

Private Equity Program Review

ASRS Staff Presentation

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April 20, 2014

Outline

- 1 Background
 - The Private Equity Program
 - The Private Equity Team
 - Private Equity Strategy
- 2 Private Equity Performance
- 3 Portfolio Composition

Private Equity

- ASRS has allocated 7% of total assets (+/- 2%) to private equity as part of its strategic asset allocation
- ASRS began investing in private equity in 2007
- The NAV of PE assets was \$1812 million on September 30, 2013
 - This is 5.47% of total fund and the NAV is \$508 million below target funding
- We update pacing plans annually to adjust investment levels to achieve and maintain target funding
- Investment pace for 2014 is \$600 million in new commitments

The Private Equity Team

- Karl Polen heads private market investing and Eric Glass is the portfolio manager for private equity and real estate
- Kerry White is the asset manager responsible for financial reporting, legal and tax matters
- Grosvener provides the back office and is the official book of record for valuations and return calculations
- Meketa is the private equity investment consultant providing advice on strategic matters and diligence support on new investments

Investment Strategy

- We focus in areas where capital is in demand and private market structures may be better suited to the situation
 - In past few years, we have placed significant capital in distressed style strategies as the U.S. emerges from the great recession
 - Energy is a current focus with tremendous demand for capital in development and infrastructure
 - We are focused on growth sectors including technology and health care
 - Companies with enterprise value less than \$1 billion which generally are not well served or well suited to public market capitalization
 - Growing companies which need capital and assistance with professionalization of management
 - Take private of public company orphan divisions
- We have placed less emphasis on
 - Venture capital
 - Take private leveraged buyouts
 - Strategies with multiple exit routes

Manager Selection

- Performance criteria
 - Unlike public markets, research indicates persistence of performance in private equity
 - We consider absolute and relative performance through IRR, TVPI, quartile comparison to other private managers and public market equivalent returns
 - We consider consistency by charting returns at the deal level to consider dispersion, loss ratios and median returns
- Organizational criteria
 - We expect organizations to have talent depth appropriate to the opportunity they are pursuing
 - We expect organizations to have evolved a healthy team dynamic with proper sharing of economics and decision authority appropriate to their point in their life cycle
 - We prefer teams focused on adding value through operations
 - We prefer teams with specialized knowledge of industries, regions and, when appropriate, restructuring techniques
- Terms
 - Cost matters and when possible we negotiate fee reductions based on size or closing order
 - We prefer terms compliant with ILPA guidelines on governance, fee offsets, clawbacks and other such matters

Performance Compared to Russell 2000 (September 30, 2013)

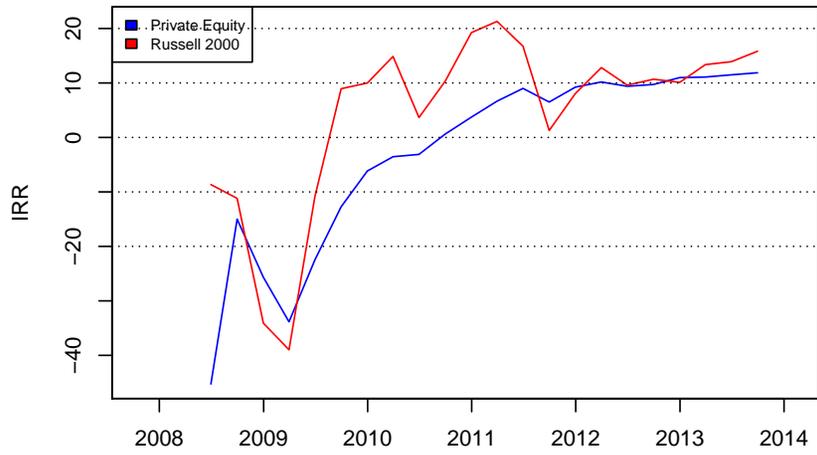
TWRs and IRRs Comparison to Russell 2000

	One Quarter	One Year	Three Years	Inception
Private Equity TWR	3.39%	14.52%	15.50%	3.23%
Russell 2000 TWR	10.21%	30.06%	18.29%	6.40%
Private Equity IRR	3.92%	16.96%	15.69%	11.87%
Russell 2000 IRR	8.91%	28.13%	17.81%	15.83%

Current and Legacy Portfolios

Fund	R2K PME	Fund IRR	R2K \$Mtch IRR	Fund TVPI
Total PE	0.92	11.87%	15.83%	1.31
Total PE Legacy Portfolio	0.93	11.76%	15.11%	1.35
Total PE Current Portfolio	0.91	12.91%	22.49%	1.15

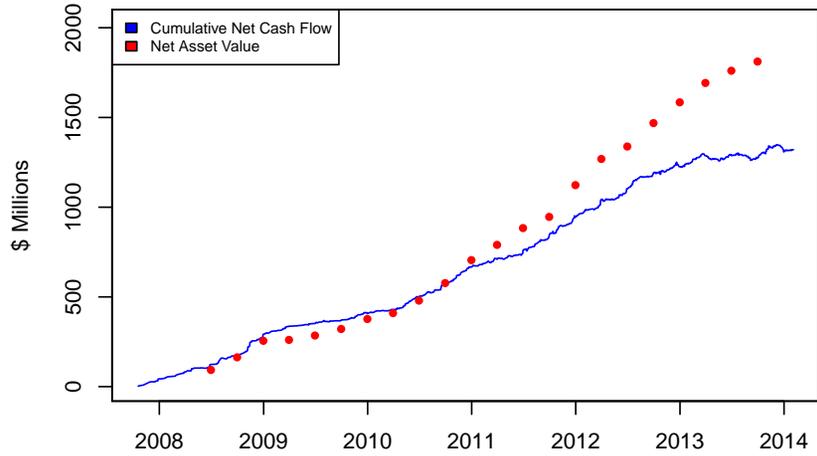
**Private Equity IRRs compared to Russell 2000
Inception through indicated date**



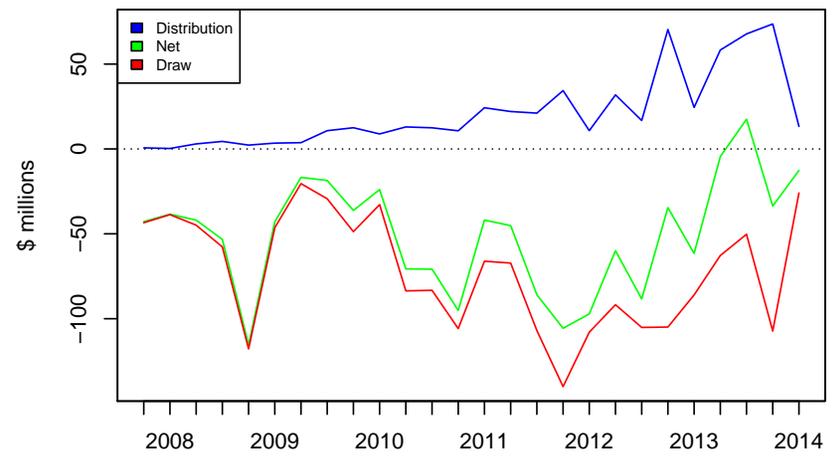
Russell 2000



**Private Equity Cumulative Net Capital Contributed
Compared to Value**



**Private Equity
Quarterly Draws and Distributions**



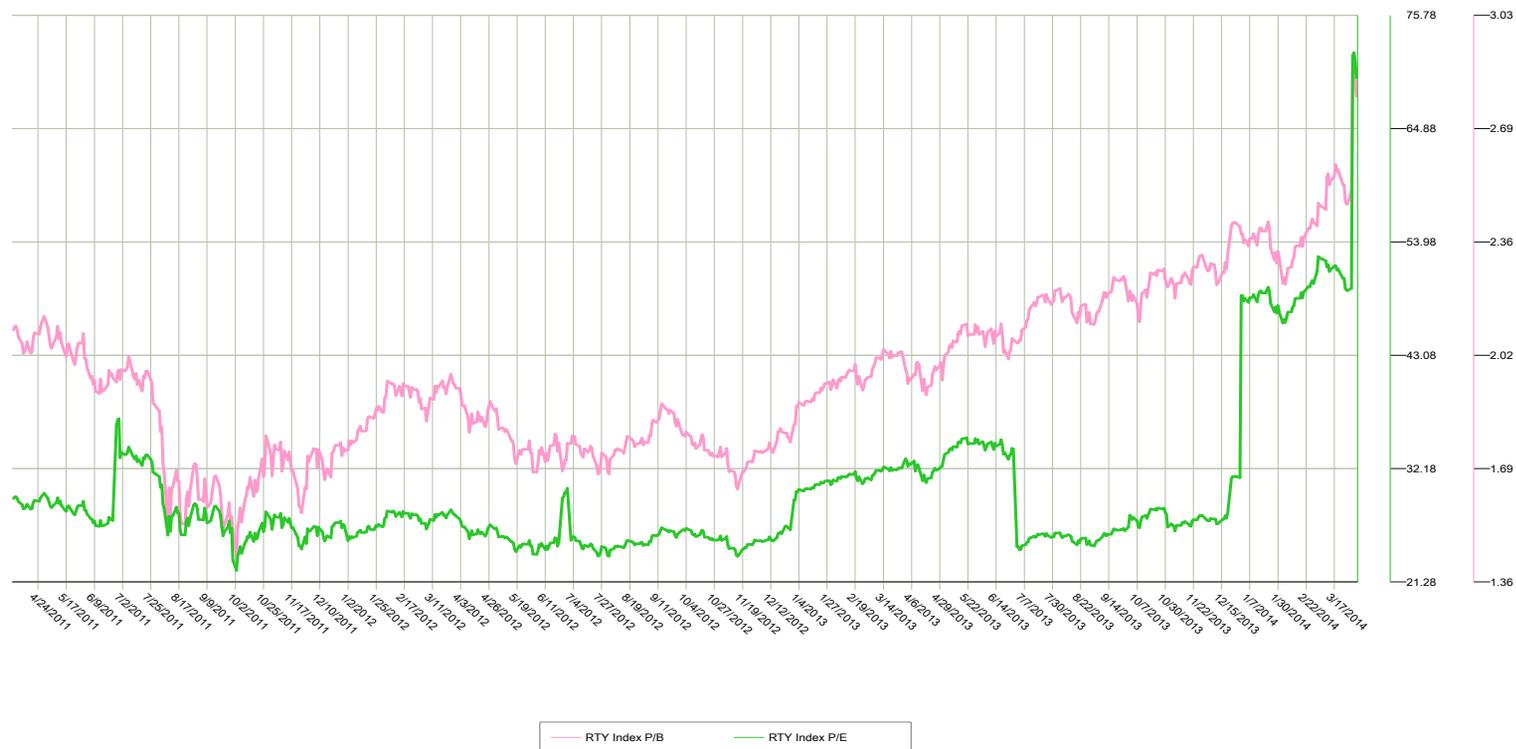
Russell 2000 is at historically high values

Bloomberg

Graphical Financial Analysis

Date Range: 4/4/2011 - 4/4/2014

Periodicity: Daily



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Performance Compared to Other PE

ASRS PE TWRs compared to Burgiss and Thomson One

	# of Funds	One Qtr	One Year	Three Years
ASRS PE	72	3.39%	14.52%	15.50%
Burgiss	1583	3.63%	12.98%	12.38%
Thomson One	222	4.74%	17.30%	15.49%

Arizona State Retirement System

Fourth Quarter Report 2013

Portfolio IRR by Vintage Year Including Benchmarks

As of September 30, 2013

(\$ in millions)

Vintage Year	Commitments as of 12/31/13	Net IRR ²	Venture Economics ¹			Ranking			
			Lower Quartile ³	Median ⁴	Upper Quartile ⁵	4th Quartile	3rd Quartile	2nd Quartile	1st Quartile
2004	\$7.7	22.05%	(0.31%)	4.54%	12.02%				X
2006	50.0	5.69%	1.27%	5.37%	9.68%			X	
2007	415.1	10.00%	5.30%	10.15%	15.37%		X		
2008	754.9	13.24%	6.02%	11.89%	16.69%			X	
2009	386.0	13.76%	6.22%	13.13%	17.69%			X	
2010	370.0	16.14%	5.15%	10.53%	20.66%			X	
2011	602.4	6.43%	(4.48%)	7.98%	13.57%		X		
2012	385.0	30.55%	(20.41%)	(6.92%)	6.41%				X
2013	465.0	(60.77%)	(75.92%)	(22.19%)	13.59%		X		
Total	\$3,436.1	11.89%				0	3	4	2

ASRS Portfolio by Vintage

ASRS Portfolio Commitments by Vintage

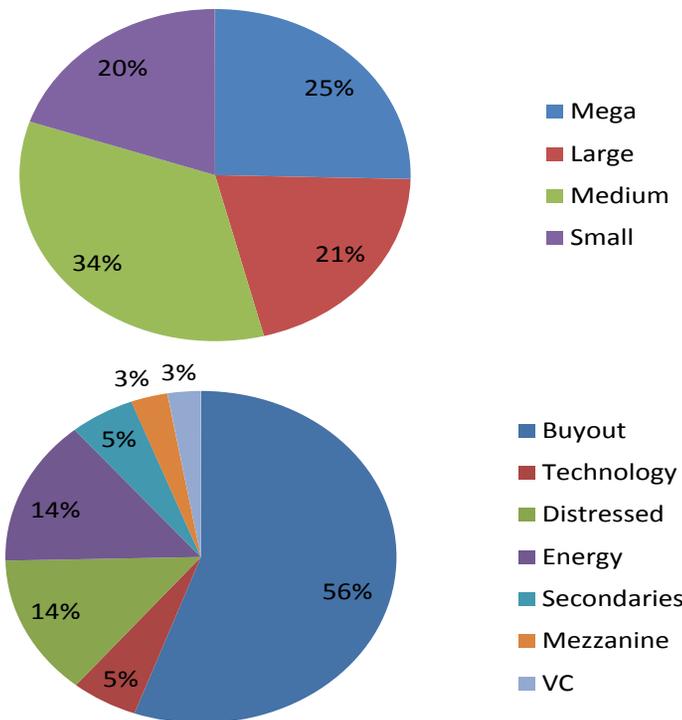
	Commitment \$	# of Funds	Commitment/Fund
2006	50	1	50
2007	483	15	32
2008	680	14	49
2009	386	8	48
2010	355	8	44
2011	659	12	55
2012	350	6	58
2013	515	9	57
	3,143	67	47

ASRS staff will present 1 more fund to the Private Markets Committee in December to bring the total commitments to \$565M

ASRS Commitments by Style

ASRS Portfolio Commitments by Style

	Commitment \$
Total Mega Buyout	462
Total Large Buyout	375
Total Medium Buyout	823
Total Small Buyout	360
Total Buyout	1,735
Total Technology	180
Total Distressed	447
Total Energy	465
Total Secondaries	176
Total Mezzanine	100
Total Venture Capital	90
Total	3,278



ASRS PE Industry Sectors Compared to R2K

ASRS Portfolio Commitments vs R2K

ASRS % Over/Under Weight

