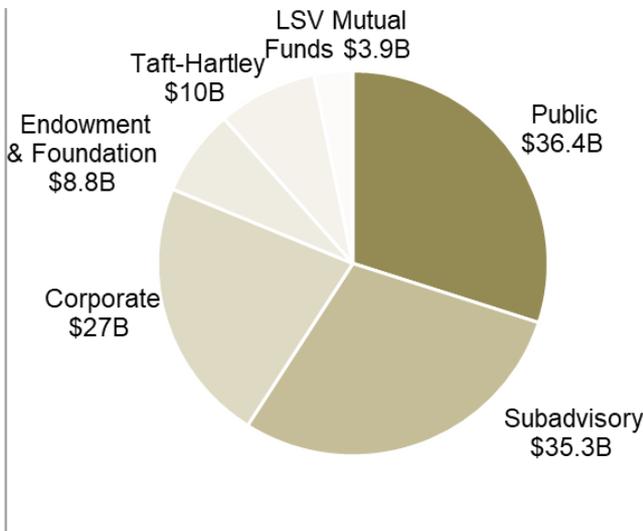
## Diversified Asset and Client Base

200+ Clients with Track Records of 10 Years or Longer. 100+ Clients with Multiple Mandates

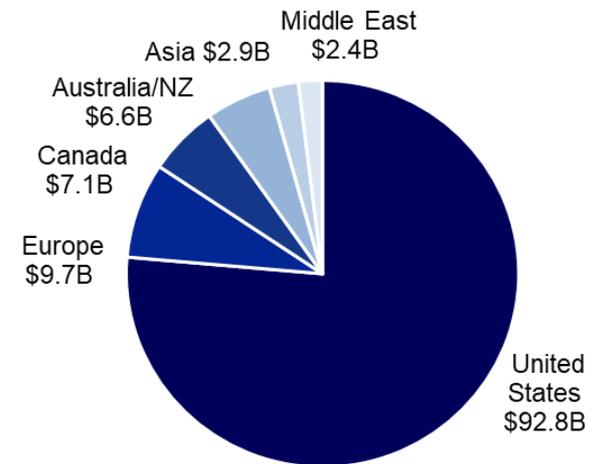
**Total Assets – \$121.7 B**



**Total Clients – 360+**



**Global Investor Base**



# Organizational Structure

**Josef Lakonishok, Ph.D.**

Partner, CEO, CIO  
Portfolio Manager (24)

## Marketing

## Research, Portfolio Construction

## Operations

## Compliance

**Jason Ciaglo**

Partner  
Business Development (9)

**Menno Vermeulen, CFA**

Partner  
Systems Dev & Port Manager (23)

**Puneet Mansharamani, CFA**

Partner  
Portfolio Manager (18)

**Bhaskaran Swaminathan, Ph.D.**

Partner  
Director of Research (13)

**Kevin Phelan, CFA**

Partner  
Chief Operating Officer (14)

**Josh O'Donnell**

Partner  
Chief Compliance Officer  
Chief Legal Officer (5)

**David Coon**

Director  
Retail Sales & Services (2)

**Bala Ragothaman, CFA**

Partner  
Systems Development (12)

**Jason Karceski, Ph.D.**

Partner  
Portfolio Manager & Research (9)

**Han Qu**

Partner  
Research (24)

**Tracy Bolger**

Partner  
Manager, Operations (21)

**Leslie Kondziela**

Partner  
Compliance Officer (14)

**Brett Goldacker**

Associate Director (2)

**Titus Liu**

Partner  
Systems Development (7)

**Greg Sleight**

Partner  
Portfolio Manager (12)

**Louis K.C. Chan, Ph.D.**

Partner, Academic Advisor  
University of Illinois (18)

**Rajeev Uppalapati, CFA**

Partner (8)

**John Dunbar**

Associate (2)

## Client Service & Marketing Support

**Simon Zhang, CFA**

Partner  
Systems & Research (20)

**Guy Lakonishok, CFA**

Partner  
Portfolio Manager (9)

**Dan Givoly, Ph.D.**

Academic Advisor  
Penn State University (13)

## Portfolio Accounting

**Jessica Roberts**

Associate (2)

**Marisa Rosenblatt, CIPM**

Partner (14)

**Gal Skarishevsky**

Quantitative Analyst (2)

**Harrison Hong, Ph.D.**

Academic Advisor  
Columbia University (1)

**Monika Quinn**

Partner  
Portfolio Accounting (21)

## Trading

**Gloria Balta**

Associate (14)

## Bus. Mgmt.

**Jessica Merz**

Associate (9)

**Dan Newman**

Partner  
Trading (19)

**Eric Miller**

Partner  
Trading (20)

**Claude O'Malley**

Partner  
Trading (13)

**Erin Varner**

Associate (2)

**Brian Sanderson**

Partner  
Trading (6)

**Brian Weber**

Associate  
Trading (7)

**Erika Edmonson**

Associate  
Trading (1)

**Lisa Lewis**

Associate (11)

**Sara Paeth**

Associate (3)

## Portfolio Services

**James Owens**

Partner  
Portfolio Services (18)

**Keith Bruch, CFA**

Partner  
Portfolio Services (15)

**Peter Young, CFA**

Partner  
Portfolio Services (14)

**Scott Kemper**

Partner  
Portfolio Services (12)

**Michael Wagner**

Partner  
Portfolio Services, Taft-Hartley (6)

**Paul Halpern, Ph.D.**

Director  
Portfolio Services, Canada (14)

**David Beata**

Partner  
Portfolio Services (14)

**Josh Dupont**

Director  
Portfolio Services (2)

Note: Number indicates years at LSV.

## Relationship Summary

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### Howard County Master Trust

Investment Strategy:	Large Cap Value Equity	<b>Beginning Value - 5/4/00:</b>	<b>\$ 20,400,000</b>
Inception Date:	May 4, 2000	Net Contributions/Withdrawals:	\$ (25,180,603)
Initial Funding:	\$20,400,000	Net Return on Investment:	\$ 68,635,246
Benchmark:	Russell 1000 Value	<b>Ending Value - 9/30/18:</b>	<b><u>\$ 63,854,643</u></b>
Custodian:	State Street		
Consultant:	Summit Strategies Group		

#### Objectives/Investment Process:

The objective of our Large Cap Value Equity (U.S.) strategy is to **outperform the Russell 1000 Value** by at least 200 basis points (gross of fees) per annum over a full investment cycle with a tracking error of approximately 4%.

The process used to select stocks is a **quantitative** approach developed by our founding partners through years of academic research on a variety of investment and investor behavior topics. The process ranks a broad universe of stocks on a combination of **value and momentum** factors and seeks to invest approximately 140-160 stocks in the most attractive securities possible within our strict risk parameters to control the portfolio's tracking error relative to the benchmark. The resulting portfolio will be broadly diversified across industry groups and fully invested (cash balances are typically less than 1% of the portfolio). Initial positions must be in stocks with a market capitalization above \$500 million.

## Market Update

	Periods Ending 9/30/18						
	3Q18	YTD	1 Yr	2 Yrs	3 Yrs	5 Yrs	10 Yrs
S&P 500	7.7%	10.6%	17.9%	18.3%	17.3%	14.0%	12.0%
Large Cap Value (R1000V)	5.7%	3.9%	9.5%	12.3%	13.6%	10.7%	9.8%
Large Cap Growth (R1000G)	9.2%	17.1%	26.3%	24.1%	20.6%	16.6%	14.3%
<b>Value vs Growth Spread:</b>	<b>-3.5%</b>	<b>-13.2%</b>	<b>-16.9%</b>	<b>-11.9%</b>	<b>-7.0%</b>	<b>-5.9%</b>	<b>-4.5%</b>
Mid Cap Core (RMC)	5.0%	7.5%	14.0%	14.7%	14.5%	11.7%	12.3%
Mid Cap Value (RMCV)	3.3%	3.1%	8.8%	11.1%	13.1%	10.7%	11.3%
Mid Cap Growth (RMCG)	7.6%	13.4%	21.1%	19.5%	16.7%	13.0%	13.5%
<b>Value vs Growth Spread:</b>	<b>-4.3%</b>	<b>-10.3%</b>	<b>-12.3%</b>	<b>-8.4%</b>	<b>-3.6%</b>	<b>-2.3%</b>	<b>-2.2%</b>
Small Cap Core (R2000)	3.6%	11.5%	15.2%	18.0%	17.1%	11.1%	11.1%
Small Cap Value (R2000V)	1.6%	7.1%	9.3%	14.8%	16.1%	9.9%	9.5%
Small Cap Growth (R2000G)	5.5%	15.8%	21.1%	21.0%	18.0%	12.1%	12.7%
<b>Value vs Growth Spread:</b>	<b>-3.9%</b>	<b>-8.6%</b>	<b>-11.7%</b>	<b>-6.2%</b>	<b>-1.9%</b>	<b>-2.2%</b>	<b>-3.1%</b>

*Periods longer than one year are annualized.*

## Portfolio Characteristics – September 30, 2018

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	Howard County Portfolio	Russell 1000 Value	S&P 500
<b>Value Measures</b>			
Price / Earnings (FY1)	<b>11.7x</b>	15.1x	18.0x
Price / Earnings (FY2)	<b>10.8x</b>	13.8x	16.3x
Price / Cash Flow	<b>8.4x</b>	11.1x	14.4x
Price / Book	<b>2.0x</b>	2.2x	3.5x
Dividend Yield	<b>2.8%</b>	2.5%	1.9%
<b>Size Measures</b>			
Weighted Average Market Cap	<b>\$98.3 billion</b>	\$127.3 billion	\$248.7 billion
Weighted Median Market Cap	<b>\$40.1 billion</b>	\$68.8 billion	\$113.3 billion
# of Holdings	<b>152</b>		

# Performance

Periods Ended September 30, 2018

Assets Managed: \$63,854,643

	QTD	YTD	One Year	Three Year	Five Year	Seven Year	Ten Year	Fifteen Year	Since Inception*
<b>Howard County</b>	<b>4.7%</b>	<b>2.6%</b>	<b>9.9%</b>	<b>14.9%</b>	<b>12.4%</b>	<b>17.6%</b>	<b>11.8%</b>	<b>11.1%</b>	<b>10.2%</b>
Russell 1000 Value	5.7%	3.9%	9.5%	13.6%	10.7%	15.0%	9.8%	8.9%	7.2%
S&P 500	7.7%	10.6%	17.9%	17.3%	14.0%	16.9%	12.0%	9.7%	6.1%

## Calendar Year Summary

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000*
<b>Howard County</b>	<b>19.4%</b>	<b>17.9%</b>	<b>-2.3%</b>	<b>12.9%</b>	<b>42.0%</b>	<b>20.1%</b>	<b>0.1%</b>	<b>14.3%</b>	<b>26.0%</b>	<b>-38.1%</b>	<b>1.6%</b>	<b>23.2%</b>	<b>12.4%</b>	<b>22.6%</b>	<b>34.5%</b>	<b>-11.4%</b>	<b>2.9%</b>	<b>16.4%</b>
Russell 1000 Value	13.7%	17.3%	-3.8%	13.5%	32.5%	17.5%	0.4%	15.5%	19.7%	-36.9%	-0.2%	22.2%	7.0%	16.5%	30.0%	-15.5%	-5.6%	9.9%
S&P 500	21.8%	12.0%	1.4%	13.7%	32.4%	16.0%	2.1%	15.1%	26.4%	-37.0%	5.5%	15.8%	4.9%	10.9%	28.7%	-22.1%	-11.9%	-6.0%

## Value Equity

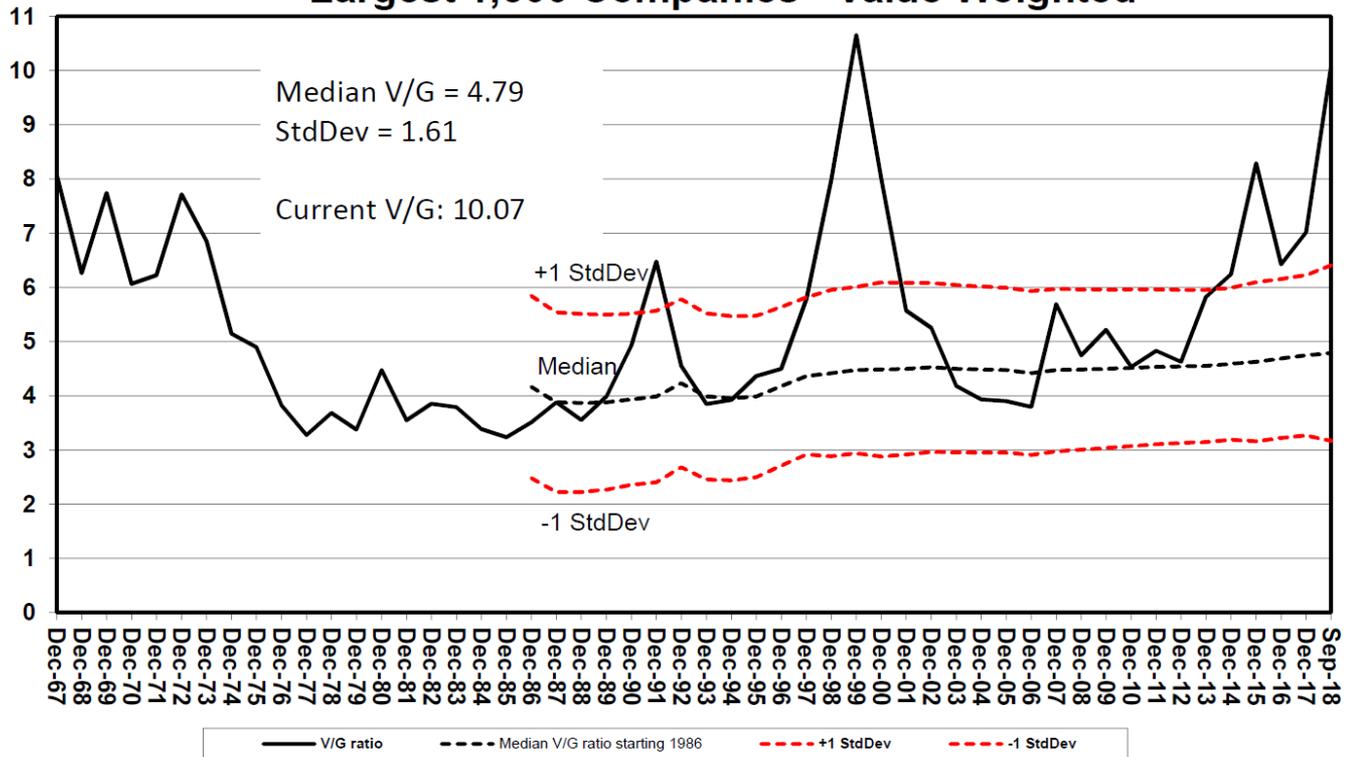
*Investment Specialists*

\*Inception date: 5/4/2000

Note: All returns are gross of fees. Periods greater than one year are annualized.

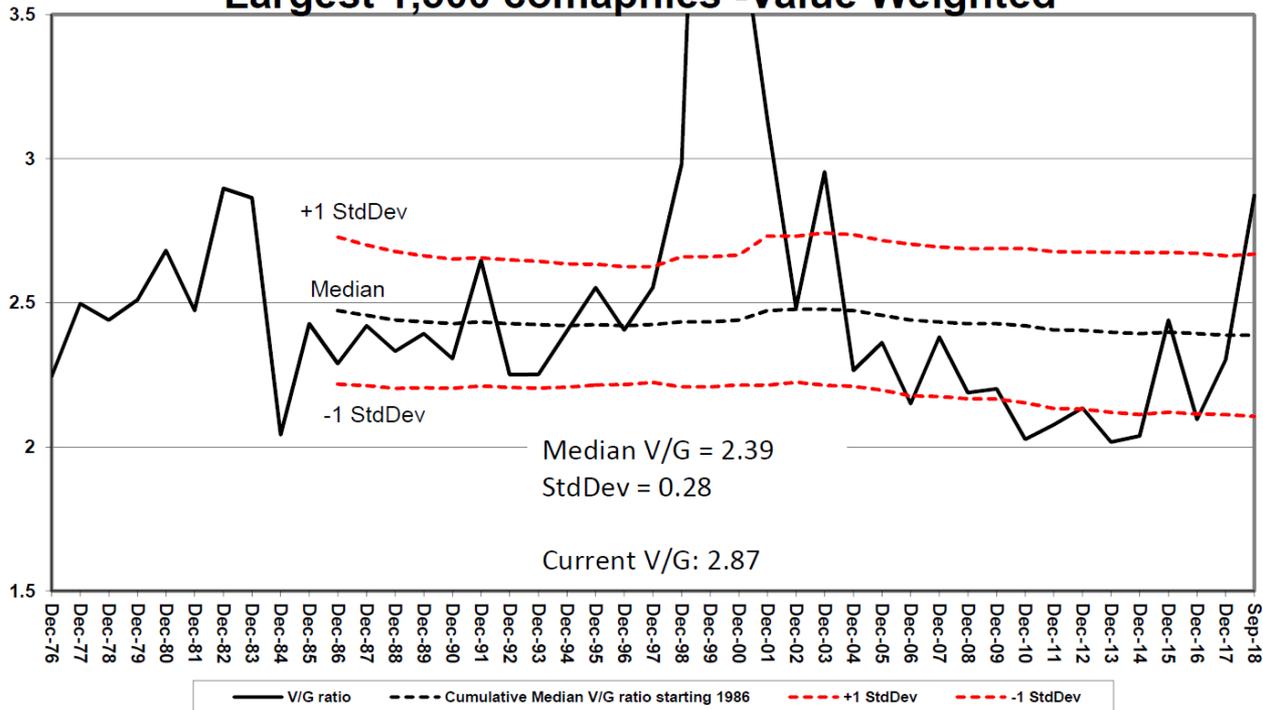
# Value/Growth Spreads are Favorable for Value

**U.S. Value vs. Growth relative valuation**  
**BM(value)/BM(growth): 1967-2018**  
**Largest 1,500 Companies - Value Weighted**



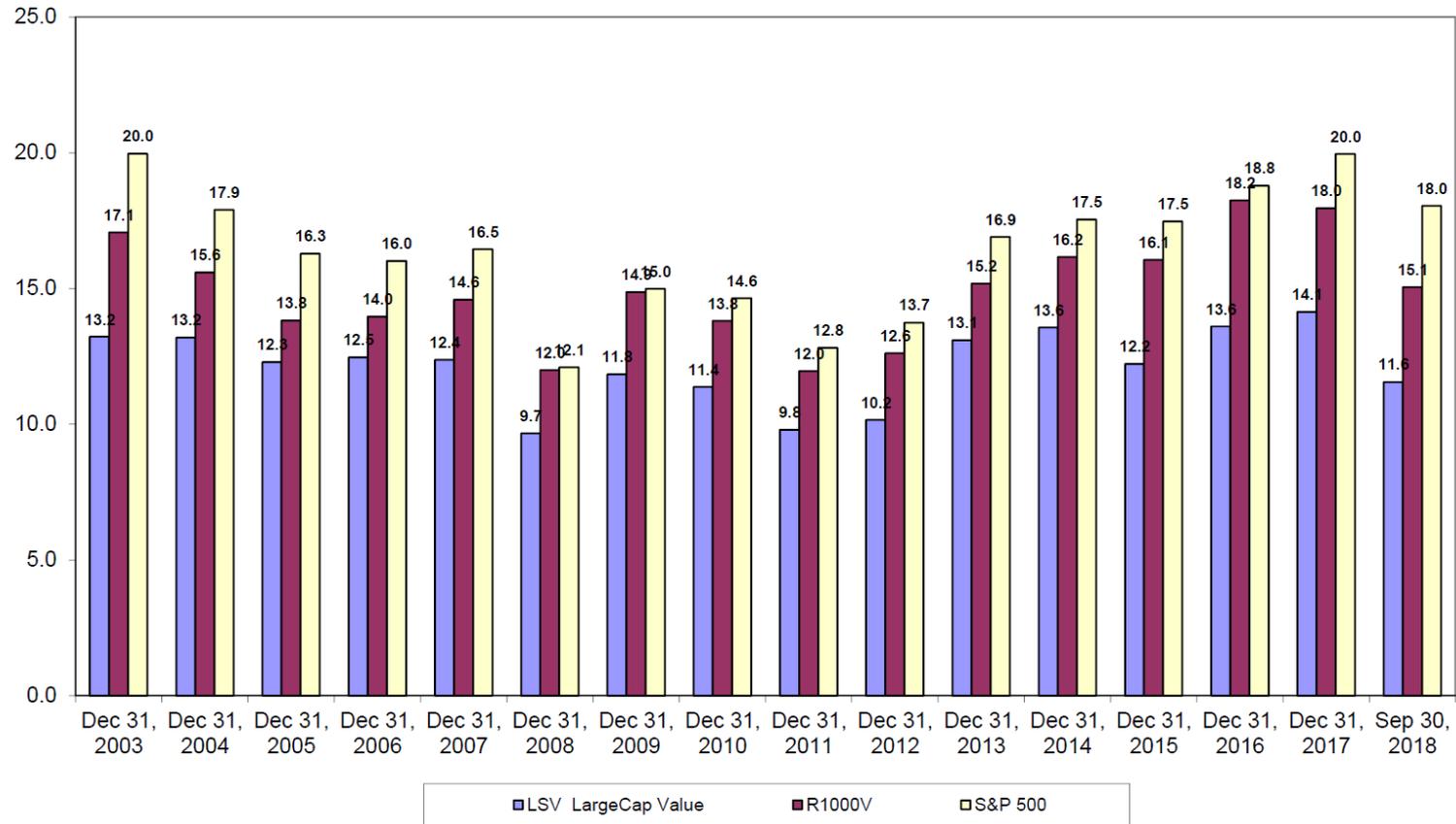
# Value/Growth Spreads are Favorable for Value

**Value vs. Growth relative valuation**  
**FY1-to-P(value)/FY1-to-P(growth): 1976-2018**  
**Largest 1,500 companies - Value Weighted**

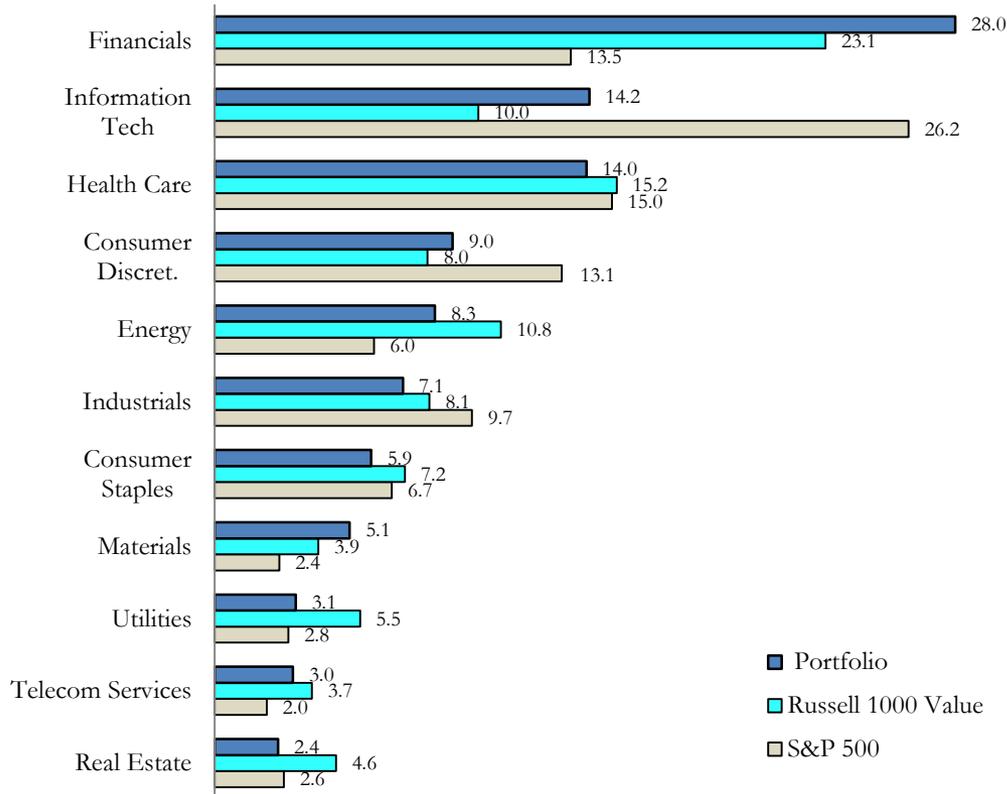


# LSV Portfolio Trading at Valuations Close to Historical Lows

U.S. Large Cap P/E (FY1): 2003- 2018



## Portfolio Characteristics – September 30, 2018



Top 10 Holdings	% of Portfolio
JPMORGAN CHASE & CO	3.4%
CISCO SYSTEMS INC	3.0%
PFIZER INC	2.7%
JOHNSON & JOHNSON	2.4%
BANK OF AMERICA CORP	2.3%
INTEL CORP	2.1%
CITIGROUP INC	2.1%
EXXON MOBIL CORP	2.0%
WALGREENS BOOTS ALLIANCE INC	1.7%
VERIZON COMMUNICATIONS	1.6%

## Portfolio Holdings by Sector – September 30, 2018

SECTOR	MKT. VALUE	% PORT
<b>FINANCIALS</b>	<b>17,635,131</b>	<b>27.6%</b>
Jpmorgan Chase & Co	2,177,812	3.4%
Bank Of America Corp	1,464,162	2.3%
Citigroup Inc	1,320,016	2.1%
Pnc Financial Services Group Inc/The	599,236	0.9%
Discover Financial Services	588,665	0.9%
Capital One Financial Corp	588,566	0.9%
Morgan Stanley	582,125	0.9%
Prudential Financial Inc	536,996	0.8%
Regions Financial Corp	532,150	0.8%
Suntrust Banks Inc	527,641	0.8%
Allstate Corp/The	523,110	0.8%
Ameriprise Financial Inc	502,044	0.8%
Goldman Sachs Group Inc/The	493,328	0.8%
Fifth Third Bancorp	457,888	0.7%
Bank Of New York Mellon Corp/The	443,613	0.7%
Lincoln National Corp	433,024	0.7%
Travelers Cos Inc/The	425,449	0.7%
Everest Re Group Ltd	411,246	0.6%
Hartford Financial Services Group Inc/The	409,672	0.6%
Keycorp	373,932	0.6%
Unum Group	363,351	0.6%
State Street Corp	343,498	0.5%
Wells Fargo & Co	341,640	0.5%
Zions Bancorp Na	325,975	0.5%
Annaly Capital Management Inc	309,969	0.5%
Bb&T Corp	305,802	0.5%
Cit Group Inc	304,499	0.5%
Assurant Inc	302,260	0.5%
Aflac Inc	301,248	0.5%
Metlife Inc	247,616	0.4%
Radian Group Inc	243,906	0.4%
Cna Financial Corp	228,250	0.4%
American Financial Group Inc/Oh	221,940	0.3%
Chimera Investment Corp	201,243	0.3%
Navient Corp	181,980	0.3%
Brighthouse Financial Inc	21,279	0.0%

SECTOR	MKT. VALUE	% PORT
<b>INFORMATION TECHNOLOGY</b>	<b>9,075,076</b>	<b>14.2%</b>
Cisco Systems Inc	1,902,215	3.0%
Intel Corp	1,328,849	2.1%
Corning Inc	698,940	1.1%
International Business Machines Corp	559,477	0.9%
Lam Research Corp	500,610	0.8%
Applied Materials Inc	401,960	0.6%
Hp Inc	399,435	0.6%
Seagate Technology Plc	336,185	0.5%
Skyworks Solutions Inc	317,485	0.5%
Hewlett Packard Enterprise Co	252,805	0.4%
Juniper Networks Inc	242,757	0.4%
Dell Technologies Inc Class V	238,138	0.4%
On Semiconductor Corp	237,747	0.4%
Arrow Electronics Inc	235,904	0.4%
Xerox Corp	209,095	0.3%
Vishay Intertechnology Inc	199,430	0.3%
Ncr Corp	193,188	0.3%
Western Digital Corp	187,328	0.3%
Western Union Co/The	179,164	0.3%
Cirrus Logic Inc	158,260	0.2%
Ca Inc	154,525	0.2%
Dxc Technology Co	124,475	0.2%
Perspecta Inc	17,104	0.0%
<b>CONSUMER STAPLES</b>	<b>3,756,129</b>	<b>5.9%</b>
Walgreens Boots Alliance Inc	1,115,370	1.7%
Kroger Co/The	681,174	1.1%
Kimberly-Clark Corp	488,652	0.8%
Archer-Daniels-Midland Co	417,241	0.7%
Tyson Foods Inc	410,757	0.6%
Ingredion Inc	325,376	0.5%
Pilgrim'S Pride Corp	285,822	0.4%
Supervalu Inc	31,737	0.0%

SECTOR	MKT. VALUE	% PORT
<b>ENERGY</b>	<b>5,251,281</b>	<b>8.2%</b>
Exxon Mobil Corp	1,266,798	2.0%
Valero Energy Corp	1,012,375	1.6%
Chevron Corp	978,240	1.5%
Marathon Petroleum Corp	487,817	0.8%
Phillips 66	477,933	0.7%
Conocophillips	325,080	0.5%
Newfield Exploration Co	282,534	0.4%
Mcdermott International Inc	216,239	0.3%
Us Silica Holdings Inc	178,885	0.3%
Dht Holdings Inc	25,380	0.0%
<b>CONSUMER DISCRETIONARY</b>	<b>5,090,148</b>	<b>8.0%</b>
Lear Corp	522,000	0.8%
Kohl'S Corp	521,850	0.8%
Target Corp	502,797	0.8%
General Motors Co	464,646	0.7%
Aaron'S Inc	386,666	0.6%
Ford Motor Co	313,575	0.5%
Pultegroup Inc	294,763	0.5%
Harley-Davidson Inc	244,620	0.4%
Whirlpool Corp	237,500	0.4%
Goodyear Tire & Rubber Co/The	236,239	0.4%
Penske Automotive Group Inc	232,211	0.4%
Big Lots Inc	204,771	0.3%
Wyndham Destinations Inc	173,440	0.3%
Dillard'S Inc	160,314	0.3%
Brinker International Inc	158,882	0.2%
Macy'S Inc	145,866	0.2%
Lennar Corp	103,278	0.2%
Thor Industries Inc	97,929	0.2%
Wyndham Hotels & Resorts Inc	77,798	0.1%
Office Depot Inc	9,309	0.0%
Lennar Corp	1,694	0.0%

## Portfolio Holdings by Sector – September 30, 2018

SECTOR	MKT. VALUE	% PORT
<b>INDUSTRIALS</b>	<b>4,525,873</b>	<b>7.1%</b>
Cummins Inc	727,429	1.1%
Eaton Corp Plc	633,129	1.0%
Fedex Corp	626,054	1.0%
Spirit Aerosystems Holdings Inc	513,352	0.8%
United Continental Holdings Inc	498,736	0.8%
Agco Corp	316,108	0.5%
Delta Air Lines Inc	283,367	0.4%
Manpowergroup Inc	214,900	0.3%
Ryder System Inc	211,903	0.3%
Oshkosh Corp	178,100	0.3%
Timken Co/The	124,625	0.2%
Triumph Group Inc	83,880	0.1%
Pitney Bowes Inc	66,552	0.1%
Rr Donnelley & Sons Co	22,858	0.0%
Lsc Communications Inc	17,552	0.0%
Trinity Industries Inc	7,328	0.0%
<b>UTILITIES</b>	<b>1,957,368</b>	<b>3.1%</b>
Firstenergy Corp	992,439	1.6%
Entergy Corp	462,441	0.7%
Exelon Corp	449,698	0.7%
Public Service Enterprise Group Inc	52,790	0.1%

SECTOR	MKT. VALUE	% PORT
<b>HEALTH CARE</b>	<b>8,938,850</b>	<b>14.0%</b>
Pfizer Inc	1,709,916	2.7%
Johnson & Johnson	1,533,687	2.4%
Amgen Inc	1,015,721	1.6%
Merck & Co Inc	780,340	1.2%
Hca Healthcare Inc	765,160	1.2%
Abbvie Inc	756,640	1.2%
Express Scripts Holding Co	627,066	1.0%
Aetna Inc	547,695	0.9%
Gilead Sciences Inc	440,097	0.7%
Biogen Inc	282,648	0.4%
Anthem Inc	274,050	0.4%
Quest Diagnostics Inc	161,865	0.3%
Mallinckrodt Plc	43,965	0.1%
<b>REAL ESTATE</b>	<b>1,549,473</b>	<b>2.4%</b>
Hospitality Properties Trust	343,196	0.5%
Omega Healthcare Investors Inc	330,977	0.5%
Vereit Inc	288,948	0.5%
Select Income Reit	261,086	0.4%
Piedmont Office Realty Trust Inc	183,621	0.3%
Medical Properties Trust Inc	141,645	0.2%

SECTOR	MKT. VALUE	% PORT
<b>MATERIALS</b>	<b>3,219,876</b>	<b>5.0%</b>
Eastman Chemical Co	578,149	0.9%
Lyondellbasell Industries Nv	471,546	0.7%
Celanese Corp	376,200	0.6%
Packaging Corp Of America	361,977	0.6%
International Paper Co	344,050	0.5%
Huntsman Corp	315,868	0.5%
Cabot Corp	301,056	0.5%
Domtar Corp	281,718	0.4%
Chemours Co/The	189,312	0.3%
<b>COMMUNICATION SERVICES</b>	<b>2,492,294</b>	<b>3.9%</b>
Verizon Communications Inc	1,051,783	1.6%
At&T Inc	829,426	1.3%
Comcast Corp	276,198	0.4%
Viacom Inc	202,560	0.3%
Tegna Inc	93,288	0.1%
Gannett Co Inc	39,039	0.1%
<b>CASH</b>	<b>296,077</b>	<b>0.5%</b>
<b>TOTAL</b>	<b>63,854,643</b>	<b>100%</b>

## Investment Philosophy

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**LSV believes in the systematic implementation of fundamental investment ideas**

### Deep Value

- We identify cheap companies that are underappreciated by the market
  - A patient approach that focuses on undervalued companies can deliver superior returns
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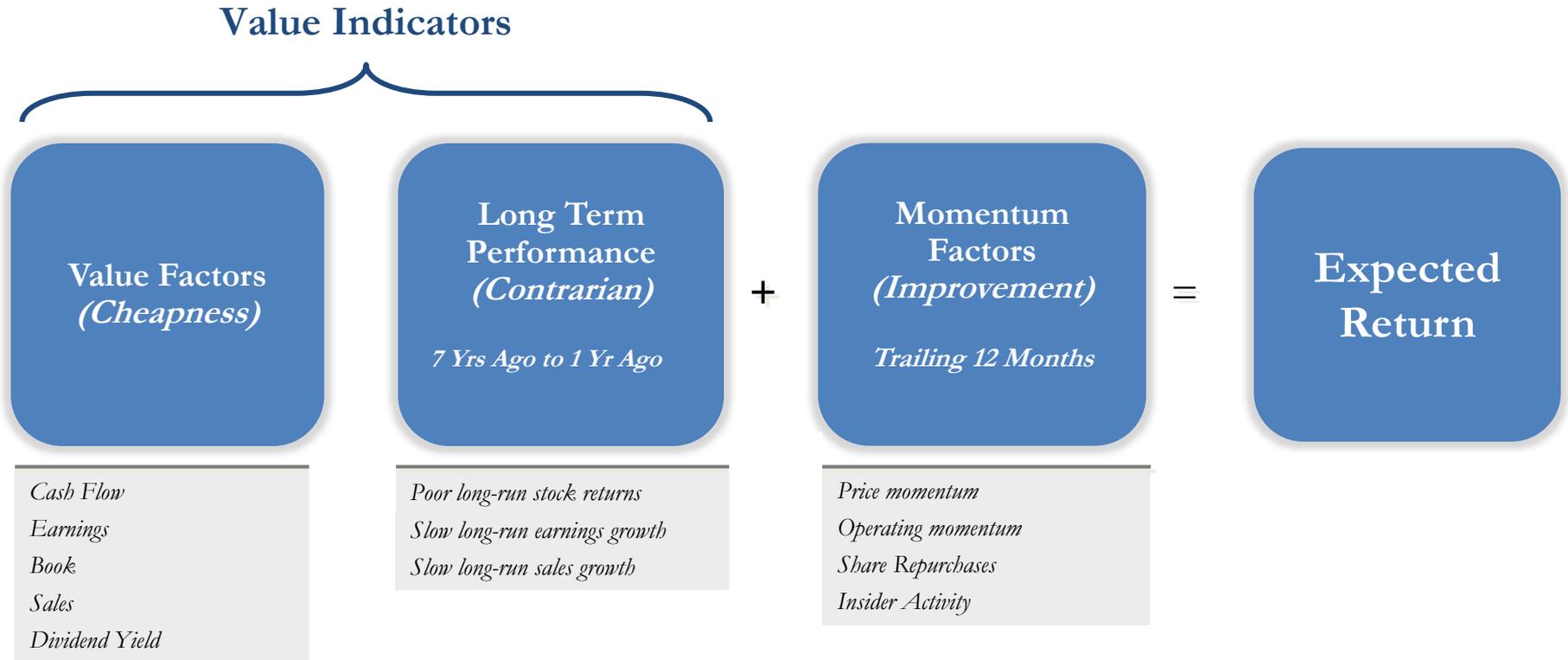
### Quantitative

- LSV's quantitative investment strategy is based on comprehensive empirical research which addresses the complexities of financial statements
  - Our common sense approach avoids the pitfalls of data mining
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### Risk Control

- We construct well diversified portfolios across sectors, industries and individual names utilizing our proprietary optimization process

## Investment Process – Expected Return Model



# Investment Process

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## Investment Universe

*US Equity Universe*

~ 9,000 stocks

Companies listed on NYSE, AMEX & OTC, excluding ADR's, foreign companies & closed-end funds

## Screen

*Screen for Market Cap & Liquidity*

~ 2,100 stocks

Market cap greater than \$500M

## Buy List

*Model-based ranking of stocks*

~ 300 stock buy list

Fundamental value measures & indicators of near-term price appreciation

## Client Portfolio

*Risk Control (Optimizer)*

~140-160 stock portfolio

Sector, Industry, Company, Market Cap & account specific constraints

## **Sell Discipline**

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### **A stock is sold when:**

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- Model ranking deteriorates

### **A stock is cut back when:**

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- Portfolio weight becomes excessive

### **Turnover**

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- Approximately 25% per year

## Research and Investment Team

Name	Years Experience / LSV	Role & Responsibilities	Education
<b>Josef Lakonishok</b>	41/24	CEO, CIO, Founding Partner Portfolio Management	Ph.D. Cornell University, Finance MS Cornell University, Statistics MBA/BA Tel-Aviv University, Economics & Statistics
<b>Menno Vermeulen, CFA</b>	27/23	Partner Portfolio Management & Systems Development	MS Erasmus University-Rotterdam, Econometrics
<b>Puneet Mansharamani, CFA</b>	20/18	Partner Portfolio Management	MS Case Western University, Engineering BS Delhi University, Engineering
<b>Bhaskaran Swaminathan</b>	29/13	Partner Director of Research	Ph.D. University of California at Los Angeles, Finance MBA University of Denver, Finance BE College of Engineering, Guindy, Madras, India, Mechanical Engineering
<b>Jason Karceski</b>	25/9	Partner Portfolio Management & Research	Ph.D. University of Illinois, Finance MBA University of North Florida BS California Institute of Technology, Electrical Engineering
<b>Han Qu</b>	25/24	Partner Research	MS University of Illinois, Finance & Statistics BS Shanghai University, Computer Science
<b>Simon Zhang, CFA</b>	20/20	Partner Systems & Research	MBA/MS University of Illinois, Finance & MIS Civil Engineering MS Tongji University, Shanghai, Engineering Management BS Shanghai Institution of Building Material, Engineering
<b>Bala Ragothaman, CFA</b>	21/12	Partner Systems Development	MS University of Iowa, Computer Science & Networks BS PSG College, Bharathiar University, Computer Engineering
<b>Titus Liu</b>	17/7	Partner Systems Development	MS University of Chicago, Finance, Econometrics & Accounting BS University of Illinois, Electrical Engineering
<b>Greg Sleight</b>	12/12	Partner Portfolio Management	MBA University of Chicago, Econometrics, Econ. & Analytic Finance BS University of Illinois, Material Science & Engineering
<b>Guy Lakonishok, CFA</b>	18/9	Partner Portfolio Management	MBA University of Chicago, Analytical Finance & Accounting BS Washington University, Electrical Engineering
<b>Gal Skarishevsky</b>	8/2	Quantitative Analyst	MBA University of Chicago, Finance & Accounting BS Ben-Gurion University, Computer Science
<b>Dan Givoly, CPA (Isr.)</b>	34/13	Academic Advisor; Ernst & Young Professor of Accounting; Dept. of Accounting, Pennsylvania State University	Ph.D. New York University, Accounting & Finance MBA Tel-Aviv University BA Hebrew University, Jerusalem, Economics & Statistics
<b>Louis Chan</b>	36/18	Partner, Academic Advisor Professor Finance, University of Illinois	Ph.D./ MS University of Rochester, Finance & Applied Economics BBA University of Hawaii, Business Administration
<b>Harrison Hong</b>	22/1	Academic Advisor Professor Economics, Columbia University	Ph.D. Massachusetts Institute of Technology, Economics BA University of California, Berkeley, Economics & Statistics

## Client Portfolio Services Team

Name	Years Experience / LSV	Role & Responsibilities	Education
James Owens	29/18	Partner Portfolio Services	BA Iowa State University, Finance
Keith Bruch, CFA	30/15	Partner Portfolio Services	MBA University of Chicago, Finance BA Northwestern University, Economics
Peter Young, CFA	30/14	Partner Portfolio Services	BS Wake Forest University, Business/Mathematics
Scott Kemper	22/12	Partner Portfolio Services	MBA University of Chicago BA DePauw University
Michael Wagner	31/6	Partner Client Portfolio Services, Taft-Hartley	MBA Loyola University, Finance BS Elmhurst College, Marketing
Josh Dupont	7/2	Director Portfolio Services	MBA University of Chicago, Finance, Economics BA Northwestern University, Economics
Paul Halpern	47/14	Director Client Portfolio Services, Canada	Ph.D. University of Chicago MBA University of Chicago Bcomm University of Toronto
Jason Ciaglo	20/9	Partner Business Development	MBA University of Chicago BA University of California-Berkeley, English
David Coon	27/2	Director Retail Sales & Services	MBA DePaul University BA Albion College
Kevin Phelan, CFA	17/14	Partner Chief Operating Officer	BA University of Chicago, Economics
Josh O'Donnell	14/5	Partner Chief Compliance Officer Chief Legal Officer	JD Vanderbilt University Law School BA Wake Forest University, Politics

# Representative Client List

## 15+ Years

Alma College Endowment  
 Automobile Mechanics Local 701  
 Bank of America  
 BASF  
 Bridger Coal Company - Reclamation Trust  
 Caterpillar Inc.  
 Cement Masons Local 502 Pension Fund  
 Christiana Care Health Services  
 City and County of San Francisco Employees' Retirement System  
 CHRISTUS Health  
 City of Gainesville Police Officers' & Firefighters' Ret. Plan  
 City of Kansas City Employee's Retirement System  
 College of the Ozarks  
 Dignity Health  
 Empire State Carpenters  
 FCA  
 FM Global  
 Formanek Investment Trust  
 Froedtert Health  
 General Laborers' Local 66 Pension Fund  
 G.C.I.U. Local 119B Pension & Welfare Funds  
 Hoogovens Pensioenfond  
**Howard County (MD) Master Trust**  
 I.A.T.S.E. National Pension Fund  
 I.B.E.W. Local 98 Pension Plan  
 I.U.O.E. Local 478 Pension Fund  
 I.U.O.E. Local 825  
 Illinois Municipal Retirement Fund  
 Illinois State Board of Investment  
 John D. & Catherine T. MacArthur Foundation  
 Kansas City Police Employees' Retirement System

### Summary

As of 9/30/18:  
 Approximately \$122 Billion  
 In Assets Under Management

360+ Total Clients

200+ Clients  
 with Track Records of  
 10 Years or Longer

100+ Clients with Multiple Mandates

## 15+ Years (Cont.)

New Jersey Health Foundation  
 North Dakota State Investment Board  
 Norwalk City Employees' Pension Fund  
 Olin Corporation  
 PacifiCorp  
 PacifiCorp/I.B.E.W. Local 57 Retirement Trust Fund  
 Paper Products Local 27 Pension & Welfare Funds  
 Parkland Management Company  
 Parochial Employees' Retirement System of Louisiana  
 Plumbers & Pipefitters National Pension Fund  
 Prudential Retirement  
 Raytheon Company  
 RTD (Denver) Salaried Employees' Pension Trust  
 Roy J. Carver Charitable Trust  
 Salvation Army USA Southern Territory  
 S.E.L.U. Local 25  
 SEI Investments  
 Sheet Metal Workers Local 73  
 Shell Pensioenfond  
 Southern Alaska Carpenters Retirement Fund  
 Teachers' Retirement System of Illinois  
 Teachers' Retirement System of Louisiana  
 Teamsters Joint Council No. 83 of Virginia  
 The Seeing Eye, Inc.  
 UA Local Union Officers & Employees Pension  
 U.F.C.W. International Union-Industry Pension Fund  
 Warehouse Employees' Local 570 Pension Fund  
 WellSpan Health System  
 Anonymous Clients - 14

## 15+ Years (Cont.)

Kempen Capital Management  
 L-3 Communications Corporation  
 Lattner Family Foundation  
 Laundry & Dry Cleaning Workers Pension Fund, UNITE  
 Louisiana State Employees' Retirement System  
 McConnell Foundation  
 Methodist Le Bonheur Healthcare  
 Mid-Atlantic Regional Council of Carpenters  
 Municipal Police Employees' Ret. System of Louisiana  
 National Asbestos Workers Pension Fund  
 National Roofing Industry Pension Fund  
 NCR Corporation

# Representative Client List

## 10-15 Years

1199 National Benefit & Pension Fund  
 ACT, Inc. (American College Testing)  
 Alberta Investment Management Corporation  
 Altria Group  
 AMP Capital Investors  
 Ancilla Systems, Inc.  
 ANZ Global Wealth  
 Archdiocese of Cincinnati  
 Asbestos Workers Philadelphia Pension & Welfare Fund  
 AustralianSuper  
 Baltimore County Employees' Retirement System  
 Bayerische Versorgungskammer (BVK)  
 Bricklayers & Allied Craftworkers Local 5  
 Bricklayers & Trowel Trades International Pension Fund  
 Bristol County Retirement System  
 Carpenters Pension Fund of Illinois  
 Carpenters Pension Trust of St. Louis  
 Central Pennsylvania Teamsters Pension Fund  
 Chagnon Foundation  
 Chicago Area I.B.O.T. Local 703  
 Chicago Firemen's Annuity & Benefit Fund  
 City of Richmond  
 City of St. Louis Employees Retirement System  
 City of Stamford, CT Employees' Retirement Fund  
 Cleveland Bakers & Teamsters  
 Covenant Health  
 Cullen Foundation  
 Daimler NA  
 Desjardins Global Asset Management

## 10-15 Years (Cont.)

Detroit Free Press Inc. Newspaper Guild  
 Diebold Nixdorf  
 District of Columbia Retirement Board  
 Duke Energy  
 Eighth District Electrical Workers  
 Firefighters' Retirement System of Louisiana  
 Frederick County Employees' Retirement Plan  
 Funds SA  
 Harbor Capital Advisors, Inc.  
 Hess Corporation  
 I.B.E.W. Local 103 Pension Fund  
 I.B.E.W. Local 25 Pension Fund  
 I.U.O.E. Local 14-14B  
 I.U.O.E. Local 302 & 612  
 IN/KY/OH Regional Council of Carpenters Pension Fund  
 IOOF  
 Iron Workers Local Union 16  
 Irving S. Gilmore Foundation  
 Jacksonville Plumbers & Pipefitters Pension Fund  
 Jewish Healthcare Foundation  
 Kaiser Foundation Hospitals  
 Laborers' Pension Fund - Chicago  
 Laborers' National Pension Fund  
 Local 1102 Amalgamated Pension Fund  
 Local Government Super  
 Maritime Super  
 Marsh & McLennan Companies, Inc.  
 Mason Tenders' District Council Pension Fund  
 McGill University

## 10-15 Years (Cont.)

Midwest Pension Plan  
 Minnesota State Board of Investment  
 Municipal Employees' Annuity & Benefit Fund of Chicago  
 New England Healthcare Workers  
 New Hampshire Retirement System  
 New Jersey Transit Corporation  
 New York City District Council of Carpenters  
 New Zealand Superannuation Fund  
 Nexcom  
 Nissan North America  
 Ohio Highway Patrol Retirement System  
 Ohio Public Employees Retirement System  
 Ohio School Employees' Retirement System  
 Operating Engineers Local 428  
 Pacific Salmon Commission  
 Pavers & Roadbuilders Pension Trust  
 Pennsylvania Municipal Retirement System  
 Prudential Investments  
 Retail, Wholesale & Dept. Store Union  
 Sacramento County Employees' Retirement System  
 Saint Louis University  
 Salvation Army Central Territory  
 Salvation Army Eastern Territory  
 San Antonio Fire and Police Pension Fund  
 Stagecoach Group  
 Stanislaus County Employees' Retirement Association  
 State of Idaho Endowment Fund  
 Telstra Super Pty, Ltd  
 Texas Presbyterian Foundation

# Representative Client List

## 10-15 Years (Cont.)

Twin City Pipe Trades  
 Twin Disc, Inc.  
 U.F.C.W. International Union-Industry Pension Fund  
 U.F.C.W. Local 1546 Pension Fund  
 U.F.C.W. Midwest Pension Fund  
 United Church of Canada  
 University of Guelph  
 Virginia Retirement System  
 Wells Fargo Funds  
 West Virginia Investment Management Board  
 Anonymous Clients - 46

## 5-10 Years

Chicago Transit Authority  
 Cox Enterprises, Inc.  
 Delphi  
 Denver Employees Retirement Plan  
 DTE Energy  
 Foresters  
 LIUNA Pension Plans  
 Mercy Investment Services Inc.  
 Methodist Hospital System  
 Metropolitan Water Reclamation District  
 Mine Super  
 Ministers and Missionaries Benefit Board

## 5-10 Years (Cont.)

Misericordia Home  
 New York State Teachers' Retirement System  
 PORTICO  
 South Carolina Retirement System Investment Commission  
 Trinity Health  
 Anonymous Clients - 26

## 0-5 Years

Alaska Permanent Fund  
 Aon Hewitt Investment Consulting  
 Arkansas Public Employees Retirement System  
 Boilermakers-Blacksmith National Pension Fund  
 Bridge Builder Mutual Funds  
 Canadian Medical Protective Association  
 Chicago Regional Council of Carpenters  
 City of Newport News  
 Connecticut Laborers' Pension Fund  
 Diocese of Brooklyn  
 District Council 82 Painting Industry Pension Fund  
 Dominican Sisters of Springfield Illinois  
 E-L Financial Corporation  
 Emerson Electric  
 Entergy

## 0-5 Years (Cont.)

Hackensack Meridian Health, Inc.  
 Immanuel  
 IUPAT Industry Pension Plan  
 Kentucky Retirement Systems  
 Legacy Health  
 Louisiana School Employees' Retirement System  
 Mercer  
 Mission Health System  
 Mother Theresa Mission Care and Trust  
 National Elevator Industry Plan  
 New Mexico State Investment Council  
 NewYork-Presbyterian  
 Nordea  
 Nova Scotia Health Employees' Pension Plan  
 Old Mutual Global Investors  
 Parkland Health & Hospital System  
 PGA Tour Inc.  
 Plumbers & Pipefitters Local Union 25  
 Scotiabank  
 SOKA-BAU  
 The General Retirement System for Employees of Jefferson County  
 The Sisters of the Holy Family of Nazareth  
 University of Alberta  
 University of Nebraska  
 Voya Investments  
 Anonymous Clients - 46