INVESTMENT ADVISORY COMMITTEE MEETING

December 3, 2013

STATE OF MICHIGAN RETIREMENT SYSTEMS
QUARTERLY INVESTMENT REVIEW

R. Kevin Clinton, State Treasurer

Prepared by the Bureau of Investments
Michigan Department of Treasury

INVESTMENT ADVISORY COMMITTEE MEETING

December 3, 2013

Agenda

9:30 a.m.	**Call to Order and Opening Remarks**
9:40 a.m.	**Approval of Minutes of 9/5/13, IAC Meeting**

- **Meeting Dates for 2014**
- **Meeting Topics**

9:45 a.m.	**Executive Summary & Performance for Periods Ending 9/30/13**
10:00 a.m.	**Current Asset Allocation Review**
10:10 a.m.	**Round Table Discussion**
10:20 a.m.	**Review of Investment Reports**

- ***Domestic Equity***
- ***International Equity***
- ***Absolute and Real Return/Opportunistic***
- ***Fixed Income***
- ***Alternative Investments***
- ***Real Estate and Infrastructure***

11:30 a.m.	**Closing Remarks ~ Adjournment**

Reports Received and Filed:

- ***Capital Markets Overview***
- ***Economic and Market Review and Outlook***
- ***Basket Clause***

2014 Meeting Schedule

Thursday, March 6, 2014
Thursday, June 5, 2014
Thursday, September 4, 2014
Tuesday, December 2, 2014

All meetings start at 9:30 a.m.

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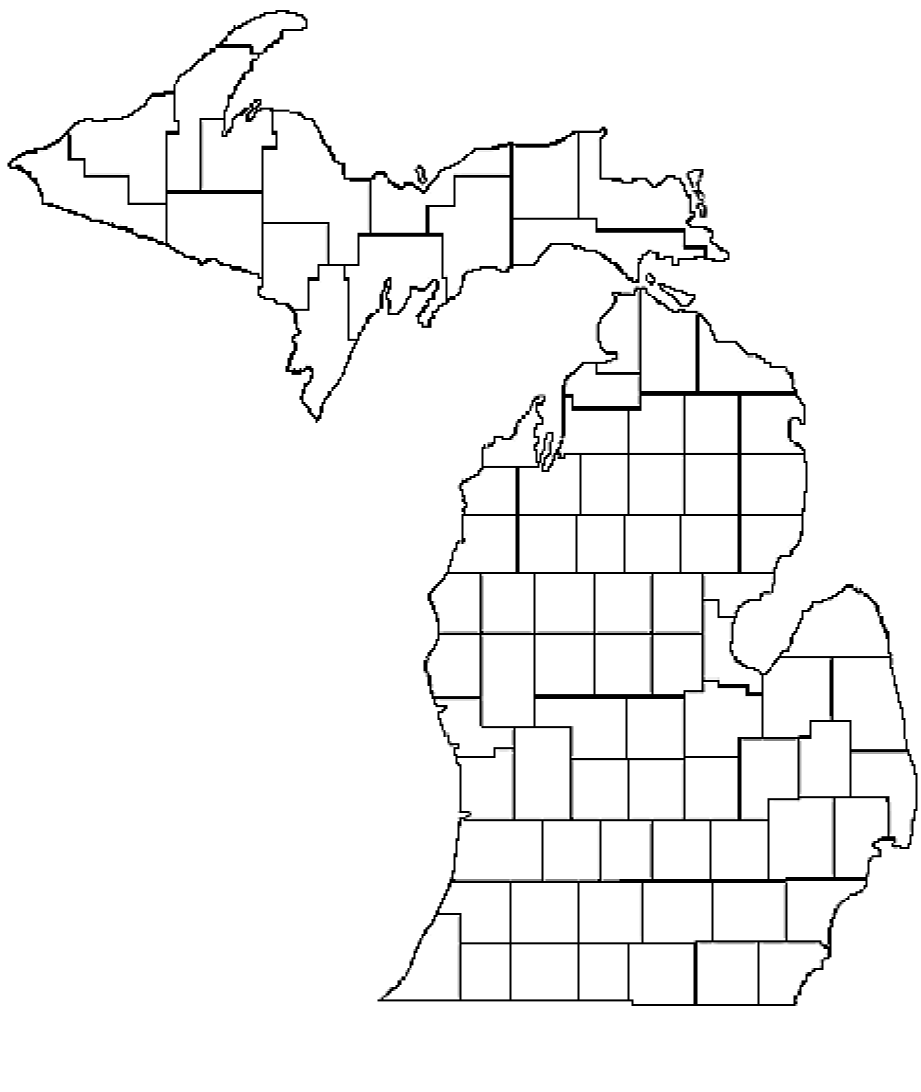
STATE OF MICHIGAN
RETIREMENT SYSTEMS

MINUTES

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

INVESTMENT ADVISORY COMMITTEE

The Investment Advisory Committee (IAC) held its quarterly meeting on Thursday, September 5, 2013, at the Bureau of Investments, Great Lakes Conference Room, 2501 Coolidge Road, Suite 400, East Lansing, Michigan.

Members Present:

Nick A. Khouri, Chairman
L. Erik Lundberg
Steve Arwood, LARA
John E. Nixon, DTMB

In attendance from the Department of Treasury: State Treasurer Andy Dillon, Jon M. Braeutigam, Gregory J. Parker, Robert L. Brackenbury, Peter Woodford, Karen Stout, Brian Liikala, Richard Holcomb, Jack Behar, Jim Elkins, Rick DiBartolomeo, Paul Nelson, Amanda Ellis, Thomas Albert, Giles Feldpausch, Marge McPhee, and Emma Khavari.

Others in attendance: Becky Gratsinger, Jim Voytko, Molly Jason, Mark Guastella, Chuck Abshagen, Joe Curtin, Ryan Austin, Michael Lashendock, and June Morse. Special guest speaker from Principal Global Investors: Randy Mundt.

Call to Order

Chairman Khouri called the September 5, 2013, IAC meeting to order at 9:30 a.m. and thanked everyone for taking time from their busy schedules to attend the September IAC meeting. He began by noting that the agenda was full and included a guest speaker from Principal Global Investors to discuss real estate. Chairman Khouri noted that the S&P is up a good 15%, bonds are up 100 basis points, and the year for the fund has been good through June. He noted that the Board has been reviewing a different asset class at each meeting, with real estate being reviewed at this meeting. He turned the meeting over to Treasurer Dillon.

Treasurer Dillon discussed the anticipated tapering of the Federal Reserve quantitative easing policy with the Board members questioning the impact this will have on the markets and the possibility of hedging or just riding it out. It was noted that one solution was to just ride it out, even though there may be rough spots, as hedging is very expensive. Treasurer Dillon turned the meeting back over to Chairman Khouri.

Approval of Minutes of June 18, 2013

Chairman Khouri asked for a motion to approve the minutes of the June 18, 2013, IAC meeting. Mr. Steve Arwood so moved, seconded by Mr. Erik Lundberg; there were no objections.

Chairman Khouri turned the meeting over to Mr. Jon Braeutigam to discuss the Performance and Executive Summary sections.

Executive Summary & Performance

Mr. Braeutigam briefly discussed the performance of the plan ending June 30, 2013, noting that the return for the plan was 12.2% for the one year, 11.9% for the three year, and 7.4% for the ten year. He noted that there has been a strong performance in absolute return and the stock market has been going up. He reviewed the last ten years, noting that the fund is right on target with peers across the board, with the three year number better than the peers. There was a discussion about high-yield and corporate bonds which alone are unable to provide the required 8% return. So, in order to achieve the target return the portfolio must be diversified with the help from exposure to equities. Mr. Braeutigam also discussed the liability side GASB accounting rule changes which will be in effect in 2014. He noted that there is a challenging gap in the fund between the contributions and the payouts.

Mr. Braeutigam turned the meeting over to Mr. Greg Parker to review the Executive Summary section.

Executive Summary

Mr. Parker began by reviewing the asset allocation sources and uses of cash which provides information on what has been done over the past year in the fund. He noted that over the past 12 months, domestic equity, alternative investments, international equity, and real estate have generated cash, which means investments in these areas were sold. The total net benefit payments were $2.7 billion. There was a discussion about how to manage equity beta in the pension fund making note that many drivers are used to produce the 8% return with a low correlation to the equity markets.

Mr. Parker noted that 60% of the assets are pure equity: private, domestic, and international, which are tied to growth and corporate profits. He discussed another set of asset classes, which are the stabilizing, income producing assets, short-term cash and fixed income. They do not earn a very high rate of return, but are important to making pension payments. There is also a third bucket which helps to diversify: real estate, real return strategies, opportunistic strategies, and absolute return strategies. There was discussion about correlations when the equity market goes down and what has happened in the past when these events occurred.

There was a lengthy discussion about the cash that has to go out, what has to be sold to produce that cash and the source of stability so something that is severely depressed does not have to be sold to produce that cash. Mr. Parker discussed interest rates, which have gone up since the last meeting, and their impact on the economy. While interest rates have risen, corporate spreads/high-yield spreads are pretty much unchanged. He also discussed rate re-price looking at how existing home sales and autos continue to grow noting that the re-price does not seem to have an influence on the overall economy. Also discussed were different scenarios in emerging markets and what is happening at the present time in foreign countries. There were several topics discussed with great input from all in attendance.

Chairman Khouri introduced the guest speaker – Mr. Randy Mundt, President and Chief Investment Officer of Principal Real Estate Investors.

<u>Principal Global Investors Presentation</u> – *Mr. Randy Mundt, President and Chief Investment Officer – Principal Real Estate Investors*

Mr. Mundt introduced himself noting that he is the Chief Investment Officer for Principal Real Estate Investors, which is a subsidiary of Principal Global, which is a subsidiary of Principal Financial Group which is a large insurance and financial services group based in Des Moines, Iowa. He has been with the firm for over 30 years and also sits on the economic committee which develops a house-view of the global and U.S. economies. Mr. Mundt talked about the Fed tapering and its impact on the economy and asset prices, and how it filters its way through to commercial real estate. He also looked at what is behind the tapering itself noting that there is an expectation that in the U.S. economy there will be an upshift in its growth.

Mr. Mundt discussed the nominal and real 10-year Treasury rates noting that there was a negative return during the period of January 2012 to May 2013 for real 10-year Treasuries. The result was that money flowed elsewhere which lowered the cost of capital for other parts of the economy, boosting asset prices, and restoring the household wealth effect. Mr. Mundt talked about global de-synchronization and the economic and political reasons the Fed will let all of the holdings run to maturity. He discussed the space market dynamics and the capital markets which are the two macro forces affecting the real estate market. This includes who is building the buildings, who is leasing them, how much it costs to borrow against real estate, and what are the cap rates. Since the end of the global financial crisis, the U.S. real estate industry has benefitted from strong capital market tail winds. The Fed made it very cheap to borrow against real estate, which pushed cap rates down. Publically traded REITs PE ratios have been pushed up. He noted that things are beginning to change in that until now there have been very strong capital markets, tail winds and very slow recovering space markets with the exception of apartments, which have come back very quickly.

Mr. Mundt discussed the four quadrants of real estate, which is a simple way to categorize strategies, public and private, debt and equity. The public equities are the REITs, which are approximately 150 companies that trade on the stock exchange; on the public debt side would be the commercial mortgage-backed securities which are bonds that are backed by commercial mortgages. He noted the shifting dynamics of capital markets and space market forces with the Fed-driven asset reflection with the economic forces contributing to tapering which should continue to support space market recovery. There were many questions addressed during his presentation and with a great overview of what is presently going on in the real estate industry.

Real Estate

Mr. Brian Liikala provided an overview of what is happening in the real estate portfolio of the fund. He provided a brief history of leverage in the real estate portfolio. Mr. Liikala discussed the two internally managed operating platforms, which compose over 30% of the real estate portfolio, which are the retail operating company and the apartment company. There was a discussion of where the real estate portfolio will be in three to five years and how it will look different than today. Mr. Liikala noted that with longer-term leases caution must be demonstrated with the expectation of the possibility of rising interest rates. He also noted that the medical office space is growing. There was a discussion of what is happening, in general, in real estate referring back to the presentation provided by Mr. Randy Mundt.

Chairman Khouri thanked Brian for his insight in reviewing the real estate portfolio and answering all the questions from the Board members.

Remarks

Chairman Khouri discussed options for topics of discussion for the December IAC meeting, asking that any ideas be sent via e-mail. Also, Mr. Braeutigam noted that he found a discussion from General Petraeus on the whole world view very interesting. Mr. Braeutigam noted that he would find out if it would be possible to arrange a video conference call for a discussion on the U.S. going forward and geopolitical current issues with General Petraeus.

Asset Allocation, Capital Markets Overview, Economic and Market Review and Outlook, Asset Class Investment Reports, and Basket Clause

In the spirit of time, these reports were received and filed.

Next Meeting Date and Adjournment

The next Investment Advisory Committee Meeting is scheduled for Tuesday, December 3, 2013. Chairman Khouri adjourned the meeting at 11:45 a.m. and thanked everyone for coming.

Approved:

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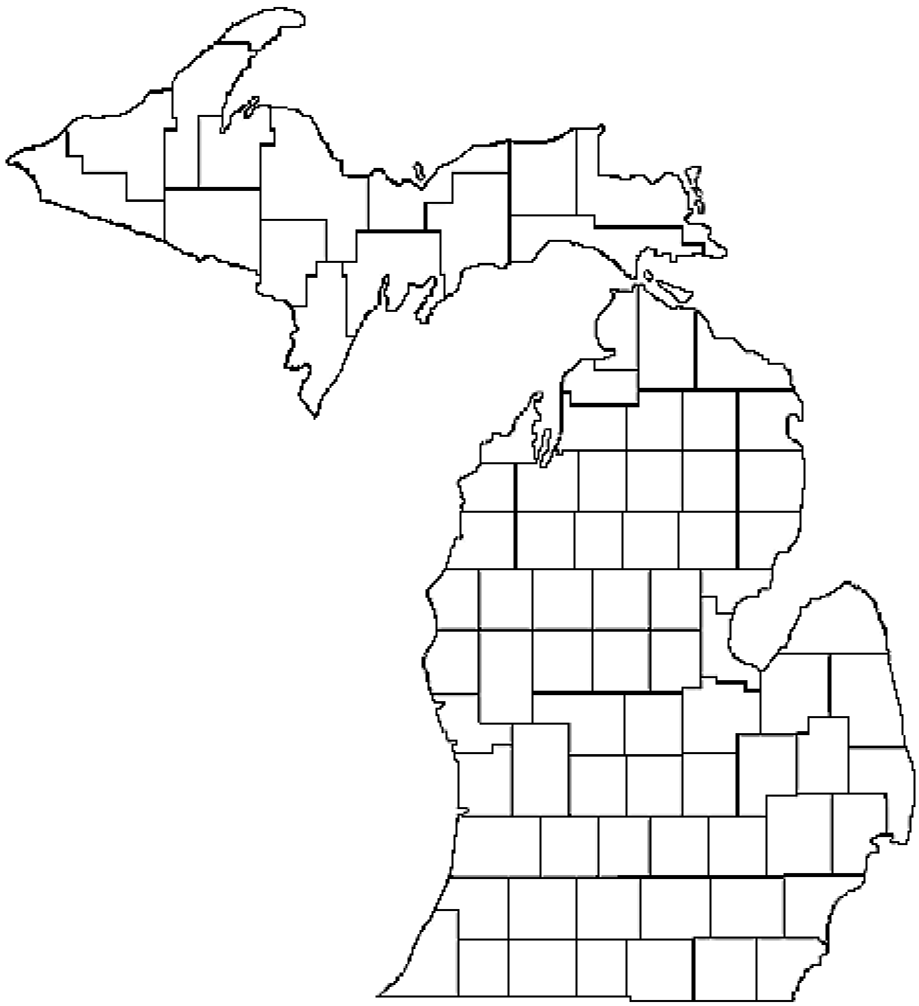
Nick Khouri, Chairman

STATE OF MICHIGAN
RETIREMENT SYSTEMS

EXECUTIVE SUMMARY

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Jon M. Braeutigam
Chief Investment Officer
and
Gregory J. Parker, CFA
Director of Investments – Public Markets
Director of Asset Allocation
Bureau of Investments

EXECUTIVE SUMMARY

December 2013

Performance

Some key performance highlights.

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	12.5%	10.8%	6.8%	5.2%	7.4%
Policy Return	13.7%	11.7%	8.3%	5.6%	7.6%
Peer Median Return	12.7%	10.2%	7.7%	5.4%	7.5%
Rank vs. Peers	52	30	83	61	57

- The plan has had strong absolute performance the past one and three years and over ten years it has achieved a 7.4% return.

- With the strong public equity market, the plan was slightly below its one-year policy return as private equity marks have short-term struggles against a strong public market benchmark. Private equity is a difficult asset class to benchmark, especially over short periods of time and even up to five years. Over longer cycles, such as ten years, private equity has out earned public domestic equity by 6.2% on an annualized basis.

- The plan essentially matched peer returns over the past year, but outperformed over the past three years. A contributor was an over allocation to emerging markets relative to peers. Emerging markets underperformed developed international markets last year by 22.8%. The returns of this asset class are volatile, but the long-term thesis for the positioning remains in place. The plan is underweight peers in long-term fixed income. That asset class lost 1.7% in value over the past year, primarily due to rising long-term interest rates.

Asset Allocation

Using equities to pay benefits, increasing diversifying strategies.

- The combined systems paid out $2.4 billion net of contributions over the past twelve months ending in September.

- The plans put to work $800 million in real return / opportunistic and absolute return strategies over the past year. Over the same time period, domestic equities and alternative investments (private equity) were decreased by $3.2 billion.

- According to State Street peer universe data, the peer median allocation for the long-term fixed income asset class is 23.1% versus the plan's allocation of 12.4%. With the 10-year U.S. Treasury yielding approximately 2.6% and cash yielding approximately 20 basis points (bps), the lower allocation is justified as it will be difficult to earn the target rate of 8% with a higher allocation to fixed income.

- The plans have outstanding capital commitments to fund approximately $6.0 billion in illiquid asset classes, primarily private equity. This figure is approximately 11.0% of the September 2013 market value and is an additional liquidity consideration. By contrast, the current outstanding commitments are roughly $570 million lower than five years ago.

Capital Markets

An update on stocks and bonds.

- The U.S. yield curve is steep. The 10-year U.S. Treasury ended October yielding 2.6%, roughly 0.9% higher than the year prior and 2.25% higher than the 2-year Treasury rate. Investment grade credit spreads are slightly wider than usual, though high-yield spreads are tighter than normal.

- A number of factors influence interest rates, however, it is notable that the 10-year Treasury rate began its trend higher after May 2013 when Federal Reserve Chairman Ben Bernanke first discussed publicly the necessary market conditions required in order to reduce or "taper" the monthly $85 billion quantitative easing policy.

- In contrast to the U.S., Italian and Spanish ten-year sovereign rates are 80 and 160 bps lower than a year ago October. Both had ten-year debt yielding slightly more than 4.0% at the end of October.

- Interestingly, at the end of October Spanish and Italian ten-year sovereign rates are yielding 140 bps more than U.S. Treasuries; however the average daily fluctuations are actually the same for the European countries as the U.S.

- The returns in domestic equities continue to be strong. The broad domestic market index, S&P 1500, returned 28.1% over the past one year ending in October. Over the past one, three, five, and ten years small caps have annually outperformed large caps by 9.3%, 3.3%, 2.8%, and 2.9% respectively.

- Annualized over the past one, three, five, and seven years foreign stocks have underperformed the U.S. by 6.5%, 10.1%, 2.8%, and 3.1% respectively. As of the end of October, emerging markets have trailed developed markets over the past one and three years annualized by 16.1% and 7.5%. Before costs, the currency hedged developed market index outperformed the dollar priced benchmark by 3.3% over the past year ending October.

Economic Backdrop

Developed foreign economies perhaps turn the corner.

- Growth in the U.S. is positive, though tepid. The GDP is growing at a rate of just 1.6% year-over-year. After being decimated during the financial crisis of 2008, jobs growth and housing are bright spots. Though both are still more than a year from being fully recovered. With 1.5 million fewer jobs today than at the peak in 2008, jobs will not be fully recovered until mid-2014 at the current growth rate.

- The economies of major developed international markets, such as Japan and the Eurozone, are struggling to recover from the 2008 financial crisis, though there are signs of hope. It appears that Abenomics has lifted Japan's real GDP back to 2007 levels. Troubled European country Spain has recently exited a two-year long recession while Italy's economy is contracting at a rate much less than expected by economists.

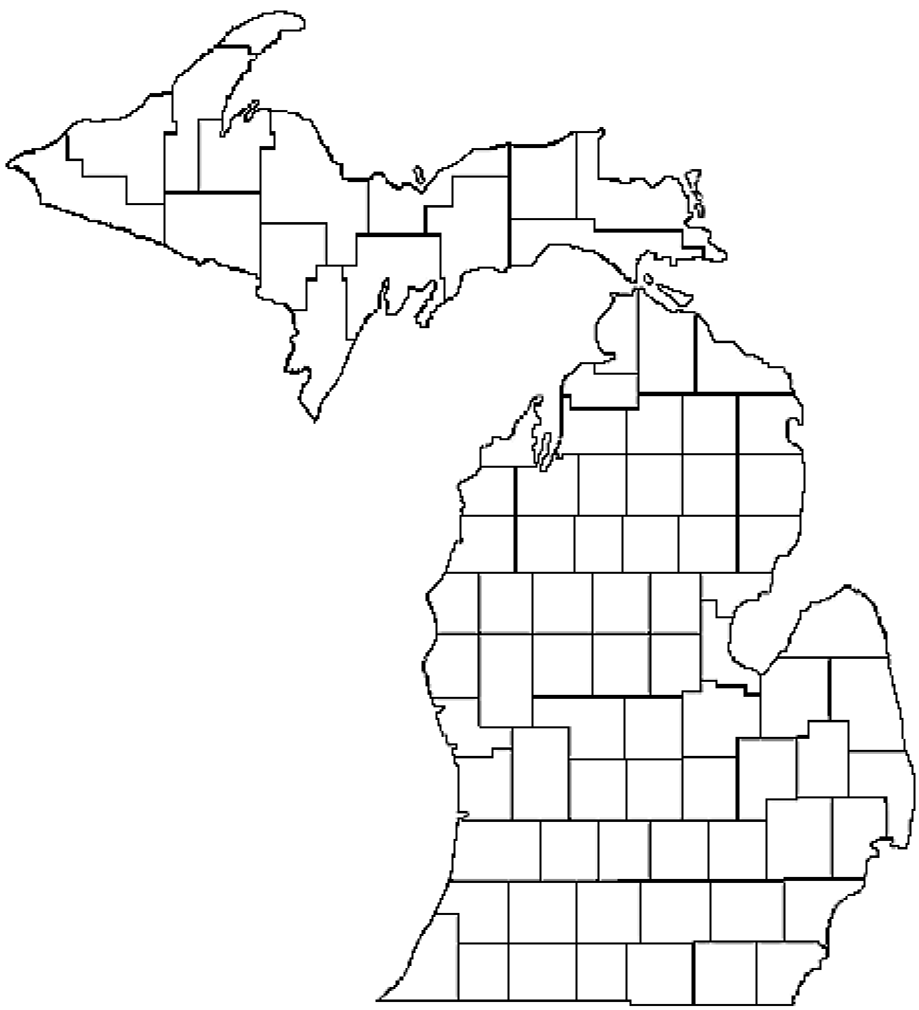
STATE OF MICHIGAN
RETIREMENT SYSTEMS

PERFORMANCE

FOR PERIODS ENDING
SEPTEMBER 30, 2013

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

Bureau of Investments

Mission Statement

The Bureau of Investments continually strives to provide quality investment management services, broad professional expertise, and independent advice to the State Treasurer as fiduciary of the State of Michigan Retirement Systems, and various Michigan trust funds and the State's common cash.

SMRS Goals

Maintain sufficient liquidity to pay benefits.

Meet or exceed the actuarial assumption over the long term.

Perform in the top half of the public plan universe over the long term.

Diversify assets to reduce risk.

Exceed individual asset class benchmarks over the long term.

MPSERS PENSION

Time-Weighted Rates of Return

Periods Ending September 30, 2013

	% of Portfolio 9/30/13	Ten Years[1] Rate	Ten Years[1] Rank	Seven Years[1] Rate	Seven Years[1] Rank	Five Years[1] Rate	Five Years[1] Rank	Three Years[1] Rate	Three Years[1] Rank	One Year[1] Rate	One Year[1] Rank	Current Quarter Rate	Current Quarter Rank
TOTAL PLAN	**100.0**	**7.4**	**57**	**5.2**	**61**	**6.8**	**83**	**10.8**	**30**	**12.5**	**52**	**4.1**	**84**
Median - Greater than $10 Billion[2]		7.5		5.4		7.7		10.2		12.7		5.0	
MPSERS Total Plan Policy		7.6		5.6		8.3		11.7		13.7		4.3	
DOMESTIC EQUITIES	**28.4**	**7.7**	**56**	**5.9**	**52**	**10.4**	**43**	**15.8**	**47**	**21.7**	**41**	**5.7**	**79**
Median[2]		7.9		6.0		10.1		15.7		21.4		6.5	
S&P 1500 Index		8.0		6.0		10.4		16.5		20.4		5.6	
ALTERNATIVE INVESTMENTS	**18.9**	**14.2**	**27**	**10.4**	**25**	**7.8**	**35**	**15.8**	**11**	**14.9**	**40**	**3.5**	**14**
Median[2]		11.4		8.8		7.0		12.3		14.2		2.5	
Alternative Blended Benchmark[3]		11.4		9.7		14.3		21.3		23.5		3.6	
INTERNATIONAL EQUITIES	**15.1**	**7.5**	**73**	**2.0**	**78**	**6.9**	**68**	**7.1**	**61**	**16.3**	**81**	**9.7**	**71**
Median[2]		9.3		3.8		7.4		7.6		19.6		10.5	
International Blended Benchmark[4]		7.2		1.3		5.4		6.4		17.0		10.2	
BONDS	**12.4**	**5.3**	**45**	**6.1**	**19**	**6.8**	**49**	**3.5**	**82**	**-0.2**	**33**	**0.6**	**67**
Median[2]		5.0		5.5		6.7		4.3		-0.9		0.7	
Barclays Aggregate		4.6		5.1		5.4		2.9		-1.7		0.6	
REAL ESTATE	**10.3**	**5.2**	**52**	**1.7**	**53**	**-2.5**	**74**	**11.1**	**65**	**8.2**	**77**	**1.6**	**64**
Median[2]		5.4		1.7		-0.5		11.8		11.5		2.6	
NCREIF - Property Blended Index[5]		7.4		4.2		2.0		11.2		9.6		2.3	
NCREIF Open Fund Index Net		6.1		2.4		-0.2		13.2		12.0		3.4	
REAL RETURN AND OPPORTUNISTIC	**5.0**							**6.6**		**6.6**		**3.1**	
50% (CPI +500bp) + 50% (8% accuarial rate)								7.7		7.1		1.7	
ABSOLUTE RETURN	**4.3**					**0.8**		**5.6**		**10.2**		**1.0**	
HFRI FOF Cons 1 mth lagged						0.1		2.8		6.2		-0.3	
COMMODITY INVESTMENTS	**0.7**							**-1.3**		**-13.4**		**2.5**	
DJ-UBS Commodity Index TR								-3.2		-14.4		2.1	
INFRASTRUCTURE INVESTMENTS	**0.7**									**13.9**		**0.6**	
CPI + 400 bp 3 month lagged										5.8		1.3	
CASH EQUIVALENTS	**4.2**	**1.6**		**1.1**		**0.8**		**0.3**		**0.5**		**0.1**	
1 Month T-Bill		1.5		1.1		0.1		0.1		0.0		0.0	

[1] Annualized Returns

[2] Comparison universe is the State Street Universe comprised of Public Funds greater than $10 Billion on the total plan level and greater than $1 Billion for asset classes.

[3] SP 500 + 300 BP through 12/31/06. Ending market value weighted blend of 10 yr yield + 300 BP and SP 500 + 300 12/31/06 to 9/30/09. Ending market value weighted blend of 10 yr yield + 300 BP and SP 500 + 300 3 month lagged 9/30/09 to present.

[4] International blended benchmark is S&P Developed BMI-EPAC 50/50 prior to 1/1/2010. S&P Developed BMI-EPAC 75 USD / 25 Local, 1/1/2010 to 9/30/10. MSCI ACWI Ex US Gross 10/1/2010 to present.

[5] NCREIF - Property Blended Index is NPI minus 75 basis points prior to October 2005, NPI minus 130 basis points current.

Source: State Street Analytics; the NCREIF - NPI (Property Index) source is NCREIF; the S&P BMI-EPAC Index source is S&P.

MPSERS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 9/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MPSERS	**12.5**	**13.0**	**10.8**	**10.3**	**6.8**	**3.4**	**5.2**	**6.2**	**6.9**	**7.4**
Public Plan - Median (> $10 billion)*	**12.7**	**14.3**	**10.2**	**10.3**	**7.7**	**3.7**	**5.4**	**6.1**	**7.0**	**7.5**
Rank	**52**	**77**	**30**	**55**	**83**	**64**	**61**	**39**	**59**	**57**
bp Difference - Median	**-18**	**-134**	**61**	**0**	**-90**	**-35**	**-20**	**7**	**-8**	**-8**

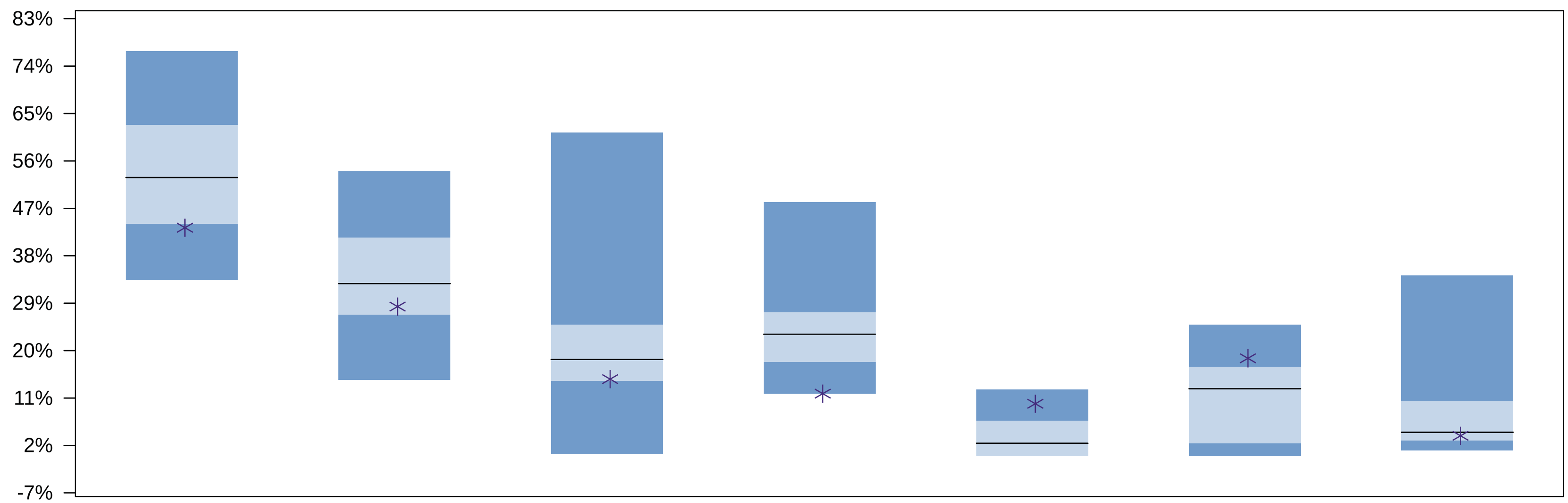
Consecutive For Years Ending

	9/13	9/12	9/11	9/10	9/09	9/08	9/07	9/06	9/05	9/04
MPSERS	**12.5**	**13.4**	**6.6**	**8.8**	**-6.1**	**-12.3**	**17.2**	**12.8**	**12.8**	**12.6**
Public Plan - Median (> $10 billion)*	**12.7**	**15.8**	**2.2**	**10.4**	**0.0**	**-15.1**	**16.6**	**11.0**	**14.3**	**13.0**
Rank	**52**	**85**	**4**	**85**	**87**	**15**	**35**	**16**	**87**	**61**
bp Difference - Median	**-18**	**-240**	**443**	**-158**	**-614**	**285**	**62**	**186**	**-148**	**-42**

*State Street Public Funds Universe > $10 Billion.

MPSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $10 Billion (SSE) - Allocation
9/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	76.83		54.09		61.35		48.20		12.62		24.92		34.29	
25th Percentile	62.84		41.50		24.96		27.32		6.77		16.94		10.43	
50th Percentile	52.86		32.71		18.33		23.11		2.42		12.77		4.51	
75th Percentile	44.10		26.80		14.24		17.87		0.00		2.36		2.91	
95th Percentile	33.43		14.49		0.32		11.88		0.00		0.00		1.09	
No. of Obs	29		29		29		29		29		29		27	
TOTAL PUBLIC SCHOOL	43.71	81	28.74	68	14.97	75	12.22	94	10.30	12	18.93	22	4.21	58

Provided by State Street Investment Analytics

MSERS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 9/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSERS	**12.5**	**12.9**	**10.7**	**10.2**	**6.7**	**3.2**	**5.1**	**6.1**	**6.8**	**7.3**
Public Plan - Median (> $1 billion)*	**13.4**	**14.5**	**10.5**	**10.5**	**8.1**	**3.9**	**5.6**	**6.2**	**7.0**	**7.5**
Rank	**63**	**87**	**43**	**66**	**88**	**74**	**73**	**57**	**64**	**59**
bp Difference - Median	**-84**	**-157**	**19**	**-30**	**-138**	**-70**	**-45**	**-10**	**-17**	**-19**

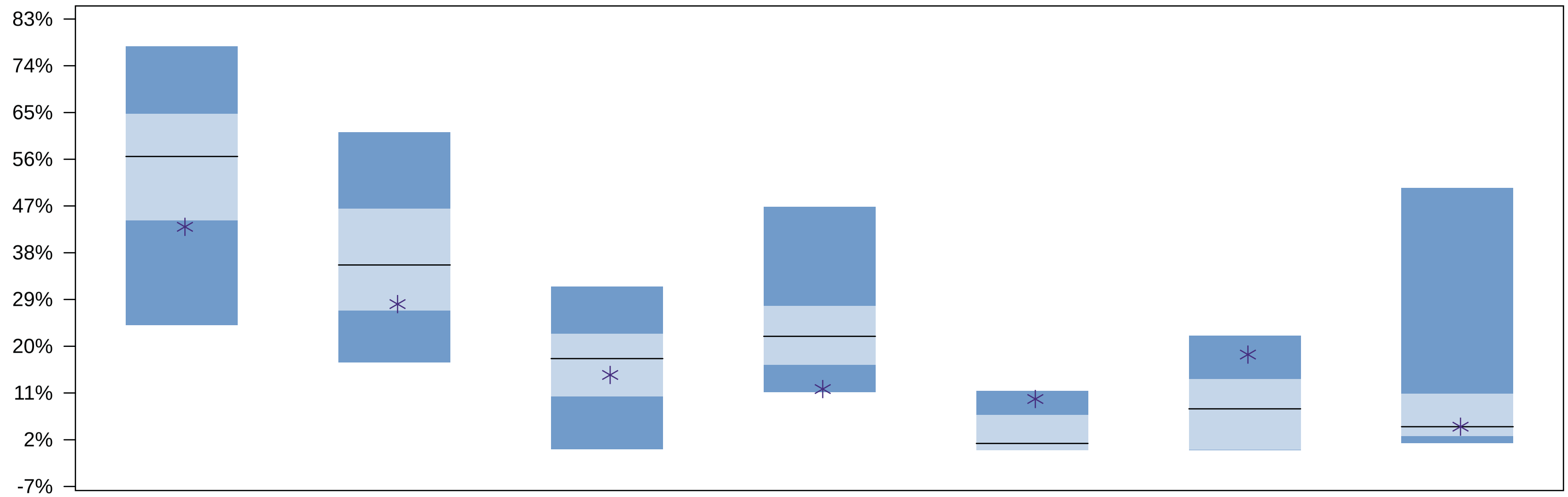
Consecutive For Years Ending

	9/13	9/12	9/11	9/10	9/09	9/08	9/07	9/06	9/05	9/04
MSERS	**12.5**	**13.4**	**6.5**	**8.5**	**-6.3**	**-12.4**	**17.2**	**12.8**	**12.8**	**12.4**
Public Plan - Median (> $1 billion)*	**13.4**	**16.6**	**2.0**	**10.5**	**0.2**	**-14.8**	**16.4**	**10.8**	**14.0**	**12.7**
Rank	**63**	**90**	**5**	**90**	**90**	**21**	**33**	**13**	**84**	**62**
bp Difference - Median	**-89**	**-321**	**441**	**-199**	**-643**	**240**	**81**	**201**	**-120**	**-36**

*State Street Public Funds Universe > $1 Billion.

MSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
9/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	77.74		61.13		31.47		46.81		11.38		22.07		50.48	
25th Percentile	64.76		46.50		22.42		27.79		6.77		13.73		10.90	
50th Percentile	56.53		35.64		17.63		21.92		1.30		7.95		4.51	
75th Percentile	44.23		26.88		10.30		16.46		0.00		0.06		2.66	
95th Percentile	24.08		16.92		0.14		11.20		0.00		0.00		1.39	
No. of Obs	54		54		54		54		54		54		52	
TOTAL EMPLOYEES	43.37	82	28.51	72	14.86	63	12.15	92	10.24	9	18.78	14	4.90	46

Provided by State Street Investment Analytics

MSPRS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 9/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSPRS	**12.4**	**12.9**	**10.8**	**10.2**	**6.6**	**3.2**	**5.2**	**6.1**	**6.8**	**7.4**
Public Plan - Median (> $1 billion)*	**13.4**	**14.5**	**10.5**	**10.5**	**8.1**	**3.9**	**5.6**	**6.2**	**7.0**	**7.5**
Rank	**63**	**88**	**40**	**65**	**90**	**73**	**70**	**53**	**62**	**59**
bp Difference - Median	**-94**	**-165**	**22**	**-28**	**-141**	**-68**	**-41**	**-6**	**-13**	**-15**

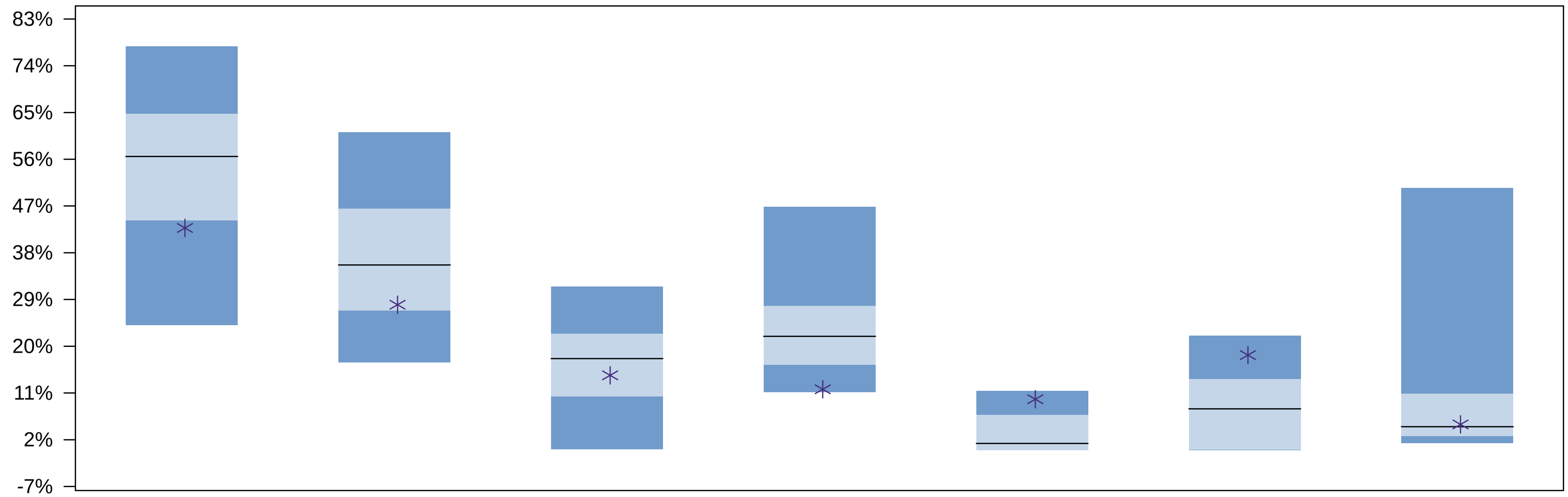
Consecutive For Years Ending

	9/13	9/12	9/11	9/10	9/09	9/08	9/07	9/06	9/05	9/04
MSPRS	**12.4**	**13.3**	**6.7**	**8.5**	**-6.5**	**-12.2**	**17.4**	**12.9**	**12.9**	**12.3**
Public Plan - Median (> $1 billion)*	**13.4**	**16.6**	**2.0**	**10.5**	**0.2**	**-14.8**	**16.4**	**10.8**	**14.0**	**12.7**
Rank	**63**	**92**	**3**	**90**	**90**	**13**	**27**	**11**	**84**	**62**
bp Difference - Median	**-94**	**-334**	**467**	**-200**	**-665**	**264**	**97**	**209**	**-115**	**-37**

*State Street Public Funds Universe > $1 Billion.

MSPRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
9/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	77.74		61.13		31.47		46.81		11.38		22.07		50.48	
25th Percentile	64.76		46.50		22.42		27.79		6.77		13.73		10.90	
50th Percentile	56.53		35.64		17.63		21.92		1.30		7.95		4.51	
75th Percentile	44.23		26.88		10.30		16.46		0.00		0.06		2.66	
95th Percentile	24.08		16.92		0.14		11.20		0.00		0.00		1.39	
No. of Obs	54		54		54		54		54		54		52	
TOTAL POLICE	43.16	82	28.38	72	14.79	63	12.10	92	10.18	9	18.69	14	5.34	46

Provided by State Street Investment Analytics

MJRS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 9/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MJRS	**12.1**	**13.0**	**10.6**	**9.7**	**6.3**	**3.1**	**5.0**	**5.9**	**6.6**	**7.0**
Public Plan - Median (> $1 billion)*	**13.4**	**14.5**	**10.5**	**10.5**	**8.1**	**3.9**	**5.6**	**6.2**	**7.0**	**7.5**
Rank	**73**	**84**	**46**	**76**	**94**	**78**	**78**	**69**	**77**	**77**
bp Difference - Median	**-128**	**-150**	**10**	**-75**	**-174**	**-84**	**-61**	**-28**	**-39**	**-50**

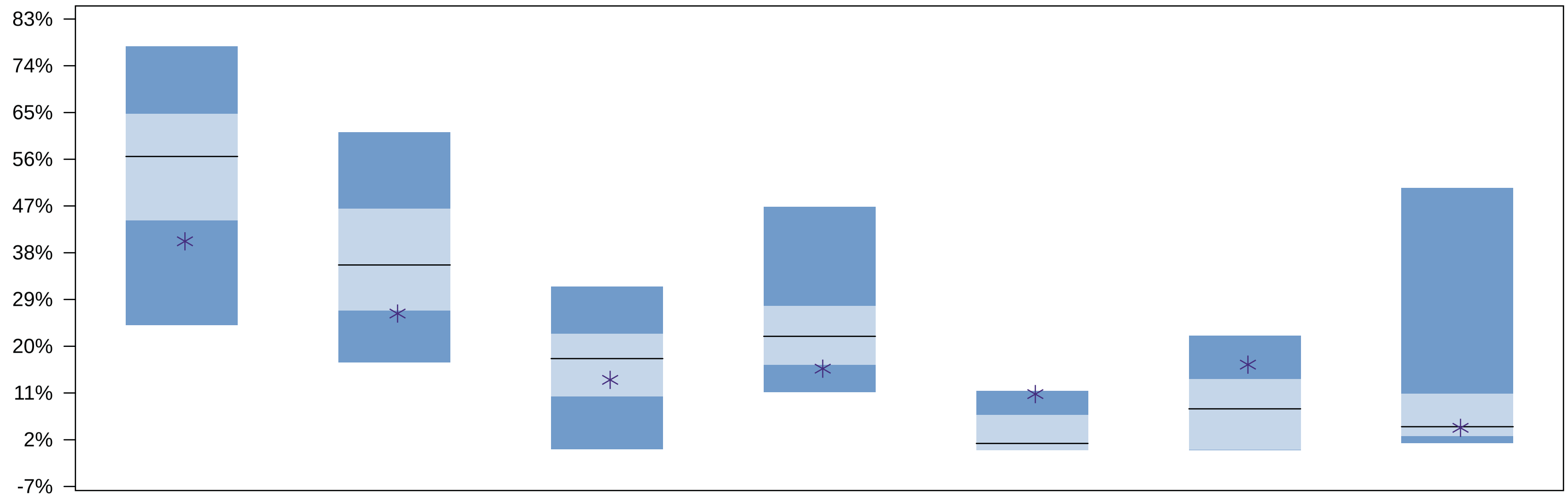
Consecutive For Years Ending

	9/13	9/12	9/11	9/10	9/09	9/08	9/07	9/06	9/05	9/04
MJRS	**12.1**	**13.9**	**6.1**	**7.0**	**-6.4**	**-11.7**	**17.0**	**12.5**	**12.3**	**11.4**
Public Plan - Median (> $1 billion)*	**13.4**	**16.6**	**2.0**	**10.5**	**0.2**	**-14.8**	**16.4**	**10.8**	**14.0**	**12.7**
Rank	**73**	**85**	**7**	**100**	**90**	**8**	**36**	**14**	**88**	**75**
bp Difference - Median	**-128**	**-268**	**402**	**-348**	**-651**	**314**	**58**	**174**	**-178**	**-129**

*State Street Public Funds Universe > $1 Billion.

MJRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
9/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	77.74		61.13		31.47		46.81		11.38		22.07		50.48	
25th Percentile	64.76		46.50		22.42		27.79		6.77		13.73		10.90	
50th Percentile	56.53		35.64		17.63		21.92		1.30		7.95		4.51	
75th Percentile	44.23		26.88		10.30		16.46		0.00		0.06		2.66	
95th Percentile	24.08		16.92		0.14		11.20		0.00		0.00		1.39	
No. of Obs	54		54		54		54		54		54		52	
TOTAL JUDGES	40.59	84	26.67	77	13.92	67	16.06	78	11.18	7	16.85	19	4.68	49

Provided by State Street Investment Analytics

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ASSET ALLOCATION REVIEW

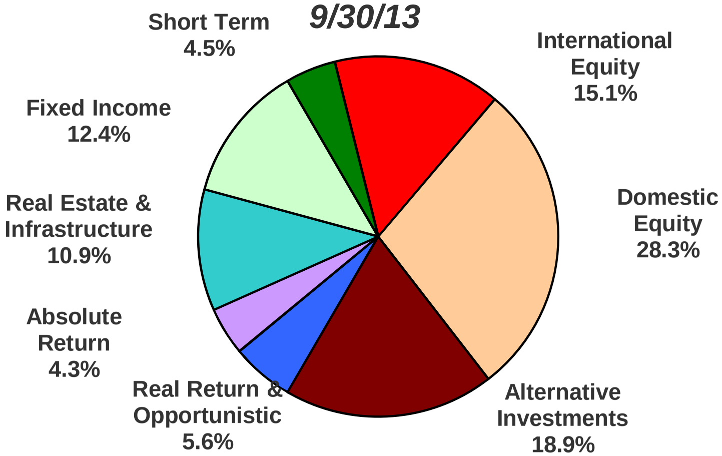
INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013

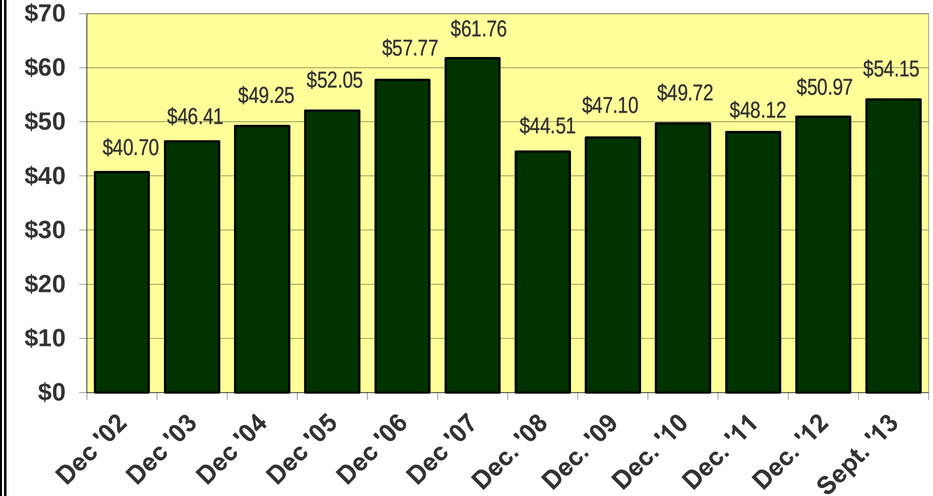
Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

STATE OF MICHIGAN RETIREMENT SYSTEMS
PROFILE - SEPTEMBER 2013

Asset Allocation 9/30/13



Market Value*
(Billions of Dollars)



Asset Allocation By Market Value
(In Millions)

Investment Strategies	9/30/13		6/30/13	
Domestic Equity	$15,341	28.3%	$14,563	27.7%
Alternative Investments	10,217	18.9%	10,254	19.5%
International Equity	8,153	15.1%	7,465	14.2%
Fixed Income	6,711	12.4%	6,672	12.7%
Real Estate & Infra.	5,921	10.9%	5,474	10.4%
Real Return & Opport.	3,047	5.6%	2,935	5.6%
Short Term***	2,421	4.5%	2,904	5.5%
Absolute Return	2,341	4.3%	2,294	4.4%
TOTAL	$54,152	100.0%	$52,561	100.0%

Market Value By Plan ~ 9/30/13
(in Millions)

	Pension Plan Mkt. Value	OPEB** Mkt. Value	Combined Mkt. Value	%
MPSERS	$40,103	$2,091	$42,194	77.9%
MSERS - (closed)	9,902	622	10,524	19.4%
MSPRS	1,133	46	1,179	2.2%
MJRS - (closed)	254	1	255	0.5%
TOTAL	$51,392	$2,760	$54,152	100.0%

Short Term Equivalents (in Billions)

Short Term Strategy***	$2.4	
Short Term in Other Inv. Strategies	0.7	
TOTAL SHORT TERM	$3.1	5.7% of Total Funds

18th Largest DB Public Pension Fund in the U.S.
21st Largest DB Pension Fund in the U.S.

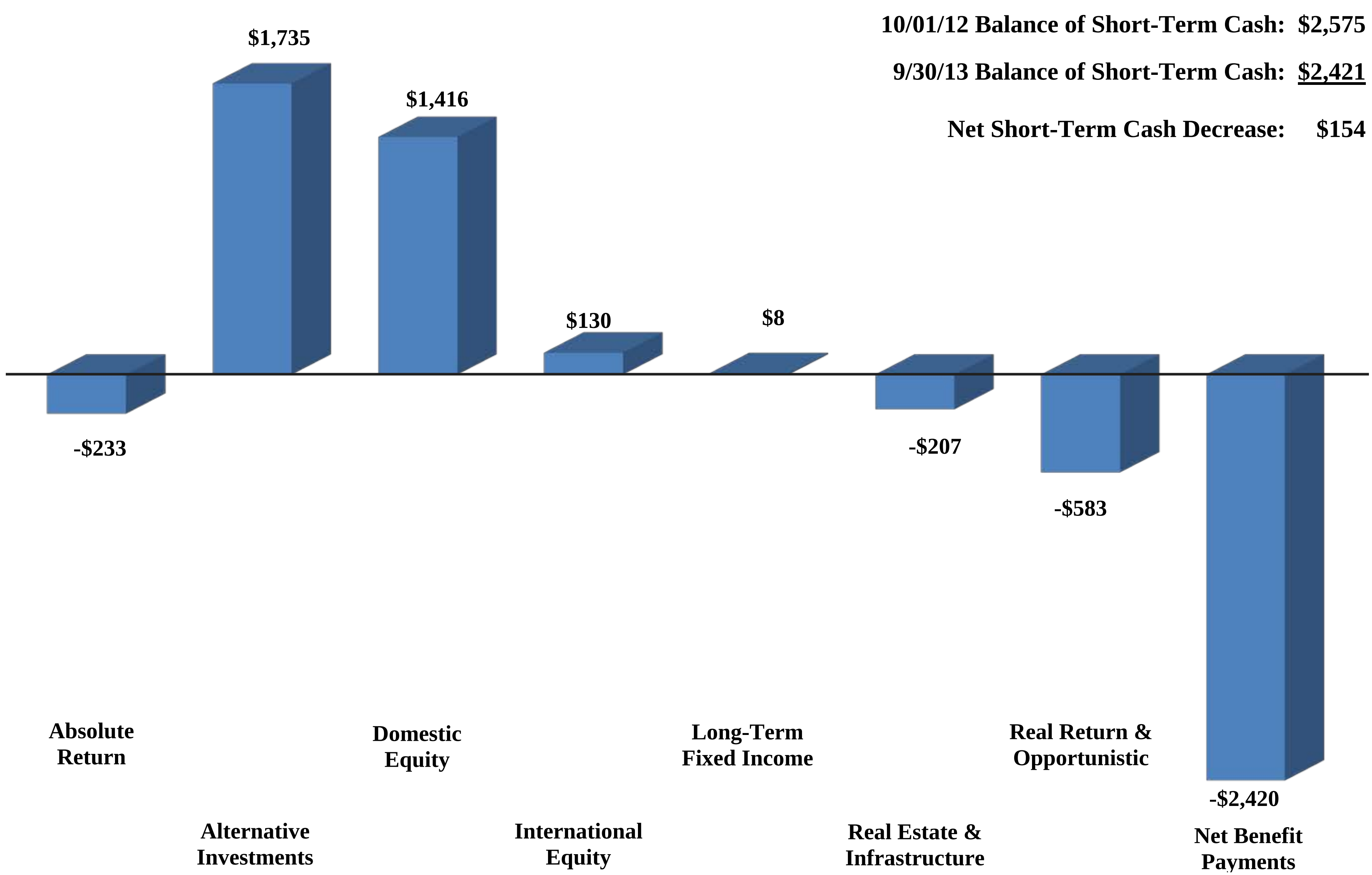
Pensions & Investments Survey - February 4, 2013 Issue

**The combined net payout for the plans for FY2012 was $3.16 billion (SOMCAFR). This represents the amount paid to beneficiaries in excess of employer and employee contributions.*

***OPEB - Other Post Employment Benefits*

Sources and Uses of Cash

October 2012 ~ September 2013



A negative number in an asset category indicates a use of cash, a positive number indicates a source of cash.

Dollars in millions

Asset Allocation Targets

	MPSERS			MSERS			MSPRS			MJRS			SMRS
Asset Class	***Actual 9/30/13***	***Target 9/30/14***	***Target* 9/30/15***	***Actual 9/30/13***	***Target 9/30/14***	***Target* 9/30/15***	***Actual 9/30/13***	***Target 9/30/14***	***Target* 9/30/15***	***Actual 9/30/13***	***Target 9/30/14***	***Target* 9/30/15***	***Ranges***
Broad U.S. Equity	28.5%	30.0%	31.0%	28.2%	30.0%	31.0%	28.2%	30.0%	31.0%	26.4%	28.0%	29.0%	20% - 50%
Alternative Invest.	18.9%	17.5%	16.0%	18.8%	17.5%	16.0%	18.7%	17.5%	16.0%	16.8%	15.5%	14.0%	10% - 25%
Broad Int'l Equity	15.1%	15.5%	16.0%	15.0%	15.5%	16.0%	14.9%	15.5%	16.0%	14.0%	14.5%	15.0%	10% - 20%
U.S. Fixed Income Core	12.4%	14.0%	15.0%	12.3%	14.0%	15.0%	12.3%	14.0%	15.0%	16.3%	18.0%	19.0%	10% - 25%
Real Estate Core	10.3%	8.0%	6.0%	10.2%	8.0%	6.0%	10.2%	8.0%	6.0%	11.2%	9.0%	7.0%	5% - 15%
Real Return / Opportunistic	5.6%	5.7%	5.0%	5.6%	5.7%	5.0%	5.5%	5.7%	5.0%	5.6%	5.7%	5.0%	0% - 10%
Absolute Return	4.3%	4.3%	4.0%	4.3%	4.3%	4.0%	4.3%	4.3%	4.0%	4.3%	4.3%	4.0%	0% - 12%
Cash	4.2%	4.0%	4.0%	4.9%	4.0%	4.0%	5.3%	4.0%	4.0%	4.7%	4.0%	4.0%	1% - 9%
Infrastructure	0.7%	1.0%	3.0%	0.7%	1.0%	3.0%	0.6%	1.0%	3.0%	0.7%	1.0%	3.0%	0% - 5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

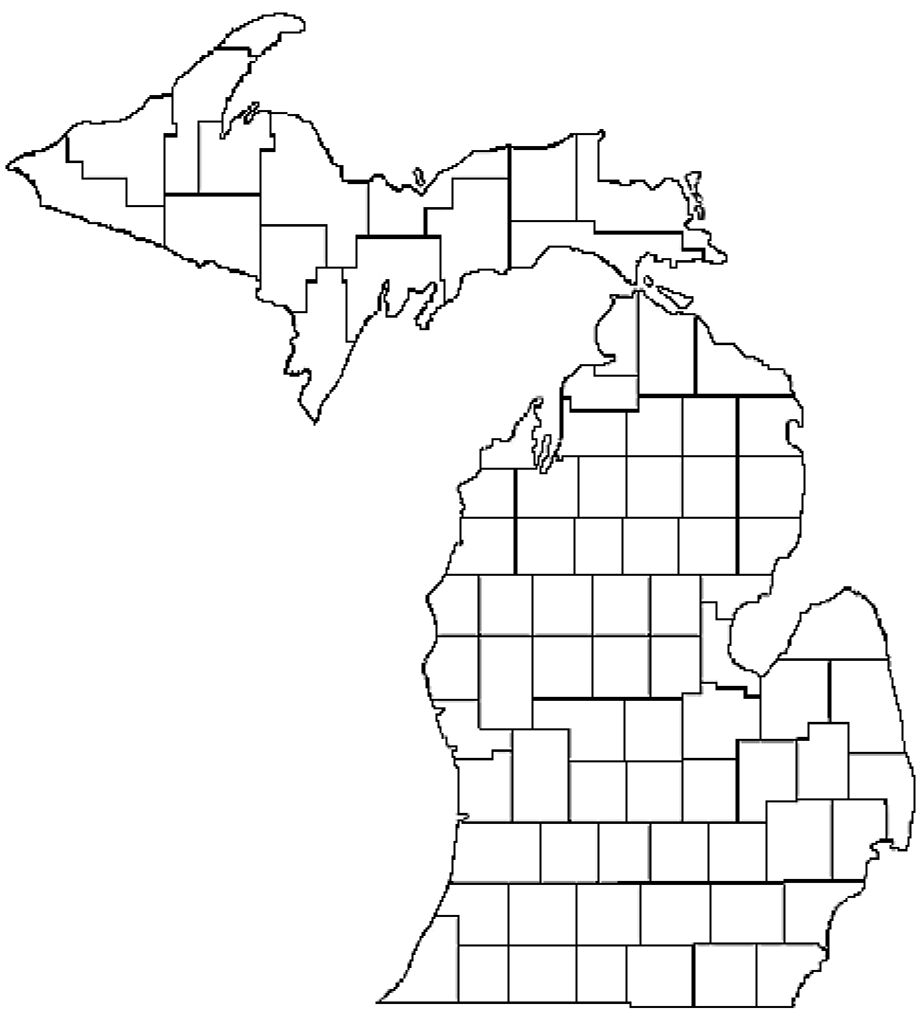
***Complies with basket clause and international restrictions.**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

CAPITAL MARKETS OVERVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Gregory J. Parker, CFA
Director of Investments – Public Markets
Director of Asset Allocation
Bureau of Investments

CAPITAL MARKETS

Return and Risk Assumptions, Benchmark and Outlook

A starting point.

MPSERS Plan	Assumed Return* (Arithmetic)	Standard Deviation*	Trailing 10-Year (Benchmark**)	Tactical (Short Term) Expectations***
Private Equity	11.8%	30.3%	11.4%	Trim
International Equity	8.7%	20.8%	8.8%	Add
Domestic Equity	7.9%	18.0%	8.0%	Trim
Infrastructure	7.4%	13.8%	6.4%	Hold
Real Estate (Core)	7.0%	12.5%	7.4%	Trim
Real Ret/Opportunistic	6.0%	11.5%	6.2%	Hold
Absolute Return	6.8%	9.8%	4.5%	Hold
Long-Term Fixed	3.5%	5.8%	4.6%	Hold
Short-Term	2.3%	3.0%	1.5%	Hold

*RV Kuhns 2013 Long Term Return/Risk assumptions
**2012 Investment policy statement; annualized returns
***Actual investments may differ due to changing conditions and the availability of new information

Overview

An improved outlook for developed international.

- The US equity market returns were strong over the past year ending September 2013, up 16.5%. Small caps were especially strong, beating large caps by more than 4%. Overall U.S. equity valuations are better than bonds but earnings need to come through. Small cap valuations are stretched and look especially vulnerable.

- The economic backdrop for developed international markets is improving; Japan is stimulating through monetary and fiscal policy, while the recession in Europe appears to be ending. Developed non-U.S. markets trade at a discount to the U.S. and the price trend of this market is favorable. Emerging market multiples on the other hand are similar to the U.S., the price trend is weak, and there is not the simulative policies of developed markets to act as a catalyst.

- Long-term US interest rates backed up with the prospect of tapering the QE program, but settled back down some after it was delayed in September. Although the yield curve is steep, credit risk appears to be the better bet especially with the U.S. economy showing continued improvement and the Federal Reserve continue to support markets.

- Valuations in the commercial real estate market are full in some areas, though opportunities are selectively available. The public REIT market showed its vulnerability to rising interest rates during the second and third calendar quarters of 2013. REITs are fairly priced against the 10-year U.S. Treasury, but appear expensive on other valuation metrics.

- Despite the easy monetary policies globally, inflation has not materialized and is not expected to do so in the near future; the latest CPI reading is 1.8%. Because of these facts, inflation oriented strategies (such as real return, commodities, infrastructure, etc.) will be targeted selectively.

Domestic Equity

The run higher continues.

- The bull market in domestic equities remains powerful. The broad domestic market index, S&P 1500, returned 20.4% over the past year and 16.5% over the past three years ending September. For the first time since 1995, all ten S&P sectors are on pace to return double-digit rates of return for the calendar year. As of the end of October, the bull market is the tenth longest on record to go without at least a 10% market correction.
- Domestic equity remains attractively priced relative to bonds, though less compelling than a year ago. Valuation metrics are mixed meaning there is uncertainty whether the absolute returns over the next cycle will be as strong as the historical average. Analysts are looking for earnings growth to validate the increase in stock prices. The price trend has re-accelerated higher though, suggesting the market might continue to trend higher in the near-term with or without the support of improving fundamentals.
- As intra-stock correlations have normalized, active strategies are having success against the passive index over the past year ending September. The MPSERS combined domestic equity active component outperformed the S&P 1500 by 2.2%. Over the past three years, the active component is behind the benchmark by roughly 100 basis points per year and about even for the past five years.

International Equity

Developed international looks interesting.

- International Equities continue to underperform domestic. Over the past one, three, five, and seven years ending June, the broad international market index, MSCI ACWI ex USA, underperformed the domestic S&P 1500 index by 2.2%, 5.4%, 2.4%, and 1.9% annualized respectively.
- Within International Equities, over the past one and three years ending in June, emerging markets have underperformed developed markets annualized by 18.4% and 8.1% respectively. The plan increased its weight to emerging markets at the beginning in the fourth quarter of 2012 and due to the magnitude of the underperformance to date, the relative returns and peer rankings have suffered.
- The plan is slightly underweight international equities relative to the strategic policy (15.1 vs. 16.0) as well as to a global benchmark (approximately 35% vs. 50%). The plan is also slightly underweight peers; 15.1% vs. 18.3%. Emerging market exposure is approximately 23.5% of total international equity which is a modest 2.4% overweight.
- The economic backdrop of most foreign developed countries has shown some improvements. This is especially true in Europe where Spain, for example, announced in October its first economic expansion in the last two years. Japan is aggressively fighting deflation with a quantitative easing program that is 2.4X larger than what the U.S. Federal Reserve has implemented when adjusting for the relative size of the economy.
- Based on a price to earnings valuation multiple, developed international equity markets trade at a 30% discount to the U.S. counterparts, while emerging markets trade at similar to slightly higher than U.S. multiples.
- Perhaps due to the monetary stimulus, improving economics, and lower valuations, the price trend (measured in local currency) of developed international markets is the best it has been since 2007, nearly six years. The trend in prices for emerging markets is still neutral to slightly bearish.

Interest Rates

Assessing opportunities in fixed income.

- On July 24, 2012 the ten-year U.S. Treasury closed at its low rate of 1.39%. Just over a year later on September 5, 2013 the rate hit a two-year high; closing at 2.99 before settling back down to end October at 2.6%.
- As compared with historical spikes in interest rates, this latest episode is (so far) just mediocre. Since the apex in the 10-year U.S. Treasury rate in 1981, rates have been in a secular decline. During past notable bounces off the bottom, rates have typically increased 2-3% before eventually settling back down to new lows.
- Italian and Spanish 10-year sovereigns ended October yielding roughly 4%. Those rates are nearly a full 200 bps lower than a two years ago though140 bps higher than U.S. 10-year Treasuries. Interestingly, for the first time since the European debt crisis began, at the end of October the variability of the daily yield changes on the European sovereigns was at the same level as the U.S. rate. In other words, for similar levels of (price) risk, Spanish and Italian debt offers an additional 140 bps of yield.
- The yield curve is steep as measured by the difference between the ten and two-year U.S. Treasury rates. These rates rank in the top decile in terms of steepness since 1977 increasing the opportunities to "ride down the yield curve".
- Investment grade credit spreads at the end of October are about 20 basis points wider than average. On the other hand, high yield spreads are 55 bps lower than normal.
- The index's sensitivity to changes in interest rates has increased over time as measured by the modified adjusted duration. **At the end of September, the Barclays Aggregate Index had duration of 5.2**.

Real Estate

Need to be selective at these valuations.

- The returns in publicly traded FTSE Nareit REIT Index were weak during the third calendar quarter, down 2.6%. Over longer periods, though, the index has performed well. For the period ending October, the FTSE Nareit Index has returned annualized 11.2%, 12.6%, and 15.4% over the past one, three, and five years respectively.
- Privately held real estate normally lags the REIT index by one year. Because of this fact, the plan's real estate returns should continue to see positive returns though valuations (cap rates) are a question.
- The REIT index is fairly priced relative to bonds; however, other valuation metrics indicate that the index is expensively priced. In other words, this index is cheap relative to bonds; however, it is expensive in the sense that it is not expected to deliver high absolute returns over the longer term.
- The price trend of the FTSE Nareit REIT Index is flattening and this indicates that the index returns could be modest going forward. Selective private market transactions take time to execute and could still make long-term sense, however caution is warranted.

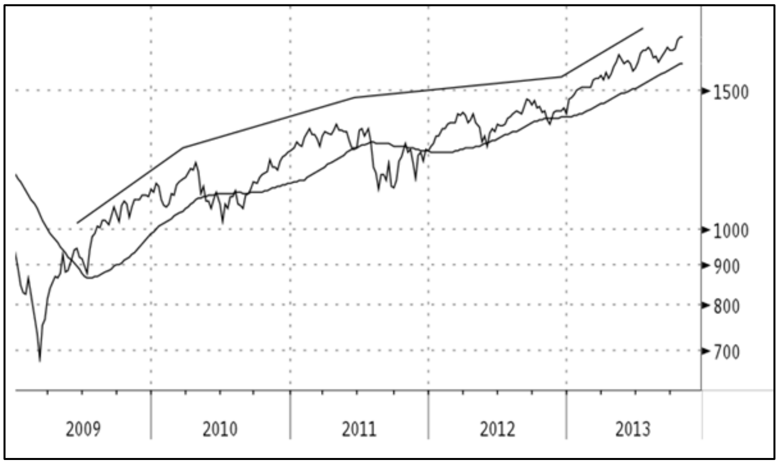
Commodities

No inflation to be found here.

- The price trend of commodities in general, as measured by the ThompsonReuters / Jeffries CRB Index, continues to show weakness.
- Allocations to real return strategies have focused on production, or relative value strategies rather than a bet on the direction of the underlying commodity market.

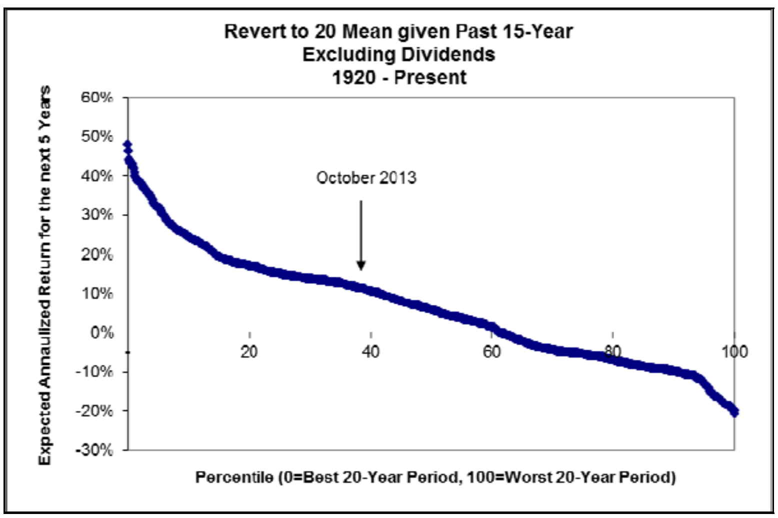
Domestic Equities

S&P 500 – 12/31/08 – 10/31/13



- At the beginning of 2012, the S&P 500 price broke out above the 200-day moving average.
- At the beginning of 2013, the price trend re-accelerated upward.
- The market hit its all time highs during the quarter.
- The technical backdrop is positive and upward sloping.

Returns Based Outlook



- Since 1920, the median 20-year price return for the S&P 500 is 185% or 5.4% annualized.
- The S&P 500 has increased by 70.1% over the past 15 years.
- Using the 20-year median price return as a projection, the S&P 500 price return would be 10.9% over the next 5 years based on the previous 15-year return.

Earnings Based Outlook

5-Year Scenerio	Price Return Estimate	Total Return Estimate
Super Bull	18.3%	21.8%
Bull	7.5%	11.7%
Base	0.3%	3.8%
Bear	-10.0%	-7.4%
Super Bear	-17.5%	-15.2%

Assumptions

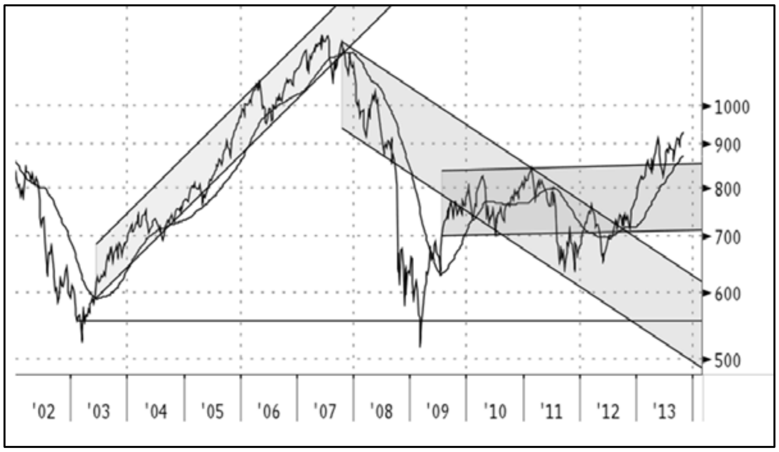
	2018 Earnings	2018 P/E Ratio	Dividend Payout
High	$159	25.0	62%
Mid	$112	15.5	54%
Low	$65	10.0	42%

Based on Robert Shiller data

International Equities

Developed Markets

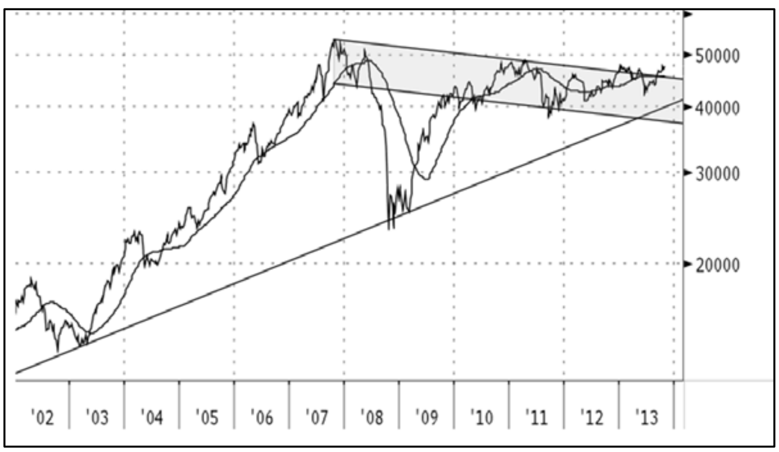
MSCI EAFE – 12/31/01 – 10/31/13



- The developed international equity market, represented by the MSCI EAFE Index, is now above its 2009-11 price channel.
- The technical backdrop for developed international markets is good and without resistance.

Emerging Markets

MSCI Emerging Markets – 12/31/01 – 10/31/13



- The "V-shaped" recovery in emerging markets began in 2008. However, the rate of appreciation has slowed since late 2009.
- The upward sloping price trend established in 2002 is still intact.
- The trend since 2007 has been price weakness; however, the price remains at the high end of the range.

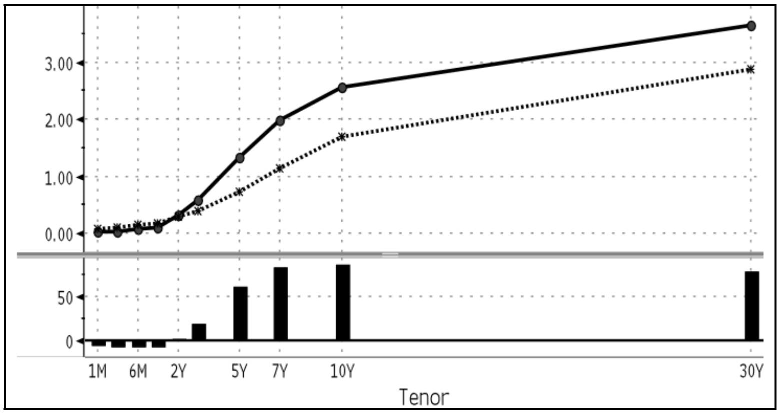
Count of Markets Priced
Below a 200-Day Moving Average

	Developed	Emerging
October 31, 2013	1	7
December 31, 2012	0	0
December 31, 2011	5	2

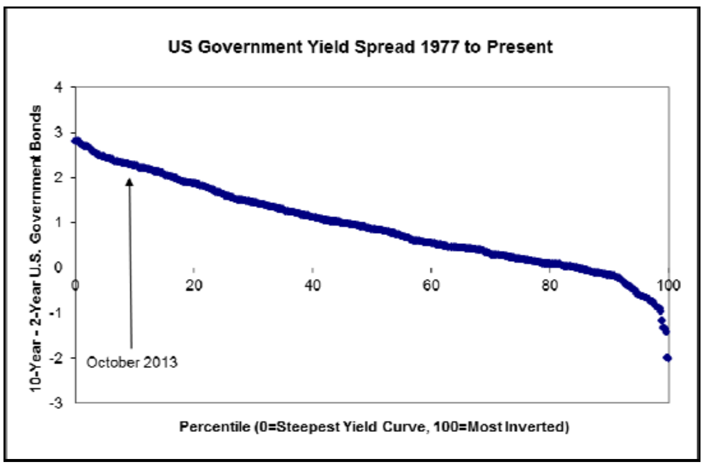
Prices above/below a 200-day moving average is a proxy for the near term direction of the stock market.

U.S. Cash and Fixed Income

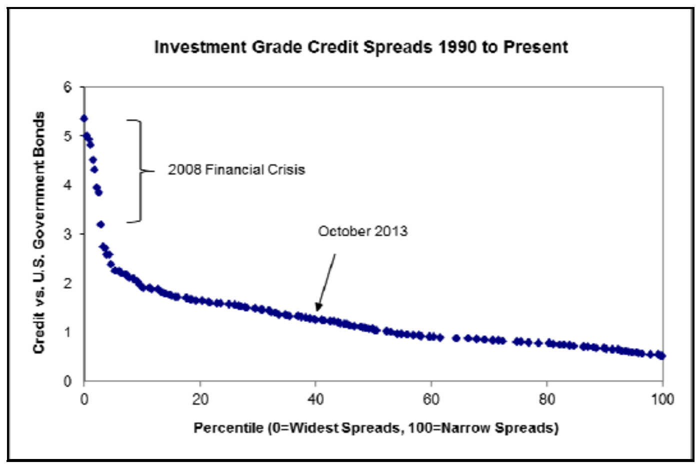
10/31/12 – 10/31/13



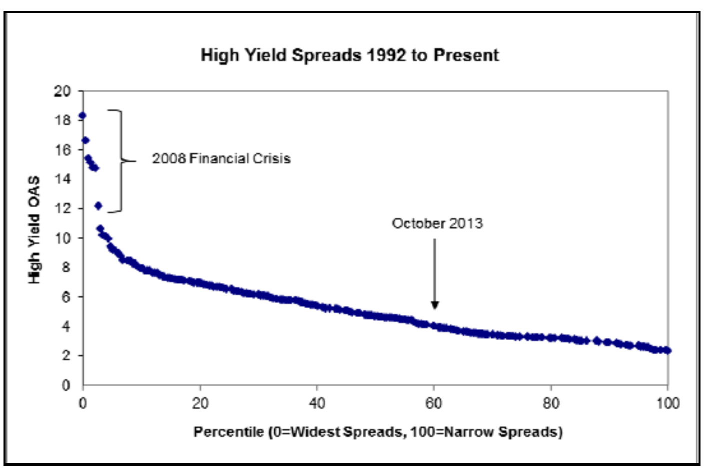
- Rates are roughly 85 bps higher year-over-year especially at the long end.
- Rates at the short end are still very low.



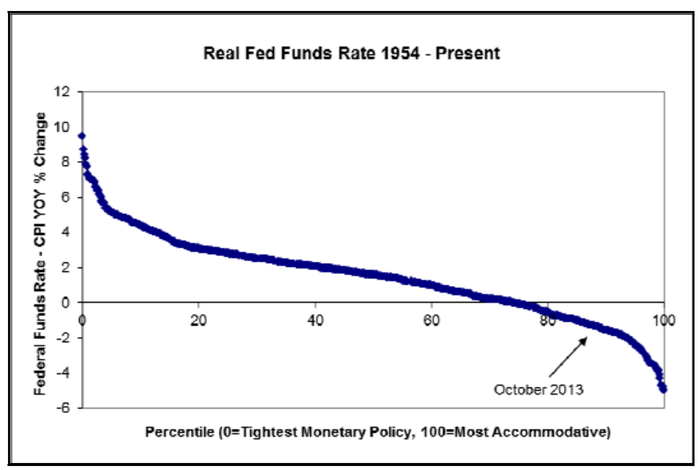
- The yield curve is steep.
- 90 bps of flattening to get to average.



- IG credit spreads are slightly elevated.
- Spreads are 20 bps above the historic average.



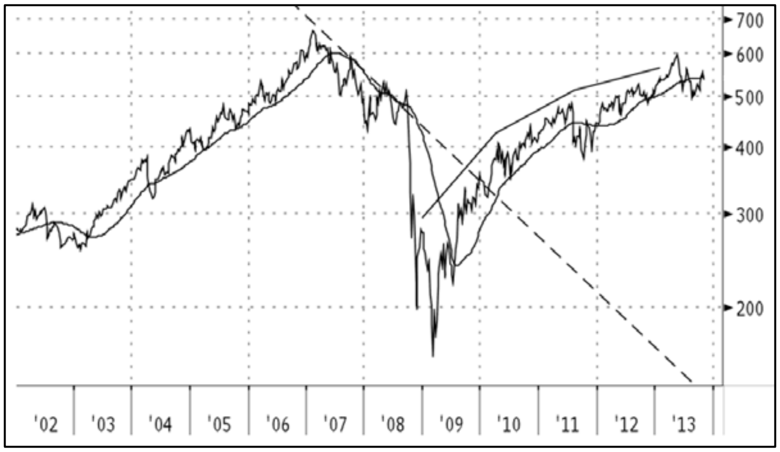
- High yield spreads are 55 bps below their historic average of +4.7%.



- The Fed maintains an extremely accommodative stance.
- The Fed has announced its intention to keep rates low through mid-2015.

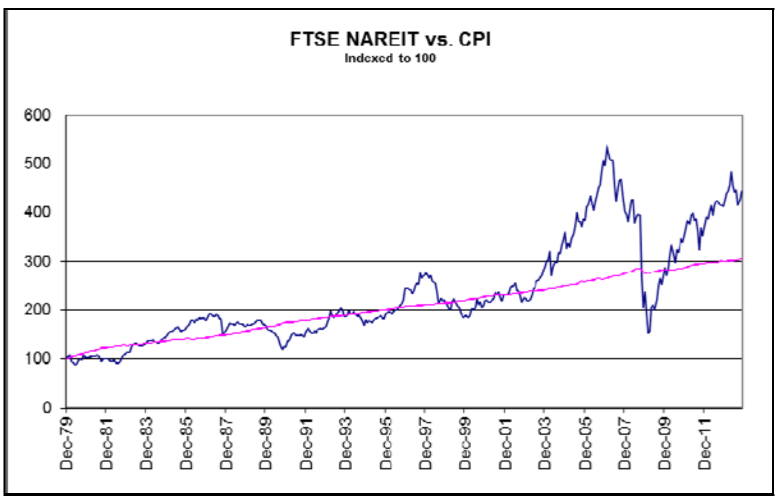
U. S. Real Estate

FTSE NAREIT Index – 12/31/05 – 10/31/13

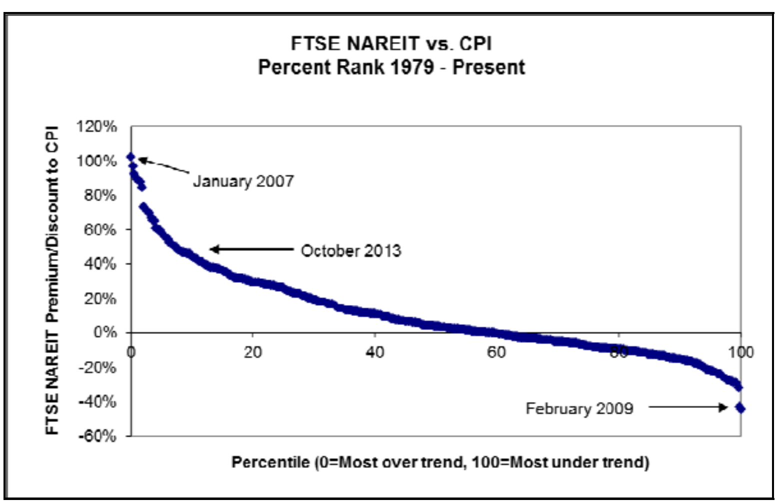


- Commercial real estate represented by the FTSE NAREIT Index has rebounded strongly since the first quarter of 2009 and has been trending up.
- The index price is at its 200-day moving average.
- The trend rate of price appreciation has moderated, and the technical backdrop for REITs is neutral.

Return Outlook

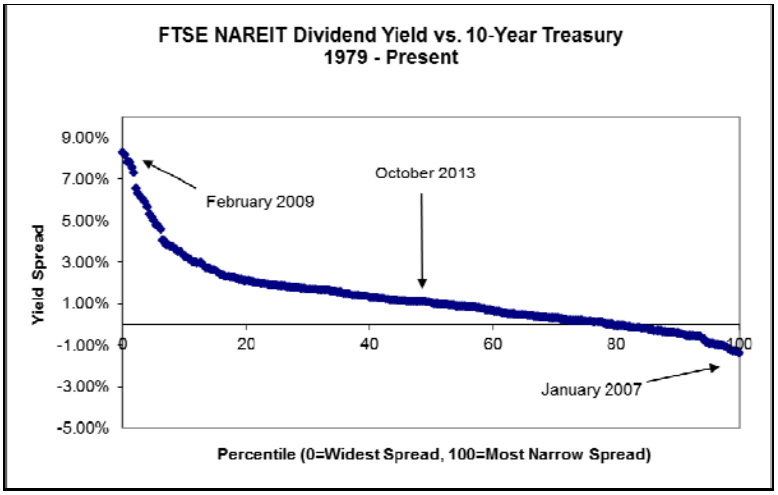


- REITs prices have trended around CPI.

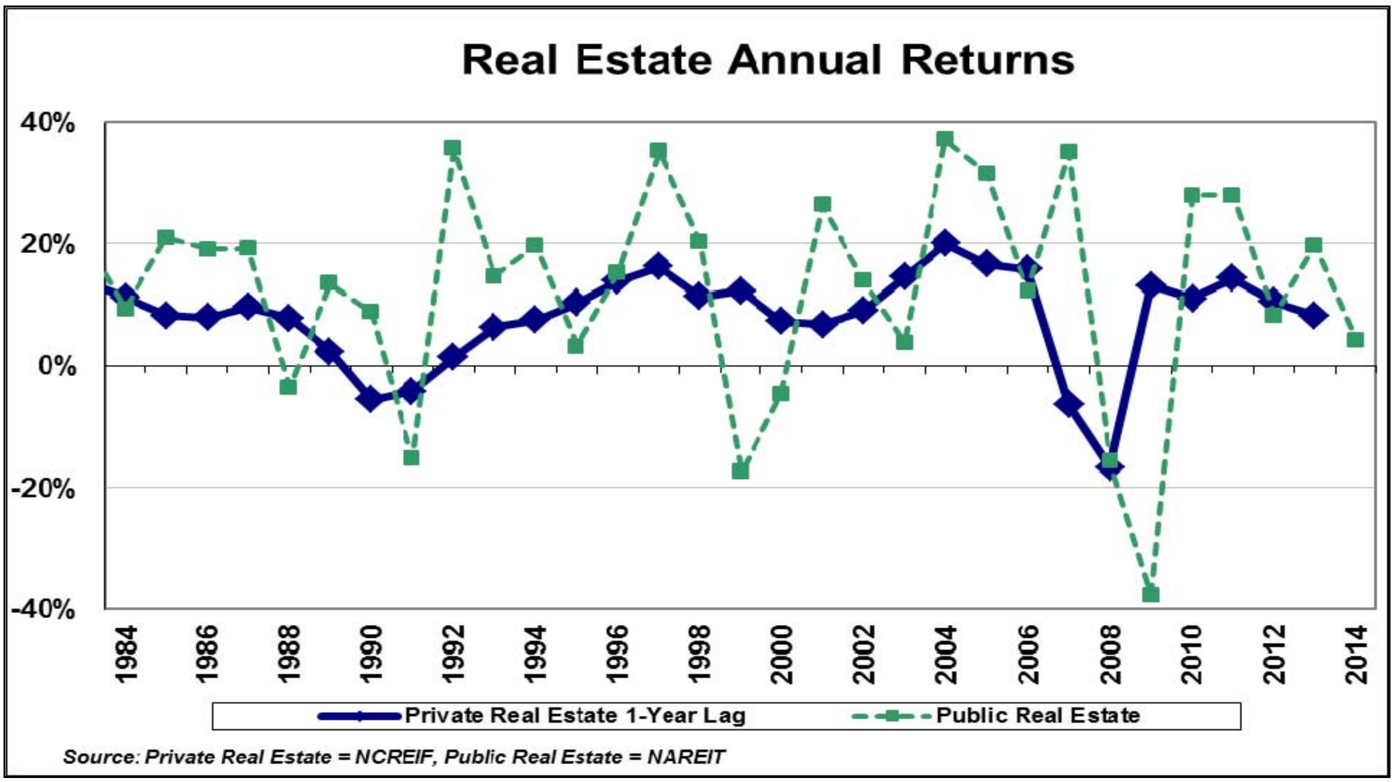


- REITs are very expensive when compared to the CPI.
- REITs have priced lower ~ 90% of the time.

U.S. Real Estate - Continued



- The Index normally yields 1.00% more than 10-Year U.S. Treasuries.
- Current dividend yield is at 3.7%.
- When compared against the 10-Year U.S. Treasury, REITs are fairly priced.



- Private real estate returns historically have followed public real estate (REIT) returns.
- Using the public REIT market as a guide, the outlook for private real estate is modest.

Commodities

<u>CRB Index</u> – 12/31/01 – 10/31/13

- Commodity prices, as measured by the ThompsonReuters / Jeffries CRB Index, continue the downward sloping price trend.
- Inflation does not appear to be a 2014 concern.

<u>CRB Food Index</u> – 12/31/01 – 10/31/13

- CRB Food index has steadily increased since 2002.
- Food prices do not appear to be a 2014 problem.

<u>CRB Raw Industrials Index</u> – 12/31/01 – 10/31/13

- CRB Raw Industrials index trend has rolled over.
- There appears to be no trend in the price of Raw Industrials.

Annual Total Returns of Key Asset Classes 1993 - 2012

Rank	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Best	Int'l Equity 32.57%	Int'l Equity 7.77%	U.S. Equity 36.52%	U.S. Equity 22.42%	U.S. Equity 32.94%	U.S. Equity 26.33%	Int'l Equity 26.97%	Gov't Bonds 13.23%	Corp. Bonds 10.40%	Gov't Bonds 11.50%
	Hedge Funds 16.35%	Real Estate 6.39%	Corp. Bonds 22.24%	Hedge Funds 13.73%	Hedge Funds 14.95%	Int'l Equity 19.97%	U.S. Equity 20.27%	Real Estate 12.24%	Real Estate 7.28%	Corp. Bonds 10.52%
	Corp. Bonds 12.17%	Cash 4.26%	Gov't Bonds 18.33%	Real Estate 10.31%	Real Estate 13.91%	Real Estate 16.24%	Hedge Funds 18.93%	Corp. Bonds 9.40%	Gov't Bonds 7.24%	Real Estate 6.74%
	Gov't Bonds 10.66%	Inflation 2.67%	Hedge Funds 13.06%	Int'l Equity 6.05%	Corp. Bonds 10.23%	Gov't Bonds 9.85%	Real Estate 11.36%	Cash 6.16%	Cash 4.43%	Hedge Funds 3.57%
	U.S. Equity 10.01%	U.S. Equity 1.32%	Int'l Equity 11.22%	Cash 5.30%	Gov't Bonds 9.58%	Corp. Bonds 8.59%	Cash 4.83%	Hedge Funds 5.77%	Hedge Funds 3.11%	Inflation 2.39%
	Cash 3.19%	Hedge Funds -1.17%	Real Estate 7.54%	Inflation 3.33%	Cash 5.35%	Cash 5.24%	Inflation 2.68%	Inflation 3.39%	Inflation 1.55%	Cash 1.79%
	Inflation 2.75%	Gov't Bonds -3.37%	Cash 6.04%	Corp. Bonds 3.28%	Int'l Equity 1.77%	Inflation 1.60%	Corp. Bonds -1.94%	U.S. Equity -6.98%	U.S. Equity -10.64%	Int'l Equity -14.95%
Worst	Real Estate 1.38%	Corp. Bonds -3.92%	Inflation 2.54%	Gov't Bonds 2.77%	Inflation 1.70%	Hedge Funds -1.61%	Gov't Bonds -2.25%	Int'l Equity -15.31%	Int'l Equity -19.74%	U.S. Equity -21.30%

Rank	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Best	Int'l Equity 40.82%	Int'l Equity 20.90%	Real Estate 20.06%	Int'l Equity 26.65%	Int'l Equity 16.65%	Gov't Bonds 12.38%	Int'l Equity 41.44%	U.S. Equity 16.38%	Real Estate 14.26%	Int'l Equity 16.83%
	U.S. Equity 29.58%	Real Estate 14.48%	Int'l Equity 16.62%	Real Estate 16.59%	Real Estate 15.84%	Cash 2.05%	U.S. Equity 27.24%	Real Estate 13.11%	Gov't Bonds 9.02%	U.S. Equity 16.17%
	Hedge Funds 9.01%	U.S. Equity 11.78%	U.S. Equity 5.65%	U.S. Equity 15.34%	Gov't Bonds 8.67%	Inflation 0.10%	Corp. Bonds 16.05%	Int'l Equity 11.15%	Corp. Bonds 8.35%	Real Estate 10.54%
	Real Estate 8.99%	Hedge Funds 5.83%	Hedge Funds 5.13%	Hedge Funds 9.21%	Hedge Funds 7.68%	Corp. Bonds -3.07%	Hedge Funds 9.65%	Corp. Bonds 8.46%	Inflation 2.96%	Corp. Bonds 9.37%
	Corp. Bonds 7.69%	Corp. Bonds 5.25%	Inflation 3.42%	Cash 4.81%	U.S. Equity 5.47%	Real Estate -6.46%	Inflation 2.72%	Gov't Bonds 5.52%	U.S. Equity 1.75%	Hedge Funds 4.06%
	Gov't Bonds 2.36%	Gov't Bonds 3.48%	Cash 3.06%	Corp. Bonds 4.27%	Corp. Bonds 5.10%	Hedge Funds -19.86%	Cash 0.19%	Hedge Funds 5.07%	Cash 0.10%	Gov't Bonds 2.02%
	Inflation 1.88%	Inflation 3.25%	Gov't Bonds 2.65%	Gov't Bonds 3.46%	Cash 5.03%	U.S. Equity -36.72%	Gov't Bonds -2.19%	Inflation 1.50%	Hedge Funds -3.55%	Inflation 1.70%
Worst	Cash 1.16%	Cash 1.33%	Corp. Bonds 1.95%	Inflation 2.55%	Inflation 4.06%	Int'l Equity -45.52%	Real Estate -16.86%	Cash 0.13%	Int'l Equity -13.71%	Cash 0.11%

Annualized Returns 1993 - 2012

	Infl.	Cash	Hedge	Gov't.	Int'l.	Corp.	US Eq.	R.E.
Return	2.43%	3.21%	5.59%	6.10%	6.94%	7.05%	8.46%	8.85%
Risk	0.91%	2.17%	8.55%	5.75%	22.06%	6.27%	18.65%	8.52%

- Hedge Funds are represented by the HFRI FOF Conservative Index
- Inflation is represented by the U.S. Consumer Price Index
- International Equity is represented by the MSCI EAFE Index
  2000 Forward - Int'l Equity is represented MSCI - AC World EX-USA Index
- Cash is represented by 30-day T-Bills
- U.S. Equity is represented by the S&P 500 / 1995 Forward by S&P 1500
- Real Estate is represented by the NPI
- Corporate Bonds are represented by the Barclays Capital - Credit Index
- Government Bonds are represented by the Barclays Capital U.S. Government

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ECONOMIC AND MARKET REVIEW AND OUTLOOK

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013

Gregory J. Parker, CFA
Director of Investments – Public Markets
Director of Asset Allocation
Bureau of Investments

ECONOMIC OUTLOOK

Select Historic Economic Growth with Forecasts

Slower 2013 growth and lowering expectations.

Real GDP Growth Actual/Forecasts	**2011**	**2012**	**2013**	**2014**	**2015**
World	2.9%	2.2%	2.0%	3.0%	3.2%
U.S.	1.8%	2.8%	1.6%	2.7%	3.0%
Developed (G10)	1.4%	1.5%	1.0%	1.9%	2.2%
Asia	7.6%	6.3%	6.4%	6.4%	6.4%
EMEA	4.9%	2.6%	2.5%	3.3%	3.6%
Europe	1.5%	-0.2%	-0.1%	1.2%	1.6%
Latin America	4.2%	2.7%	2.7%	3.6%	3.7%
China	9.3%	7.8%	7.5%	7.5%	7.2%

*Source: Bloomberg

U.S. Economic Overview

Slow, steady improvement.

- The most recent reading of the annualized U.S. GDP growth was 2.8%, though inventory building largely influenced the data. Coincidental economic indicators such as the Institute for Supply Management's Manufacturing and Non-Manufacturing PMI Indexes are nicely above 50, indicating that there currently is a modest expansion in the U.S. economy.

- In December 2012, the Federal Reserve increased the open-ended purchase Quantitative Easing (QE) program from $40 billion to $85 billion. In May 2013, Fed Chairman Ben Bernanke first suggested that the program could be "tapered" at future Board meetings, suggesting that the amount tapered could be $20 billion per month. At its September 2013 meeting, the Fed decided to delay the tapering of the QE.

- The U.S. jobs picture continues to steadily improve. The unemployment rate at the end of October was 7.3%, down from 7.8% one year prior. According to the October reports, the economy added close to 200,000 jobs. Since the beginning of the job recovery, the economy has added approximately 185,000 jobs per month on average. Skeptics point to the labor participation rate of just 62.8% which is the lowest rate since 1978.

- Given that there are still approximately 1.5 million fewer jobs today than at the peak in 2008, at this growth rate jobs will not be fully recovered until mid-2014, though potentially sooner should the data remain as robust.

- Corporate profit margins are nearing all-time highs. The question remains; how sustainable are these margins? Today the disparity between corporate profits and wages is the largest on record going back to the 1940s. Interest rates are the lowest they have been in over 50 years. The tax rate that corporations actually pay is at 60 year low as well.

- Due to the effects of the budget spending restraints and the strengthening U.S. economy, the deficit is quickly dropping; it is now at 6.1% of GDP which is down 7.5% since the second quarter of 2009. Households have repaired their balance sheets as well. Today, household debt to income measuring 5.3% is close to the lowest it has been going back to the early 1990's.

<u>International Economic Overview</u>

Japanese economic policies in focus.

- Forecasters have lowered their estimates for 2014 and 2015 global GDP growth by 0.1%, however foreign developed countries and Europe in particular have slightly higher growth expectations.

- The European economy may indeed be turning a corner. Spain, for example, announced in October that its economy had shown positive quarter-over-quarter growth for the first time since the beginning of 2011.

- In December 2012, Shinzo Abe was elected prime minister of Japan. His economic policies, known as "Abenomics" are controversial and are impacting markets globally. Year-to-date (ending October) the Japanese stock market has appreciated approximately 50%, while the yen has depreciated by more than 13%.

    - Japan is targeting a budget deficit of around 10% of GDP and its fiscal stimulus is referred as the largest peacetime stimulus ever. Japan is already highly indebted with a debt to GDP ratio over 200%. A concern is that the stimulus policy causes inflation and interest rates to rise faster than the government grows its tax income from an improving economy. It is estimated that currently 40% of the Japanese budget is used to pay the interest on the debt outstanding.

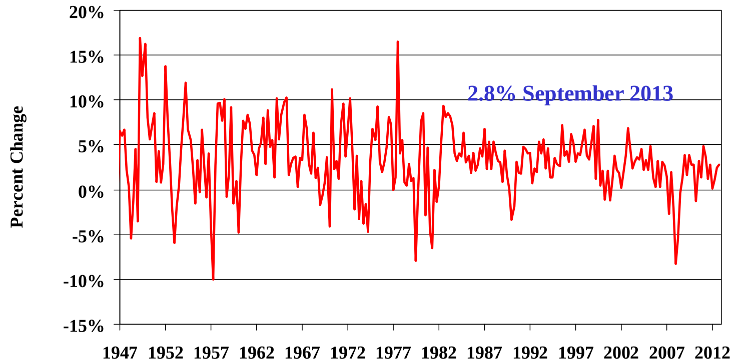
    - Japan's quantitative ¥7 trillion yen per month easing program is over 2.5X the size of the Federal Reserve's $85 billion per month program when scaled to the size of Japans economy. At the end of July, the 10-year Japanese government bond rate was 0.8%, or roughly where it was a year earlier.

    - A number of policy reforms are also part of Abe's plan. The main areas of focus are health/medical care, energy/environment, employment and the creation of companies/industries.

1

GDP

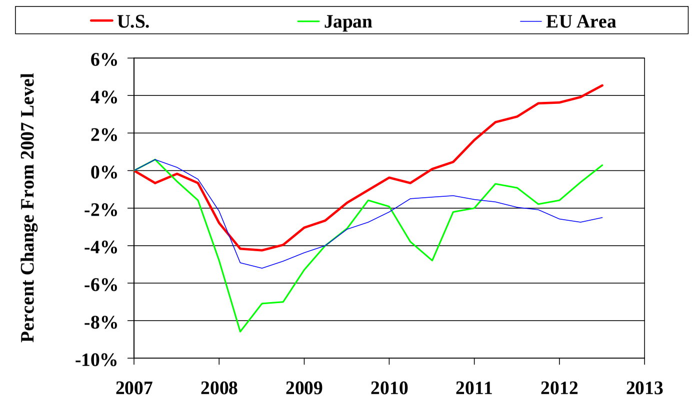
Annualized Quarter over Quarter Growth



Source: Bureau of Economic Analysis

2

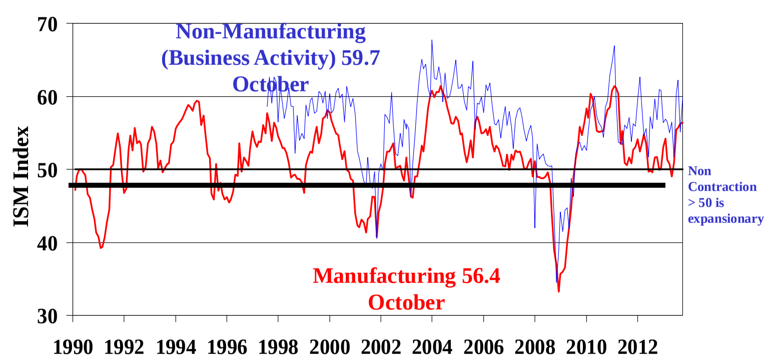
GDP of Select Developed Economies



Source: Bureau of Economic Analysis

3

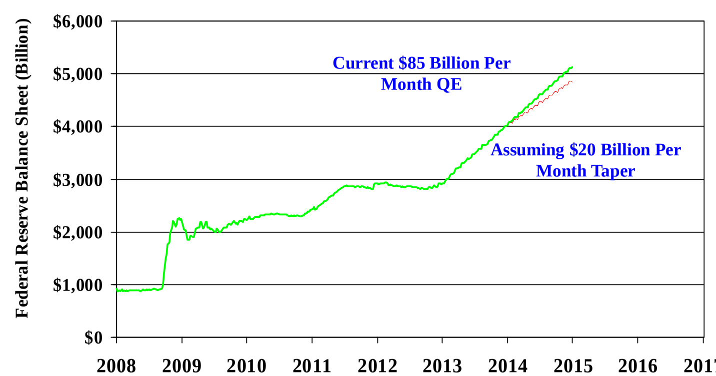
Manufacturing/Non-Manufacturing



Source: Institute for Supply Management

4

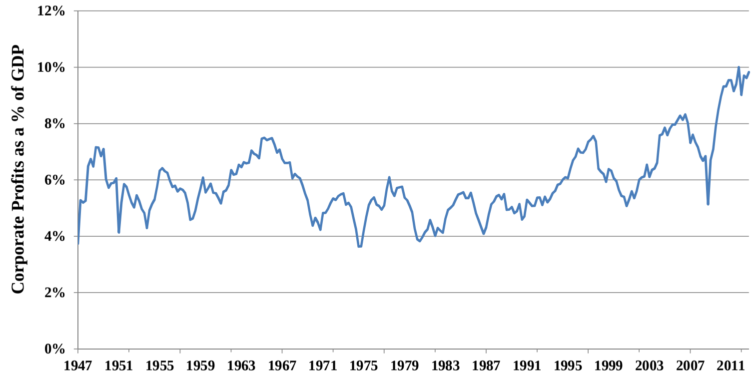
Assessing Tapering



Source: Federal Reserve Bank of St. Louis

5

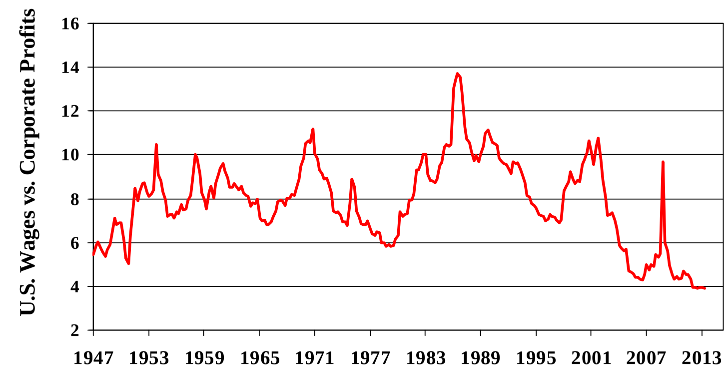
U.S. Corporate Profits as a Percent of GDP



Source: U.S. Department of Commerce, Bureau of Economic Analysis

6

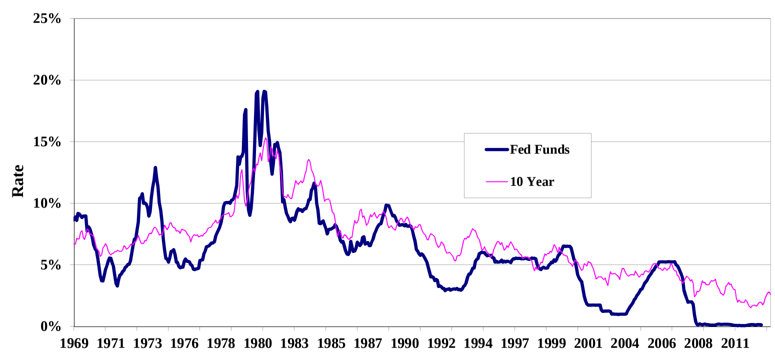
U.S. Wages vs. Corporate Profits



Source: Federal Reserve Bank of St. Louis

7

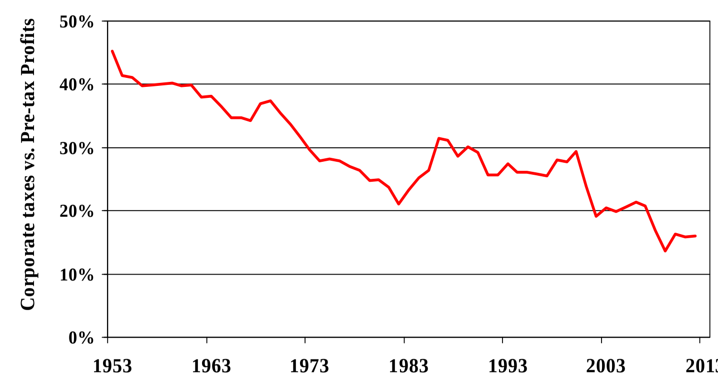
Interest Rates



Source: Federal Reserve Board, National Bureau of Economic Research

8

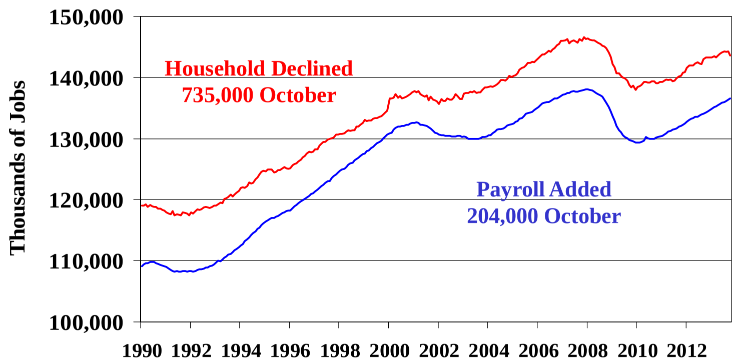
Corporate Tax Rate



Source: Federal Reserve Bank of St. Louis

9

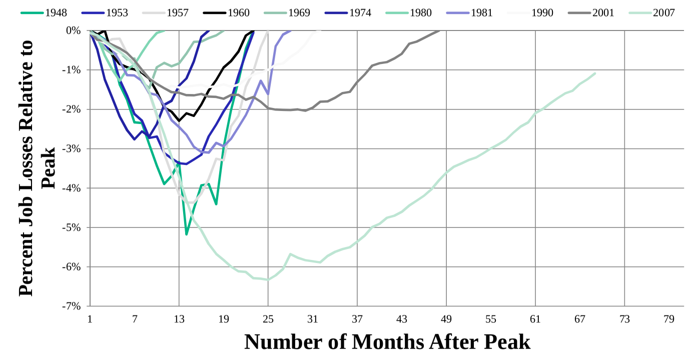
Job Market Growth



Source: U.S. Department of Labor, Bureau of Labor Statistics

10

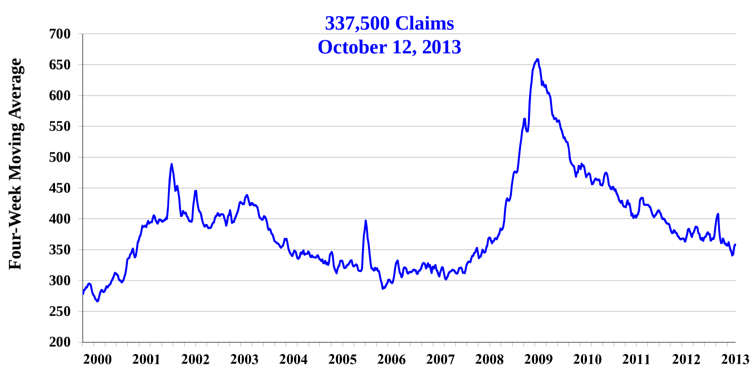
Percent Job Losses in Post WWI Recessions



Source: Federal Reserve Bank of St. Louis

11

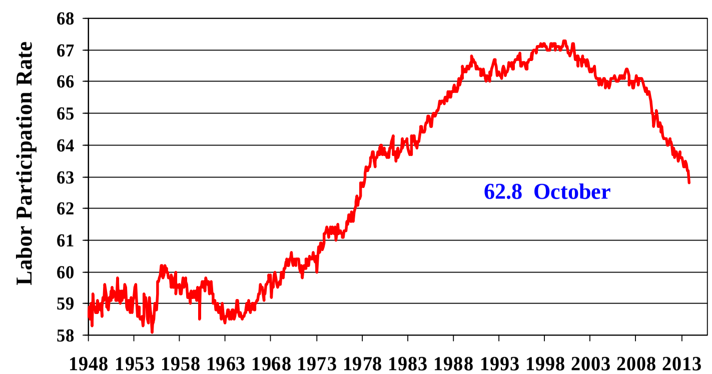
Initial Unemployment Claims



Source: U.S. Department of Labor, Employment and Training Administration

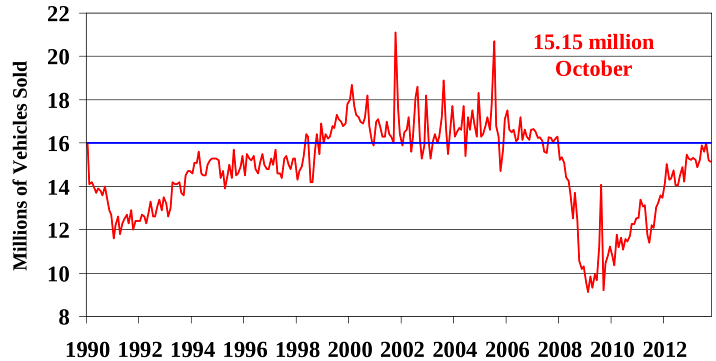
12

Labor Participation Rate



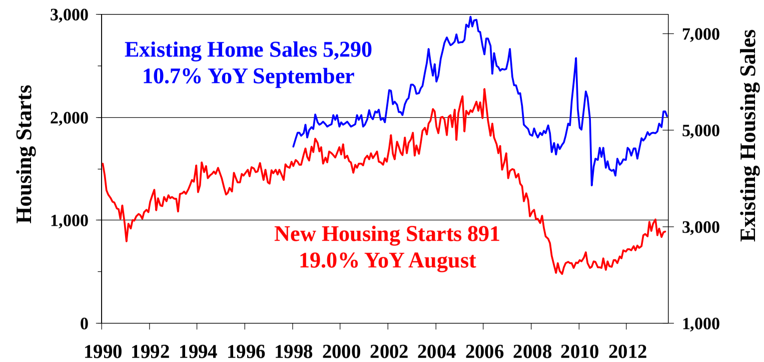
Source: Federal Reserve Bank of St. Louis

U.S. Light Vehicle Sales



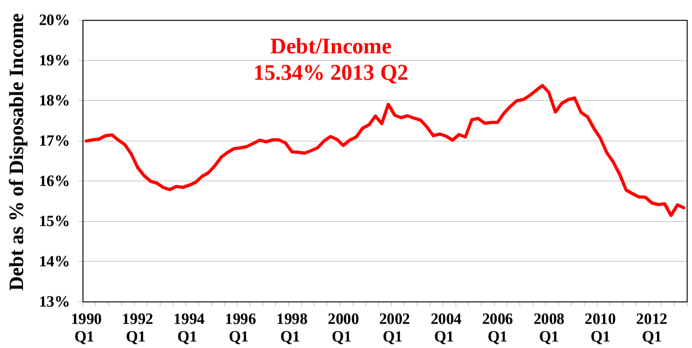
Source: U.S. Department of Commerce, Bureau of Economic Analysis, and Bloomberg

Existing Home Sales and Housing Starts



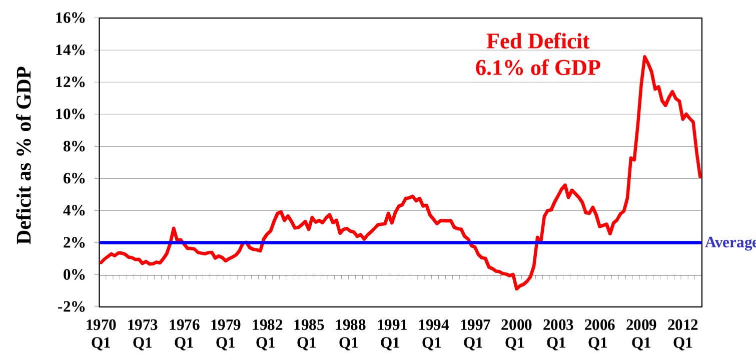
Source: U.S. Department of Commerce, U.S. Census Bureau
National Association of Realtors

Financial Obligations as Percent of Disposable Income



Source: U.S. Department of Commerce, Bureau of Economic Analysis

U.S. Deficit



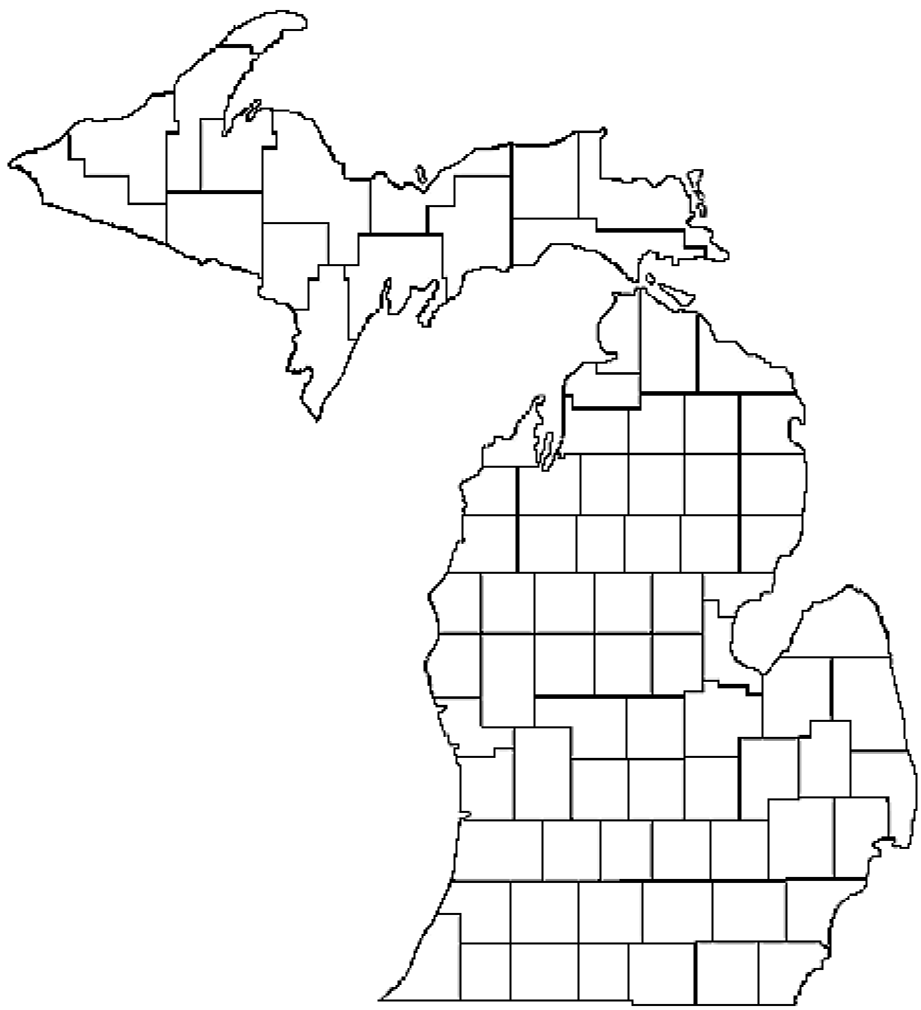
Source: U.S. Department of Commerce, Bureau of Economic Analysis

STATE OF MICHIGAN
RETIREMENT SYSTEMS

DOMESTIC EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Jack A. Behar, CFA, Administrator
Stock Analysis Division

EXECUTIVE SUMMARY

Performance

Total Domestic Equity, Gross	**1-Year**	**3-Years**	**5-Years**	**7-Years**	**10-Years**
Annualized Returns	21.7%	15.8%	10.4%	6.0%	7.7%
S&P 1500	20.4%	16.5%	10.4%	6.0%	8.0%
State Street Peer Group	21.3%	15.7%	10.1%	6.0%	7.9%
Rank vs. Peers	45	49	44	58	57

Total Domestic Equity, Net	**1-Year**	**3 Years**	**5 Years**
Annualized Returns	21.5%	15.6%	10.2%
S&P 1500	20.4%	16.5%	10.4%
Lipper Multi Core Average	22.9%	14.7%	9.7%

Total Active Equity, Net	**1-Year**	**3 Years**	**5 Years**
Annualized Returns	22.3%	15.2%	10.0%
S&P 1500	20.4%	16.5%	10.4%
Lipper Multi Core Average	22.9%	14.7%	9.7%

- Total Domestic Equities delivered a 10.4% annualized gross return during the past five years, matching the S&P 1500, and outperforming its State Street Peer Group by 30 basis points (bps). Active Equity returned 10% net of fees during this time, underperforming the S&P 1500 by 40 bps, while outperforming its Lipper peer group benchmark by 30 bps.

- Significant contributors to division performance, net of fees, during the past five years in order of importance were as follows:

  - Passive equity outperformed the S&P 900 Large/Mid-Cap Index by roughly 60 bps, as a result of fees earned through securities lending, as well as opportunistic trading.

  - The internal active fund composite returned 9.9%, underperforming the S&P 500 Large-Cap Index by 10 bps and outperforming its Lipper peer group by ~60 bps.

  - The external manager composite returned 9.8%, underperforming the S&P 1500 Multi-Cap Index by 50 bps while outperforming its Lipper peer group by 10 bps.

  - Outperformers during the period include the State of Michigan's Absolute Return Income Fund, which returned 16.3% since its inception in April of 2009 (+430 bps versus benchmark), the State of Michigan's All-Cap GARP strategy, which returned 16.6% since its inception in 2011 (+420 bps) and Donald Smith Small-Cap Value, which returned 14.7% (+320 bps) during the past five years.

- The division equitized its cash in the form of financial sector exposure during the past few years, which lifted the overall active equities return above that of its internal and external fund composites.

- During the past year, Active Equity outperformed the S&P 1500 by 190 bps while underperforming its Lipper peer group by 60 bps.

  - Outperformance was driven by external management (+240 bps), internal management (+120 bps), and the equitization of cash via financial sector exposure.

  - Standout performers, relative to their benchmarks, include Michigan-based Seizert Capital (+1330 bps), LSV Large Cap Value (+720 bps), the State of Michigan's Large Cap Core Fund (+510 bps), the State of Michigan's Absolute Return Income Fund (+430 bps) and Edgewood Large Cap Growth (+400 bps).

  - Additionally, the State of Michigan's Concentrated Equity strategy, which was launched in May of 2013, is off to a strong start, returning 15.4% to date and outperforming the S&P 1500 by close to 900bps.

Strategy Update

- Domestic equity outflows totaled $47 million and $1.4 billion during the past quarter and the last 12 months respectively.

- Domestic equity now has 25 strategies in total, composed of 7 internally managed funds, 16 externally managed funds, and 2 index funds.

- SMRS continues to consolidate its external manager portfolio and to renegotiate fee agreements wherever possible, typically in conjunction with additional capital allocations or in return for seeding new manager strategies. Six agreements have been modified within the past two years, and more are potentially on the way.

- SMRS has also been transitioning a number of its managers to all-cap concentrated strategies. We believe that such strategies better enable SMRS to dynamically benefit from the best investment opportunities available, wherever they might be on the market cap spectrum. Additionally, given SMRS significant system-wide diversification across asset classes and investment styles, a concentrated approach better enables SMRS to benefit from manager best ideas without being exposed to undue concentration risk.

- At the division level, SMRS is leveraging third party IT software to improve real time performance measurement, as well as to efficiently provide sophisticated returns-based performance insights and peer comparisons across multiple portfolios and composites.

- On a total domestic equity basis large-caps make up approximately 87% of portfolio exposure, with mid-caps totaling 9% of the portfolio, and small-caps comprising 4%. The S&P 1500 stands at 82% large-cap, 10% mid-cap and 8% small-cap.

- The combined active equity portfolio composite remains overweight in the financials and healthcare sectors. The healthcare sector provides stability and is an effective yield substitute for income-seeking investors. Meanwhile, U.S. financials have much stronger balance sheets than during the financial crisis, significant earnings leverage to a higher interest rate environment, and continue to trade at a discount to normalized earnings.

- The combined active equity portfolio trades at 15x normalized earnings versus its benchmark, the S&P 1500, at 18x normalized earnings, with less exposure to systemic risk, similar capital return characteristics and slightly less growth potential. If the active equity portfolio's normalized PE trades close to in line with the S&P 1500 over time, this would result in outperformance of roughly 15%, likely occurring over a period of three to five years (annualized outperformance of greater than 2.5%).

Market Environment and Outlook

- At 17x normalized earnings, the S&P 500 looks fairly priced, particularly in comparison to bonds. Assuming a 3.9% normalized dividend yield and 5.0% long-term expected earnings growth, the S&P 500 is poised to return approximately 8.9% over the long-term. This compares to the 30-year U.S. Treasury at 3.7% and a historical average return of 9.2%.

- Within equities, large-cap stocks look attractive relative to small-caps, particularly on a risk adjusted basis. The normalized PE for the S&P 500 is ~17x versus the S&P 600 at ~24x, while the trailing twelve-month dividend yield for S&P 500 (including buybacks) is 3.6% versus the S&P 600 at 1.1%. Over the long-term, we believe that small-caps will return roughly 8% based on a ~1% dividend yield and 7% long-term earnings growth. This makes the asset class both a lower return and a higher risk proposition than large-caps.

- During the past five years small cap growth has outperformed large-cap value by nearly 25% on a cumulative basis (~5% annualized). This has opened up the valuation gap in which SMRS active equity has positioned itself, with its large-cap overweight and value-stock tilt.

Five-Year Performance by Style and Market Cap	**Value**	**Core**	**Growth**
S&P 500 Large-Cap	8.4%	10.0%	11.6%
S&P 400 Mid-Cap	12.0%	13.1%	14.2%
S&P 600 Small-Cap	11.5%	12.4%	13.4%

Philosophy

- The Stock Analysis Division emphasizes long-term investing, because it's significantly less speculative than trying to predict short-term market moves. As with bonds, calculating the internal rate of return on current and expected cash flows is a good predictor of long-term returns.

- Markets participants tend to make investment decisions based on what has worked well in the past, what is currently “working,” or what they expect to perform well in the very near future - often irrespective of the underlying pricing behind such assets. This creates inefficiencies across the market cap spectrum for investors that are willing to have a longer time horizon, as good companies that are perceived as having muted near-term prospects can be undervalued as a result.

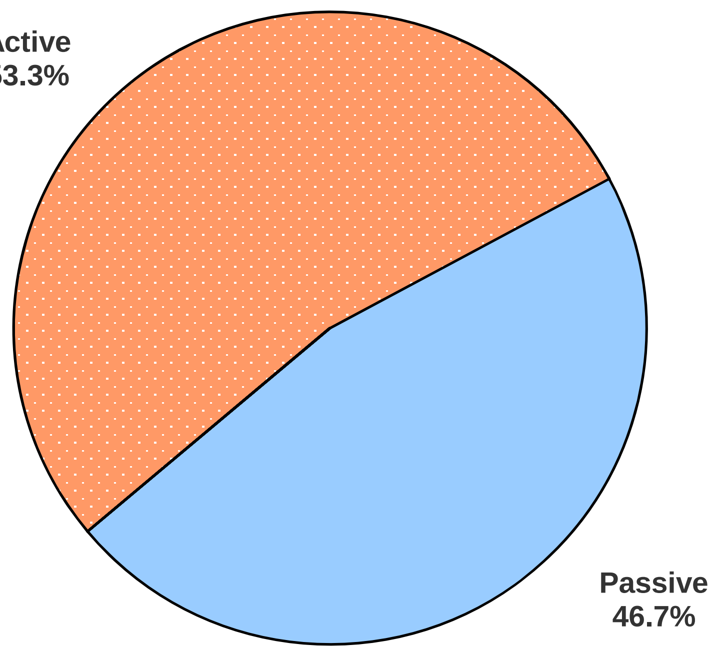
- Considerations for hiring and firing managers are based primarily on, qualitative analysis of manager thought processes, bottom up analysis of holdings, fees, organizational structure, and incentives. We do not typically use historical three and five-year performance to make hiring, firing, or allocation decisions, as it is not only ineffective in predicting future performance, but may even be inversely correlated to future results. Additionally, according to research by Morningstar, Inc., the best predictor of future mutual fund returns over the long term is not Morningstar fund rating, or past track record – but fees. As a result, the Stock Analysis Division is very careful about how much it pays for active management, and seeks to reduce its costs wherever possible while maintaining a quality manager portfolio.

- Both absolute and relative returns are important. Benchmarks are valuable, because without them there are no objective means by which to evaluate funds. However, excessive focus on benchmarks can lead to poor decision-making, particularly with respect to understanding and evaluating risk. The Stock Analysis Division attempts to generate both strong absolute and relative returns over the long term by participating in the asset allocation discussion at the Bureau level, making sub-asset allocation decisions where appropriate and constructing a portfolio with a higher level of risk-adjusted returns than its benchmark.

SMRS

Domestic Equity Holdings By Category

9/30/13



Market Value in Millions

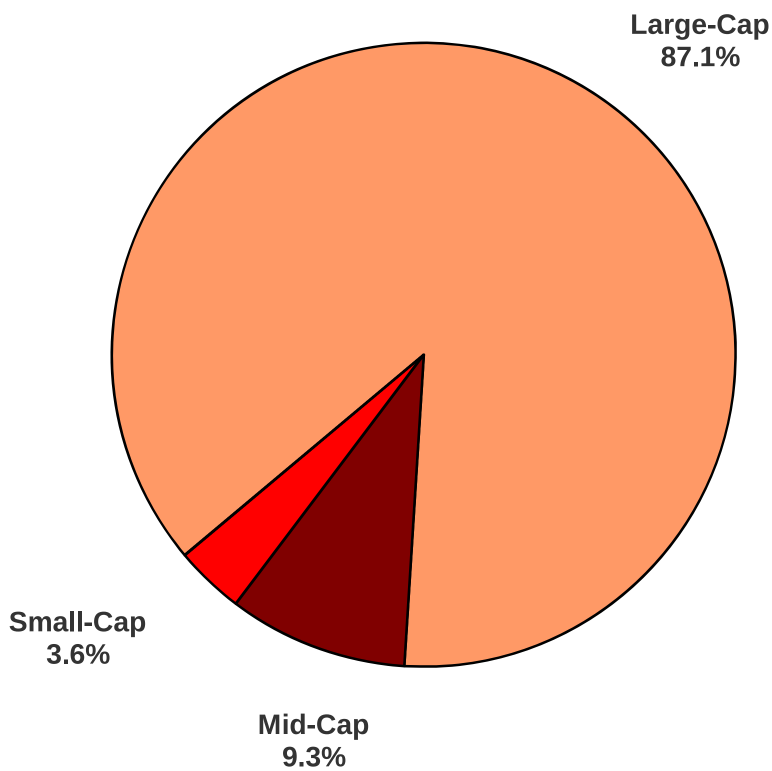
	9/30/13		6/30/13	
	Assets	**Percent**	**Assets**	**Percent**
Active	$8,176	53.3%	$7,733	53.1%
Passive	7,165	46.7%	6,830	46.9%
Total Domestic Equity	**$15,341**	**100.0%**	**$14,563**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

Domestic Equity Exposure By Market Cap

9/30/13

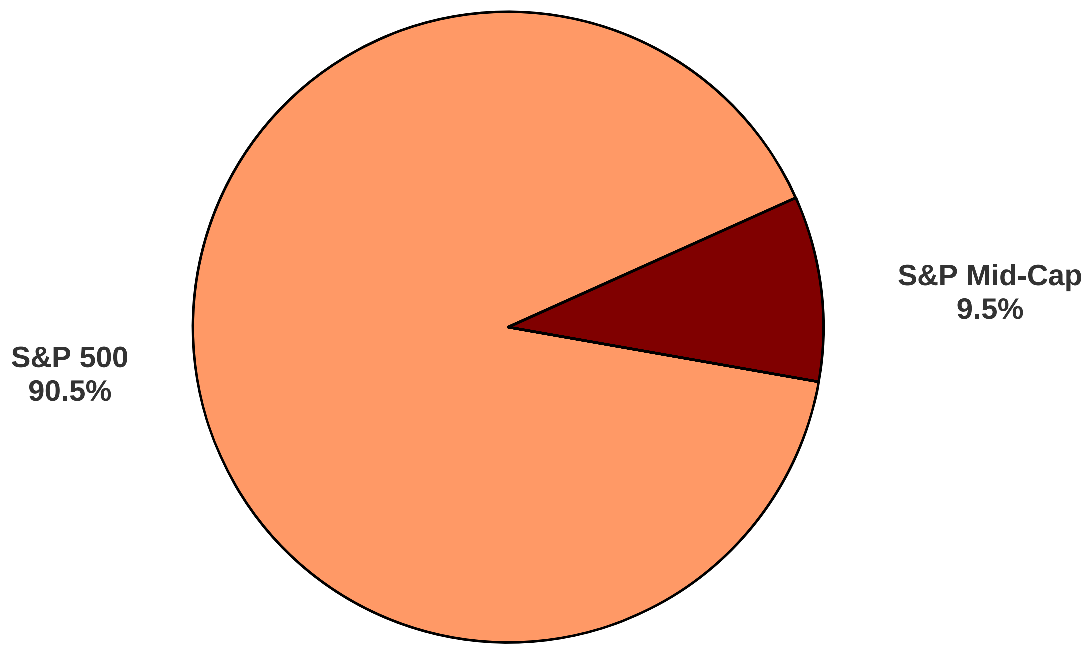


Market Value in Millions

	9/30/13		
	Assets	**Percent**	**S&P 1500**
Large-Cap (>$10B)	$13,362	87.1%	82.3%
Mid-Cap (>$4 <$10B)	1,427	9.3%	10.0%
Small-Cap (<$4B)	552	3.6%	7.7%
Total Domestic Equity	**$15,341**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Domestic Passive Equity Investments
9/30/13

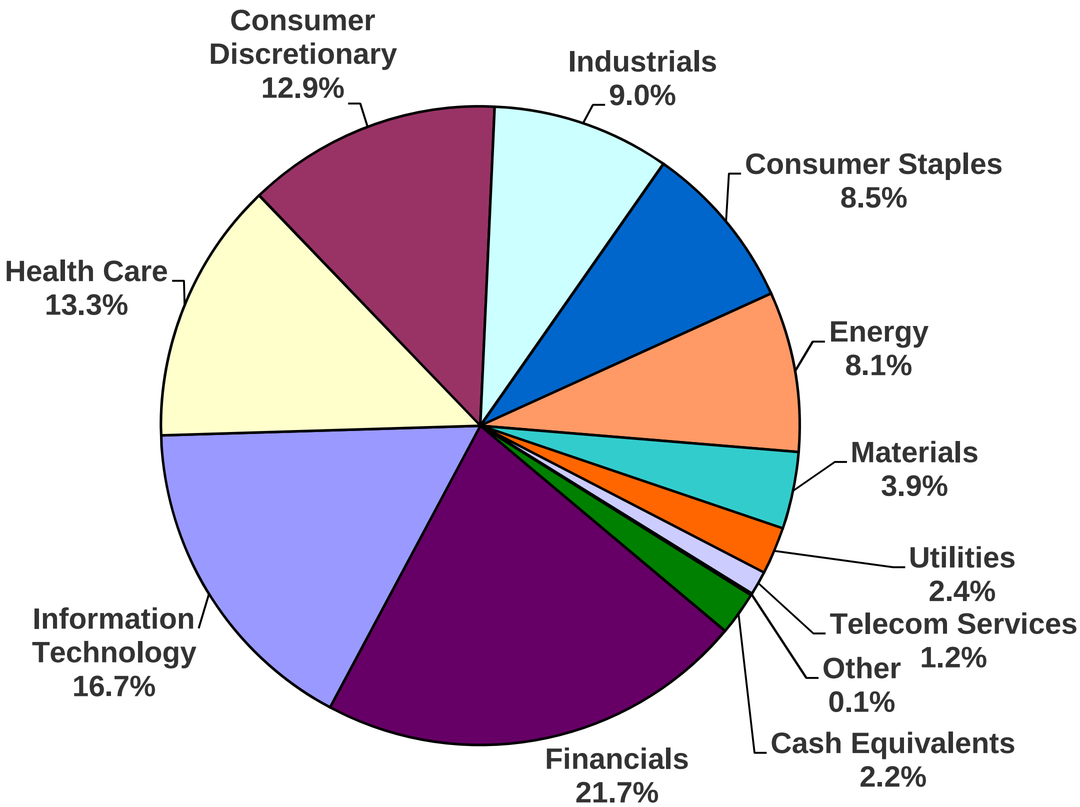


Market Value in Millions

	9/30/13		
	Assets	**Percent**	**Benchmark**
S&P 500	$6,483	90.5%	92.1%
S&P Mid-Cap	682	9.5%	7.9%
Total	**$7,165**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
All Domestic Equity Holdings By Category
9/30/13



Market Value in Millions

	9/30/13			6/30/13	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
Financials	$3,338	21.7%	17.6%	$3,270	22.5%
Information Technology	2,561	16.7%	17.2%	2,335	16.0%
Health Care	2,040	13.3%	12.6%	2,090	14.3%
Consumer Discretionary	1,973	12.9%	12.7%	1,660	11.4%
Industrials	1,376	9.0%	11.4%	1,211	8.3%
Consumer Staples	1,306	8.5%	9.3%	1,439	9.9%
Energy	1,244	8.1%	9.8%	1,210	8.3%
Materials	599	3.9%	3.9%	526	3.6%
Utilities	363	2.4%	3.3%	317	2.2%
Telecom Services	190	1.2%	2.2%	225	1.5%
Other	6	0.1%	0.0%	5	0.1%
Total Investments	$14,996	97.8%	100.0%	$14,288	98.1%
Cash Equivalents	345	2.2%	0.0%	275	1.9%
Total	**$15,341**	**100.0%**	**100.0%**	**$14,563**	**100.0%**

Michigan Department of Treasury, Bureau of Investments **Benchmark: S&P 1500**

SMRS

All Domestic Equities Composite

9/30/13

Date:	9/30/13	6/30/13	3/31/13	12/31/12
Assets ($million):	$15,341	$14,563	$14,722	$13,408
Number of Securities:	1,390	1,422	1,393	1,394

Benchmark: S&P 1500

Description: The Domestic Equities Composite combines both the SMRS' All Actively Managed Composite and its index funds.

Characteristics:	SMRS	S&P 1500
Weighted Average Capitalization ($billion):	$96.9	$94.1
Trailing 12-month P/E:	17.0x	17.5x
Forecast P/E:	14.8x	15.7x
Price/Book:	2.2x	2.4x
Beta:	0.99	1.02
Dividend Yield:	1.9%	2.0%
3-5 Year EPS Growth Estimate:	11.4%	11.5%
Return on Equity:	18.5%	18.4%

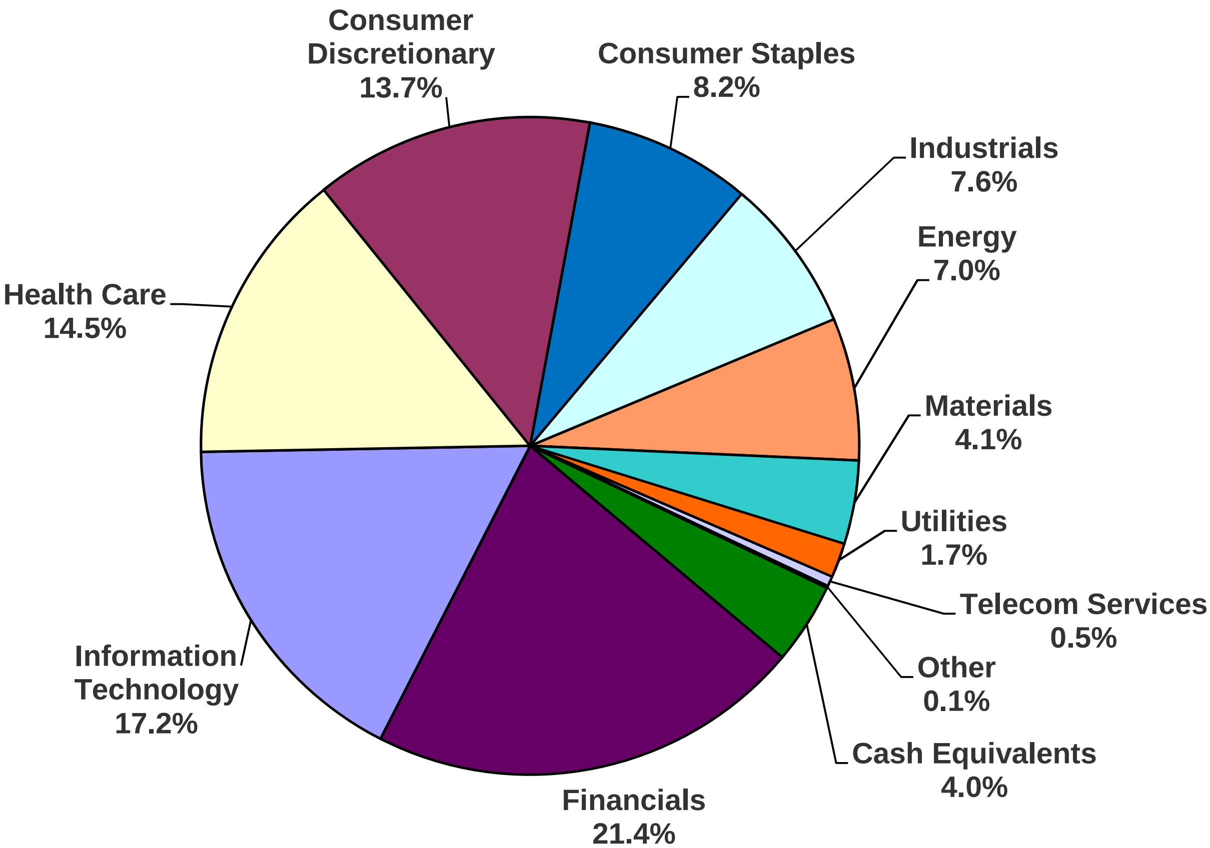
TOP TEN HOLDINGS - All Domestic Equities
9/30/13

	Portfolio Weight	Total Shares	9/30/13 Price	YTD13 Total Return	Market Value
Apple Inc.	3.36%	1,080,639	$476.75	-8.71%	$515,194,643
Johnson & Johnson	2.66%	4,702,984	$86.69	26.54%	407,701,683
SPDR S&P 500 ETF	2.56%	2,337,204	$168.01	19.71%	392,673,644
Google Inc. Class A	2.09%	365,317	$875.91	23.82%	319,984,813
Bank of America Corporation	1.67%	18,534,412	$13.80	19.14%	255,774,886
The Charles Schwab Corporation	1.33%	9,620,409	$21.14	48.65%	203,375,446
Exxon Mobil Corporation	1.27%	2,255,974	$86.04	1.44%	194,104,003
Microsoft Corporation	1.21%	5,555,135	$33.28	27.39%	184,874,893
Wells Fargo & Company	1.18%	4,396,177	$41.32	23.55%	181,650,034
PepsiCo, Inc.	1.16%	2,238,154	$79.50	18.66%	177,933,243
TOTAL	18.47%				$2,833,267,288

SMRS

All Active Domestic Equity Holdings By Category

9/30/13



Market Value in Millions

	9/30/13			6/30/13	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
Financials	$1,751	21.4%	17.6%	$1,734	22.4%
Information Technology	1,405	17.2%	17.2%	1,246	16.1%
Health Care	1,190	14.5%	12.6%	1,295	16.8%
Consumer Discretionary	1,122	13.7%	12.7%	869	11.2%
Consumer Staples	670	8.2%	9.3%	805	10.4%
Industrials	618	7.6%	11.4%	522	6.8%
Energy	572	7.0%	9.8%	568	7.3%
Materials	338	4.1%	3.9%	292	3.8%
Utilities	139	1.7%	3.3%	93	1.2%
Telecom Services	39	0.5%	2.2%	56	0.7%
Other	6	0.1%	0.0%	5	0.1%
Total Investments	$7,850	96.0%	100.0%	$7,485	96.8%
Cash Equivalents	326	4.0%	0.0%	248	3.2%
Total	**$8,176**	**100.0%**	**100.0%**	**$7,733**	**100.0%**

Michigan Department of Treasury, Bureau of Investments **Benchmark: S&P 1500**

SMRS

All Actively Managed Composite

9/30/13

Date:	9/30/13	6/30/13	3/31/13	12/31/12
Assets ($million):	$8,176	$7,733	$7,743	$7,021
Number of Securities:	1,121	1,164	1,154	1,143

Benchmark: S&P 1500

Description: The Actively Managed Composite is designed to add consistent alpha by investing in managers with value-added, but diverse strategies. While the expectation is that most will outperform over time, the composite is designed such that they do so during differing parts of the business cycle.

Characteristics:	**SMRS**	**S&P 1500**
Weighted Average Capitalization ($billion):	$94.9	$94.0
Trailing 12-month P/E:	16.6x	17.5x
Forecast P/E:	14.2x	15.7x
Price/Book:	2.0x	2.4x
Beta:	0.97	1.02
Dividend Yield:	1.8%	2.0%
3-5 Year EPS Growth Estimate:	11.4%	11.5%
Return on Equity:	18.5%	18.4%

TOP TEN HOLDINGS - All Actively Managed
9/30/2013

	Portfolio Weight	Total Shares	9/30/2013 Price	YTD13 Total Return	Market Value
Apple Inc.	4.15%	711,106	$476.75	-8.70%	$339,019,786
Johnson & Johnson	3.77%	3,556,724	$86.69	26.54%	308,332,404
Google Inc. Class A	2.69%	251,499	$875.91	23.82%	220,290,489
Bank of America Corp.	2.39%	14,164,517	$13.80	19.14%	195,470,335
The Charles Schwab Corp.	2.37%	9,149,992	$21.14	48.65%	193,430,831
Kellogg Company	1.64%	2,288,308	$58.73	7.47%	134,392,329
The Bank of New York Mellon Corp.	1.61%	4,367,091	$30.19	19.23%	131,842,477
PepsiCo, Inc.	1.57%	1,610,881	$79.50	18.66%	128,065,040
Teva Pharmaceutical Industries	1.54%	3,343,097	$37.78	3.27%	126,302,205
American International Group, Inc.	1.48%	2,485,438	$48.63	38.04%	120,866,850
TOTAL	23.21%				$1,898,012,744

SMRS

DOMESTIC EQUITIES

9/30/13

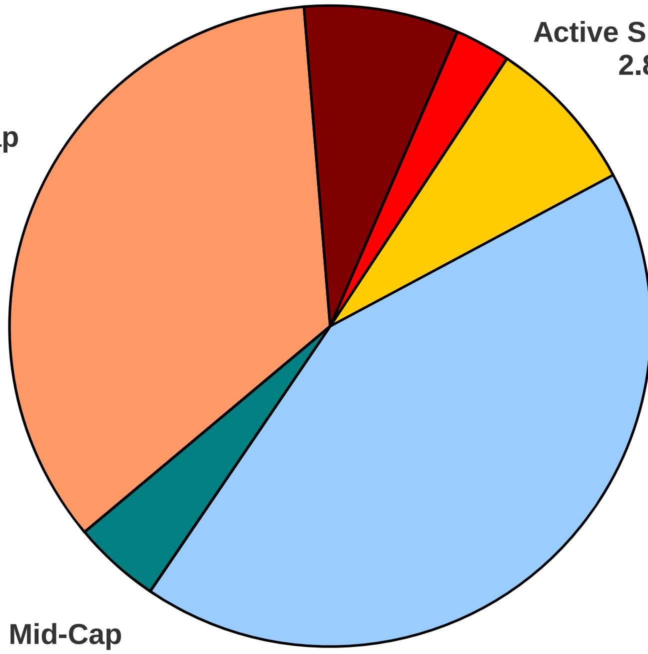
	Amount	% of Total
Passive		
S&P 500	$6,482,693	
S&P 400	682,298	
Sub Total	**$7,164,991**	46.7%
Internal Active		
Large-Cap Core	1,907,264	
Large-Cap Growth	1,257,494	
Absolute Return Income Fund	391,989	
All-Cap GARP	337,105	
Large-Cap Value	292,464	
Concentrated Equity Fund	54,178	
Tactical Asset Allocation	23,685	
Concentrated All-Cap Growth	17,332	
Sub Total	**$4,281,511**	27.9%
External Active		
LSV Large-Cap Value	$824,562	
Artisan All-Cap Value	665,747	
Donald Smith Small-Cap Value	370,611	
Fisher All-Cap Value	361,925	
Epoch Large-Cap Value	354,471	
Cramer Rosenthal McGlynn Mid-Cap Value	248,663	
JP Morgan Large-Cap Growth	183,050	
Attucks Asset Management	158,529	
Seizert Capital Partners All-Cap Core	151,398	
Bivium	138,871	
Champlain Mid-Cap Core	125,596	
Edgewood Large-Cap Growth	101,437	
Los Angeles Capital Mid-Cap Plus Core	92,104	
Munder Mid-Cap Core	61,768	
Northpointe Small-Cap Value	56,116	
Sub Total	**$3,894,848**	25.4%
TOTAL	**$15,341,350**	100.0%

Note: All dollar amounts are expessed in thousands.

SMRS

Domestic Equity Holdings By Category

9/30/13



Market Value in Millions

	9/30/13		6/30/13	
Active				
Large-Cap	$5,336	34.8%	$5,066	34.8%
Mid-Cap	1,194	7.8%	1,049	7.2%
Small-Cap	427	2.8%	471	3.2%
Multi-Cap	1,219	7.9%	1,147	7.9%
Total Active Equity	$8,176	53.3%	$7,733	53.1%
Passive				
Large-Cap	$6,483	42.3%	$6,197	42.6%
Mid-Cap	682	4.4%	633	4.3%
Total Passive Equity	$7,165	46.7%	$6,830	46.9%
Total Domestic Equity	**$15,341**	**100.0%**	**$14,563**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

Combined Active Equity Portfolio, Return Expectations
9/30/13

Return Assumption Estimates

	Yield to Maturity ****	Normal Dividend Yield **	LT Growth Rate ***
SAD Combined Active Equity	***9.6%***	***4.6%***	***5.0%***
S&P 500 Large-Cap	8.9%	3.9%	***5.0%***
S&P 400 Mid-Cap	8.6%	2.1%	***6.5%***
S&P 600 Small-Cap	8.1%	1.1%	***7.0%***
US 30 Year Treasury	3.7%	3.7%	0.0%

Trailing 12 Month and Normalized Earnings Characteristics

	TTM Price/Earnings	TTM Dividend Yield **	Normal Price/Earnings
SAD Combined Active Equity	***15.9***	**3.4%**	***14.5***
S&P 500 Large-Cap	17.1	3.4%	17.2
S&P 400 Mid-Cap	20.7	1.9%	20.8
S&P 600 Small-Cap	24.3	0.9%	23.7

Normalized Earnings & Dividend Characteristics

	Normal Earnings Yield *	Normal Payout Ratio	Normal Dividend Yield **
SAD Combined Active Equity	***6.9%***	***66%***	***4.6%***
S&P 500 Large-Cap	5.8%	67%	3.9%
S&P 400 Mid-Cap	4.8%	44%	2.1%
S&P 600 Small-Cap	4.2%	26%	1.1%

Portfolio and Benchmark Risk Estimates

	Yield to Maturity ****	Standard Deviation	Yield/Volatility
SAD Combined Active Equity	**9.6%**	**11.71%**	**0.82**
S&P 500	8.9%	11.75%	0.76
S&P 400	8.6%	13.53%	0.64
S&P 600	8.1%	14.49%	0.56
US 30 Year Treasury	3.7%	13.20%	0.28

* Earnings Yield = Earnings/Price
** Includes Share Buybacks
*** LT Growth Rate Calculation: Return on Equity * (1-Dividend Payout Ratio)
**** Yield to Maturity Formula: Dividend Yield + LT Growth Rate

SMRS Manager Performance - Net of Fees
9/30/13

Total Domestic Equity Performance, Net

	Market Value	1 Year	3 Years	5 Years	7 Years
Total Domestic Equity	**$15,341,349,451**	**21.6%**	**15.6%**	**10.2%**	**5.8%**
S&P 1500		20.4%	16.5%	10.3%	6.0%
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*5.5%*

Total Active Equity Performance, Net

	Market Value	1 Year	3 Years	5 Years	7 Years
Total Active Equity	**$8,176,358,146**	**22.3%**	**15.2%**	**10.0%**	**5.6%**
S&P 1500		20.4%	16.5%	10.3%	6.0%
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*5.5%*

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Total Internal Active	**$4,257,826,035**	**21.6%**	**14.7%**	**9.9%**	**3.7%**	2/29/00
S&P 500		19.3%	16.3%	10.0%	3.3%	
Lipper Large Cap Core		*19.7%*	*15.0%*	*9.3%*	*3.9%*	
Total External Active	**$3,894,846,992**	**22.8%**	**15.4%**	**9.8%**	**8.1%**	5/31/05
S&P 1500		20.4%	16.5%	10.3%	7.2%	
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*6.8%*	
SMRS Large-Cap Core	$1,907,263,654	24.4%	14.9%	10.8%	5.1%	8/31/07
S&P 500		19.3%	16.3%	10.0%	4.7%	
Lipper Large Core		*19.7%*	*15.0%*	*9.3%*	*4.3%*	
SMRS Large-Cap Growth	$1,257,494,178	18.6%	15.7%	11.4%	7.4%	5/31/05
S&P 500 Growth Index		17.0%	16.7%	11.6%	7.5%	
Lipper Large Growth		*19.7%*	*15.4%*	*10.8%*	*7.4%*	
LSV Large-Cap Value	$824,562,340	29.4%	17.6%	--	15.4%	1/31/10
S&P 500 Value Index		22.2%	15.9%	8.4%	13.7%	
Lipper Large Value		*22.0%*	*14.8%*	*8.8%*	*12.5%*	
Artisan All-Cap Value	$665,746,624	20.1%	16.1%	12.4%	10.2%	5/31/05
S&P 1500 Value/S&P 400 Value Blend		23.1%	16.3%	11.5%	8.9%	
Lipper Mid Value		*29.1%*	*16.1%*	*12.1%*	*8.4%*	
SMRS Absolute Return Income Fund	$391,989,044	14.9%	13.7%	--	16.3%	1/31/09
60% S&P 500/40% Barclays AGG		10.6%	11.0%	8.6%	12.0%	
Lipper Mixed Target Allocation Growth		*12.0%*	*9.6%*	*8.0%*	*12.3%*	

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Donald Smith & Co.	$370,611,226	21.9%	10.6%	14.7%	8.3%	2/28/07
S&P 600 Value Index		31.8%	20.0%	11.5%	6.1%	
Lipper Small Value		*29.8%*	*16.7%*	*11.8%*	*5.6%*	
Fisher All-Cap	$361,924,507	14.3%	12.0%	9.0%	9.2%	10/31/04
S&P 1500/S&P 600 Value Blend		20.4%	16.4%	9.5%	7.9%	
Lipper Small Value		*29.8%*	*16.7%*	*11.8%*	*8.3%*	
Epoch Large-Cap Value	$354,470,669	21.8%	14.9%	--	12.7%	1/31/10
S&P 500 Value Index		22.2%	15.9%	8.4%	13.7%	
Lipper Large Value		*22.0%*	*14.8%*	*8.8%*	*12.5%*	
SMRS All-Cap GARP	$337,105,251	16.6%	19.2%	--	16.6%	4/30/11
S&P 1500 Super Composite		20.4%	16.5%	10.3%	12.4%	
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*10.4%*	
SMRS Large-Cap Value	$292,464,223	23.8%	14.0%	7.2%	1.0%	7/31/07
S&P 500 Value Index		22.2%	15.9%	8.4%	2.0%	
Lipper Large Value		*22.0%*	*14.8%*	*8.8%*	*2.4%*	
Cramer Rosenthal All-Cap	$248,662,555	23.5%	15.9%	11.1%	9.5%	5/31/05
S&P 400 Value/S&P 1500 Blend		28.1%	16.8%	11.8%	9.1%	
Lipper Mid Value		*29.1%*	*16.1%*	*12.1%*	*8.4%*	
JP Morgan Large-Cap Growth	$183,049,613	18.1%	--	--	20.8%	8/31/12
S&P 500 Growth Index		17.0%	16.7%	11.6%	18.8%	
Lipper Large Growth		*19.7%*	*15.4%*	*10.8%*	*22.4%*	
Attucks Asset Management	$158,528,771	23.5%	16.1%	10.1%	4.5%	11/30/07
S&P 1500 Super Composite		20.4%	16.5%	10.3%	4.1%	
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*3.4%*	
Seizert Capital Partners	$151,397,721	33.7%	19.4%	--	19.5%	11/30/09
S&P 1500/S&P 400 Value Blend		20.4%	18.2%	--	19.9%	
Lipper Mid Value		*29.1%*	*16.1%*	*12.1%*	*17.4%*	
Bivium Capital Partners	$138,871,397	21.7%	16.8%	10.9%	4.2%	11/30/07
S&P 1500 Super Composite		20.4%	16.5%	10.3%	4.1%	
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*3.4%*	
Champlain Mid-Cap Core	$125,595,943	26.1%	17.3%	--	21.0%	2/28/09
S&P 400 Mid-Cap Index		27.7%	17.5%	13.1%	23.5%	
Lipper Mid Core		*27.5%*	*15.9%*	*11.5%*	*21.3%*	
Edgewood Large-Cap Growth	$101,436,670	21.0%	16.9%	--	18.2%	4/30/09
S&P 500 Growth Index		17.0%	16.7%	11.6%	20.5%	
Lipper Large Growth		*19.7%*	*15.4%*	*10.8%*	*19.8%*	

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
LA Capital Mid-Cap Core	$92,104,332	27.1%	16.9%	12.6%	10.4%	5/31/05
S&P 400 Mid-Cap/S&P 400 Mid-Cap Growth Blend		26.2%	17.0%	12.8%	9.8%	
Lipper Mid Core		*27.5%*	*15.9%*	*11.5%*	*8.5%*	
Munder Mid-Cap Core	$61,768,206	27.4%	17.2%	--	23.0%	4/30/09
S&P 400 Mid-Cap Index		27.7%	17.5%	13.1%	24.9%	
Lipper Mid Core		*27.5%*	*15.9%*	*11.5%*	*22.5%*	
NorthPointe Small Cap Core	$56,116,419	27.7%	14.6%	9.5%	6.9%	10/31/04
NorthPointe Blended Benchmark		31.5%	19.3%	11.1%	8.7%	
Lipper Small Core		*29.3%*	*17.5%*	*11.8%*	*8.8%*	
SMRS Concentrated Equity	$54,178,076	--	--	--	15.4%	5/31/13
S&P 1500 Super Composite		20.4%	16.5%	10.3%	6.7%	
Lipper Multi Core		*22.9%*	*14.7%*	*9.7%*	*8.3%*	
SMRS Concentrated All Cap Growth	$17,331,609	--	--	--	5.5%	5/31/13
S&P 1500 Super Composite Growth		18.1%	17.0%	11.9%	7.4%	
Lipper Multi Growth		*22.5%*	*15.7%*	*11.4%*	*11.2%*	

Performance Persistence Analysis #1

- As illustrated by the below charts, RVK found no significant evidence of performance persistence by analyzing historical manager return data.

Rank Persistency of Top Quartile Managers (based on **5** year rolling total returns)						
Top Quartile mngrs ranking above MEDIAN through 12.30.2010	Core US Fixed Income	Large Cap US Growth	Large Cap US Core	Large Cap US Value	Small Cap US Core	EAFE Core
% above median based on 1991-1995 rank	47%	27%	29%	36%	n/a	n/a
% above median based on 1996-2000 rank	43%	20%	30%	24%	27%	33%
% above median based on 2001-2005 rank	41%	42%	39%	34%	**62%**	36%

50% is considered random, greater than 50 is desirable

Example: 47% of top quartile Core Fixed Income managers (rank based on 1991-1995 five year total return) ranked above median for 1996-2010 period.

Rank Persistency of Top Quartile Managers (based on **3** year rolling total returns)						
Top Quartile mngrs ranking above MEDIAN through 12.30.2010	Core US Fixed Income	Large Cap US Growth	Large Cap US Core	Large Cap US Value	Small Cap US Core	EAFE Core
% above median based on 1990-1992 rank	31%	36%	**54%**	36%	n/a	n/a
% above median based on 1993-1995 rank	**59%**	32%	37%	43%	n/a	n/a
% above median based on 1996-1998 rank	43%	28%	27%	21%	27%	22%
% above median based on 1999-2001 rank	44%	41%	**52%**	44%	**67%**	42%
% above median based on 2002-2004 rank	45%	39%	35%	39%	42%	26%
% above median based on 2005-2007 rank	**57%**	24%	40%	**51%**	**57%**	44%

50% is considered random, greater than 50 is desirable

Data Source: eVestment Alliance. https://www.evestment.com.

RVKuhns & ASSOCIATES, INC.

Consistency Analysis #1

Top Quartile Managers Also Experience Down Periods

- An analysis of top-quartile managers with 10+ year track records (ranks as of 12/31/2010) indicates that even top-quartile managers may experience a sustained period of below-median returns.
  - This period of underperformance may last several months, or even multiple years.
  - Following a period of underperformance, the managers in the study often experienced a significant performance recovery.

As of 12.31.2010 [1]	No. of products with 10 yr record		% of top Q mngrs that ranked below median…		Avg no. of *consecutive* Qs spent below median [2]	No. mngrs who recovered from "down period" by 09.30.2010 [3], [4]	Avg rank of the recovered mngrs following 1st "down" period [4]
	Total	Top Quartile	for 1 or more quarters	for 4 or more quarters			
US Large Cap Value	176	44	89%	77%	7.6	17	26.5
US Large Cap Growth	204	51	92%	69%	5.6	24	28.1
US Small Cap Value	124	31	94%	61%	4.3	11	27.3
US Small Cap Growth	116	29	93%	72%	6.3	16	31.6
Fixed Income - Core	164	41	90%	68%	5.6	24	24.4
Fixed Income - High Yield	72	18	94%	72%	4.2	8	29.0
Non-US Equity - EAFE Core	40	10	90%	90%	5.6	6	22.4
Non-US Equity - Emerging	72	18	94%	67%	5.0	6	26.7

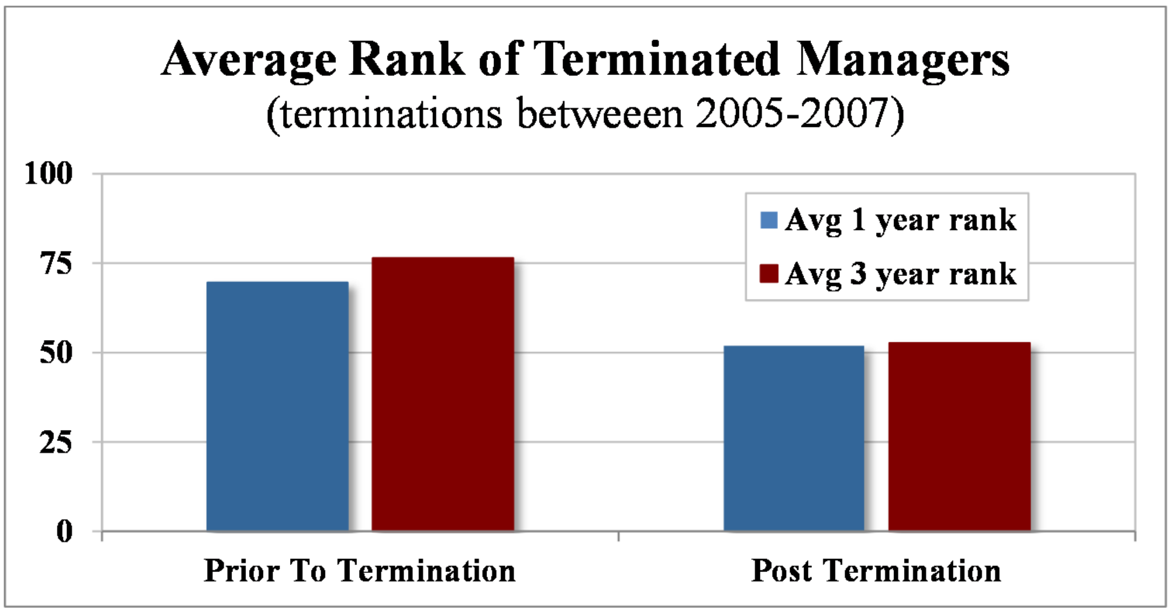
(1) For this analysis we used quarterly fund ranks for three year rolling periods; ranks are based on total gross of fees returns.
(2) The average is calculated on below median periods lasting more then one quarter; ouf of total 10 years analyzed in this study.
(3) Managers who experienced one or more periods of below median ranks for four or more consecutive quarters and achieved above median returns as of 09.30.2010.
(4) "Down period" is classified as four or more consecutive quarters of below median ranks.

Data Source: eVestment Alliance. https://www.evestment.com.

"Chasing Returns": Study #1

Poor Recent Performance ≠ Poor Future Performance

- RVK conducted a study of actual client manager termination decisions
  - On average the rank of the terminated managers significantly improved post termination event.
  - Poor *past* performance does not necessarily mean poor *future* performance.
  - It is important to understand the reasons for short-term underperformance.



Source: R.V. Kuhns & Associates, Inc. , 2010. Client data for 36 performance based terminations of managers from 2005 to 2007.

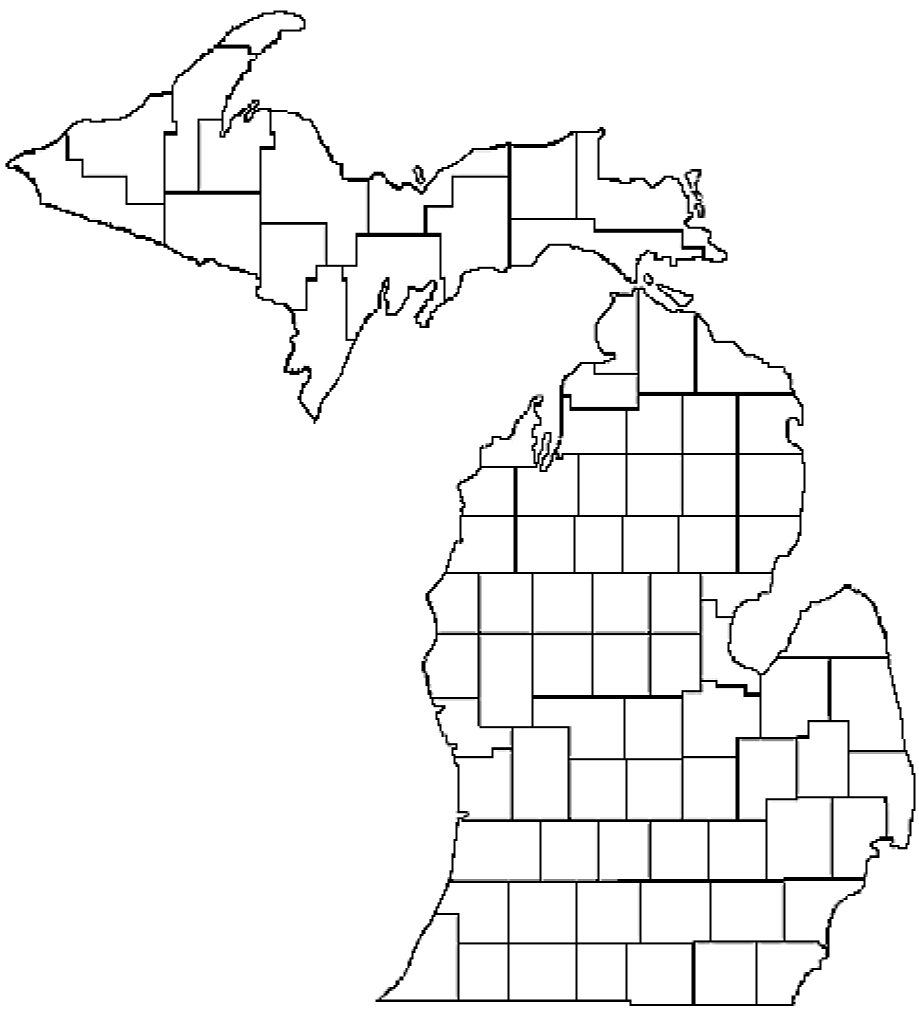
RVKuhns & ASSOCIATES, INC.

STATE OF MICHIGAN
RETIREMENT SYSTEMS

INTERNATIONAL EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Richard J. Holcomb, CFA, Administrator
Quantitative Analysis Division

EXECUTIVE SUMMARY

Performance

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	16.4 %	7.2%	6.9%	2.0%	7.5%
Benchmark Return	17.0%	6.4%	5.4%	1.3%	7.2%
Peer Return (> $1 B)	19.6%	7.6%	7.4%	3.8%	9.3%
Rank vs. Peers	81	61	68	78	73

- Performance in the third quarter was negatively affected by an emerging market overweighting. Performance of the total international equity position versus the International Blended Benchmark with the MSCI ACWI ex USA benchmark in recent years was +9.7% versus +10.2% in the third quarter, resulting in a -50 basis points (bps) tracking error and a cumulative -66 bps for the trailing year. Both variance numbers are within the normal expected range that recognizes a 250 bps possible variance, and have been impacted by negative emerging market returns. The return numbers for five years and over reflect the market decline in 2009 and recovery from the significant fixed income price disruption environment. The three and five-year tracking error numbers were +67 and +153 bps, respectively.

- The largest component in passive exposure to international developed market returns is the internally managed stock plus fund. The approximate $1.0 billion of negotiated swap agreement contracts are combined with internally managed fixed income Libor note holdings and an internal Global Dividend Income fund. All counterparties used for swap agreements and fixed income holdings are investment grade. The net unrealized gain on the combined positions was $149 million as of September 30, 2013. Recognized but unrealized gains from fixed income Libor notes, remarked at lower cost values, are now $3.1 million.

- The S&P BMI EPAC 25% hedged benchmark is used for internal stock plus passive position management and related passive investments. The performance of total passive international equity investments in developed markets was +11.4% in the third quarter versus the benchmark's return of +11.0%.

- External active international fund managers had a return of +11.2% for the quarter and +22.5% for the trailing year. Manager returns are well diversified, and reflect a combination of fundamental, quantitative and stock plus fixed income enhancement strategies. The external stock plus strategies recovered in the quarter, benefiting from adaptive active management strategies. External active stock managers have been given the authority to use a limited amount of emerging or U.S. market exposure (i.e. for security substitution purposes), but those uses are normally constrained to no more than 20% of their portfolios.

- The Emerging Market Index returns were +5.8% for the quarter, and +1.0% for the trailing year. Passive and active exposures of $1.9 billion to emerging market stocks are a current drag on relative performance, although the longer range economic outlook remains positive. Fifty percent of exposure to Emerging Markets is passive. Emerging Markets exposure is now +3.0% over its weight in the MSCI ACWI ex USA benchmark.

Outlook

- The outlook for international equities is positive based on the European Central Bank support of liquidity, gradual improvement in the global economy and attractive relative valuation with the U.S. market. Reductions in systemic leverage continues as banks write-down distressed asset values. The prospect of default risks and contagion risks continues to be reduced, but has not been eliminated. Greece, Italy, and Spain debt problems are unresolved. Emerging Markets have been negatively affected by slower growth in China and weaker commodity demand. Longer term growth expectations in emerging markets remain positive, and political instability remains an issue.

- Current external managers are diversified by style, and are starting to benefit from a better environment. Stock Plus strategies recovered in the third quarter, and are expected to enhance returns over the three-year planning horizon.

- Emerging markets are expected to benefit from growing local demand trends and any additional developed market economic growth and recovery. Political instability, corruption, lack of tested legal systems, growing regulation, and changing tax regimes remain concerns. Critical infrastructure investments should also stimulate the emerging market economies.

Investment Plan

- Move higher toward strategic asset allocation targets as a global recovery becomes more visible. Take advantage of external manager capacity and established conduits as market corrections and tactical opportunities occur.

- Research use of services with unique and useful research capabilities. Identify meaningful information for decision-making. Continue to monitor external managers and develop strategic relationships.

- Be aware of opportunistic situations with non-benchmark and exchange-traded products. Accept reasonable tracking error risk in return for better liquidity and return enhancement.

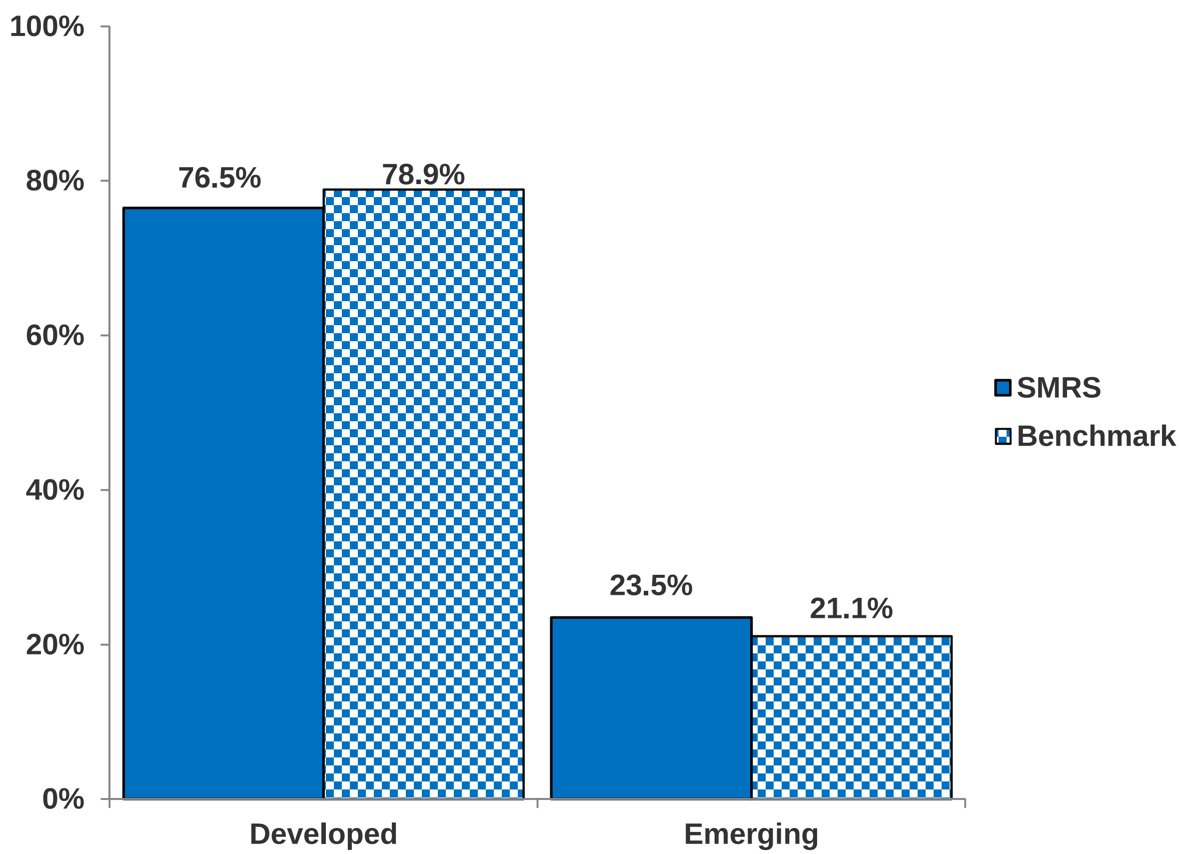
- Take advantage of attractive corporate spreads in Libor notes, and trade to improve yields when possible. Identify joint investments where appropriate with the Bureau's fixed income Divisions to enhance returns. Continue to prepare for derivative market changes by focusing on standardized structures, construction and management of collateral positions and more frequent settlement requirements. Major regulatory clarification and compliance measures have been delayed, and many requirements will not take effect before 2014.

SMRS

International Equity Holding By Category

SMRS Versus Benchmark

9/30/13

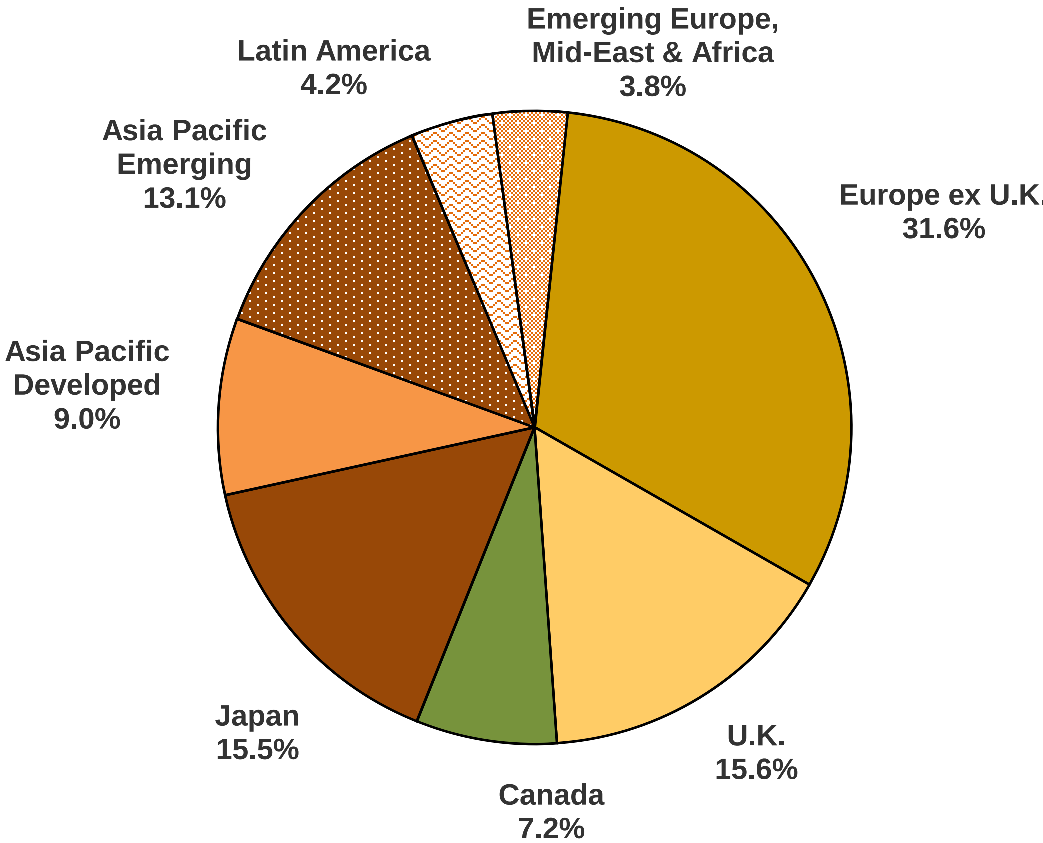


Investments by Region

	SMRS	MSCI ACWI ex USA
Developed	76.5%	78.9%
Emerging	23.5%	21.1%
Total	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
MSCI ACWI ex USA
9/30/13

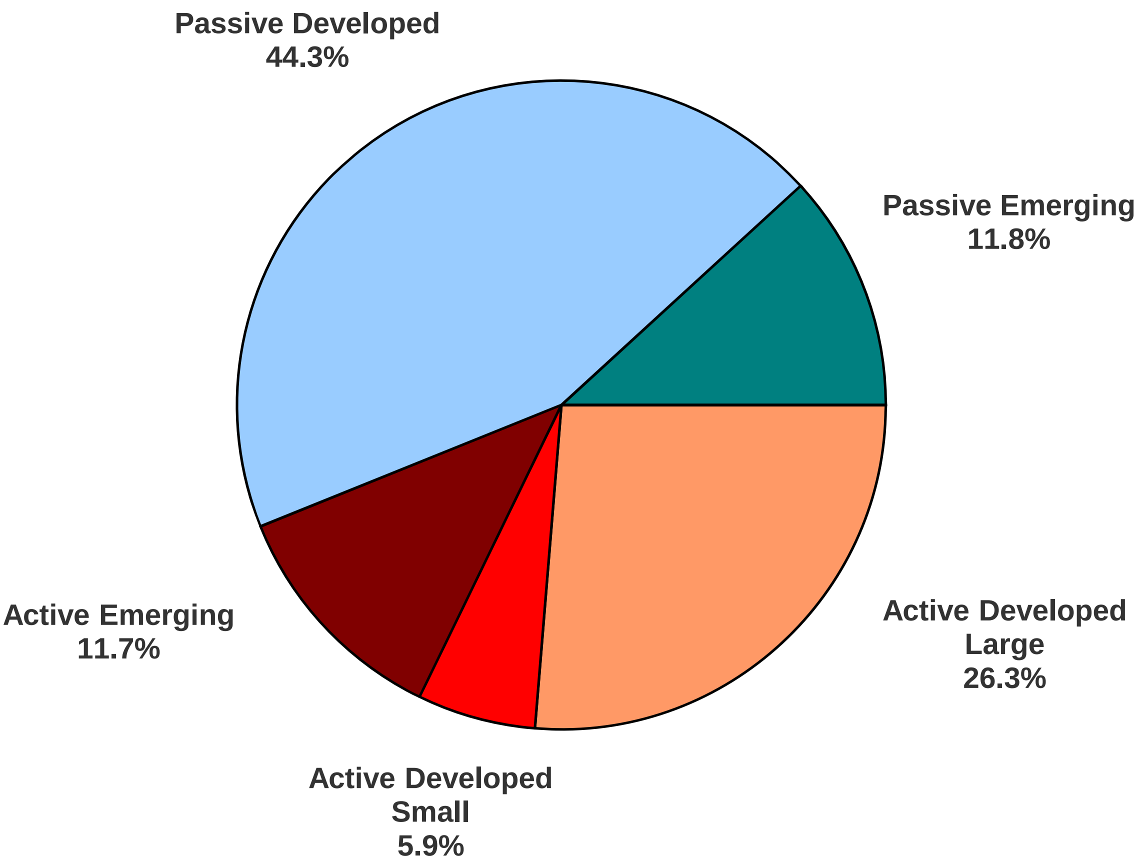


	Benchmark
Developed	
Europe ex U.K.	31.6%
U.K.	15.6%
Japan	15.5%
Asia Pacific Developed	9.0%
Canada	7.2%
Total Developed	78.9%
Emerging	
Asia Pacific Emerging	13.1%
Latin America	4.2%
Emerging Europe, Mid-East & Africa	3.8%
Total Emerging	21.1%
Total	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

International Equity Holdings By Category
9/30/13



Market Value in Millions

	9/30/13		6/30/13	
Active				
Developed Large	$2,141	26.3%	$2,247	30.1%
Developed Small	480	5.9%	340	4.5%
Emerging	954	11.7%	970	13.0%
Total Active Equity	3,575	43.9%	3,557	47.6%
Passive				
Developed	$3,615	44.3%	$2,775	37.2%
Emerging	963	11.8%	1,133	15.2%
Total Passive Equity	4,578	56.1%	3,908	52.4%
Total International Equity	**$8,153**	**100.0%**	**$7,465**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

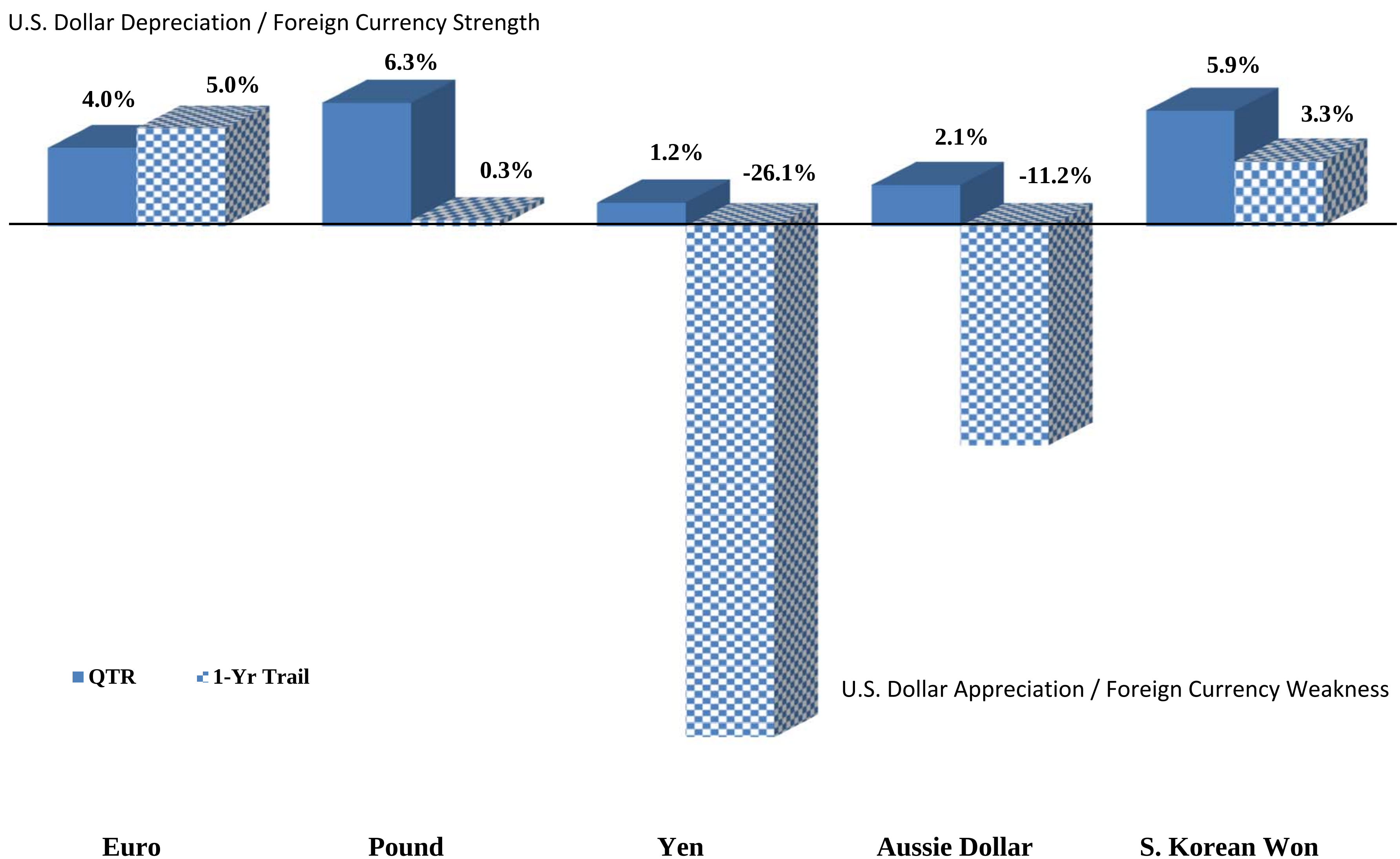
SMRS
INTERNATIONAL EQUITIES
9/30/13

Markets	Indexed	Active	Total Indexed & Active	Percent
Developed Markets - Large/Mid Cap				
Internal Stock Plus Combination	$1,379,494			
SSgA PMI Fund	987,606			
Vanguard Developed Markets Fund	544,849			
PIMCO Stock Plus Fund		$970,870		
SSgA Int'l Alpha Select BMI Fund		11		
Wellington Int'l Research Equity Fund		505,278		
Marathon-London EAFE Fund		319,599		
Baillie Gifford ACWI Ex US Alpha Fund		345,291		
Sub Total Developed Large/Mid Cap	**$2,911,949**	**$2,141,049**	**$5,052,998**	**62.0%**
Developed Markets - Small Cap				
SSgA EMI Fund	$703,331			
Franklin Templeton Int'l Small Cap Fund		$190,944		
MFS Int'l Small Cap Fund		175,252		
SSgA Int'l Small Cap Alpha Fund		113,078		
Sub Total Developed Small Cap	**$703,331**	**$479,274**	**$1,182,605**	**14.5%**
Total Developed Markets	**$3,615,281**	**$2,620,323**	**$6,235,603**	**76.5%**
Emerging Markets - All Cap				
Vanguard Emerging Mkt Stock Index Fund	$892,048			
Internal Equity Emerging Market Fund	70,786			
PIMCO Emerging Market Fund		$492,763		
LACM Emerging Market Fund		300,300		
Wellington Emerging Market Fund		161,180		
Sub Total Emerging All Cap	**$962,833**	**$954,242**	**$1,917,075**	**23.5%**
TOTAL	**$4,578,114**	**$3,574,565**	**$8,152,679**	**100.0%**

Note: All dollar amounts are expressed in thousands.

Currency Performance vs. the U.S. Dollar

9/30/13



STATE OF MICHIGAN
RETIREMENT SYSTEMS

ABSOLUTE AND REAL RETURN REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013

James L. Elkins, Administrator
Short-Term Fixed Income, Absolute and Real Return Division

EXECUTIVE SUMMARY

Absolute Return

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Absolute Return	10.2%	5.6%	0.8%	NA	NA
HFRI FOF Conservative*	6.2%	2.8%	0.1%	1.1%	2.8%

*One month lag on the index

Strategy Overview

- Arbitrage – Event-driven managers performed well during the quarter, with significant contributions from long positions in event-oriented equities and modest contributions from distressed credits and merger arbitrage. The fixed income arbitrage allocations delivered gains, benefitting from improved conditions in developed market yield curves and a rebound in structured credit. This strategy is 34.3% of the Absolute Return Portfolio.

- Credit/Distressed - Restructurings in the media and real estate sectors performed well as management teams prepared companies for re-listings or sales. With the default rate expected to stay low for some time in the US, managers have turned their focus to Europe, where they were busy during the quarter evaluating multiple portfolios from European “bad banks”. This strategy is 33.2% of the Absolute Return Portfolio.

- Long/Short Equity - Managers registered strong gains during the quarter from long positions in companies that are taking advantage of the changing competitive dynamics in the cable, media and technology sectors. Short performance was mixed during the quarter and for the year-to-date, particularly in the U.S. Managers have been able to generate gains from short positions in technology that have failed to keep up with product innovations, while shorts in speculative growth companies in the U.S. have detracted from performance. Managers have also generated positive alpha on international shorts, including companies whose end product demand is driven mostly by China. This strategy is 22.6% of the Absolute Return Portfolio.

- During the quarter, no new investments were made in the Absolute Return Portfolio.

Real Return and Opportunistic

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Real Return and Opport.	6.6%	6.6%	NA	NA	NA
Custom Benchmark	7.1%	7.7%	NA	NA	NA

- The portfolio returns have had a slight drag due to the j-curve of many of the new investments, which is expected with an unseasoned portfolio. We have been able to offset that drag with positive cash flow from our direct lending and performing credit investments. We expect the portfolio returns to continue to ramp up as the private equity style investments in the portfolio become fully invested.

- Senior Secured Credit - Performing non-investment grade credit managers delivered gains as the market ended the quarter with weaker technical conditions and concerns over a government shutdown. During the third quarter, the S&P/LSTA Leveraged Loan and Merrill Lynch U.S. High Yield Master II indices returned 1.2% and 2.3%, respectively. Default rates increased to a three-year high of 2.4%, however, consensus expectations are calling for a slight downtrend to 2.3% (excluding TXU) over the next twelve months. This strategy is 15.3% of Real Return & Opportunistic Portfolio.

- Direct Lending – Loan activity remained strong during the quarter. Managers continue to have a healthy pipeline of opportunities and expect transactions to progress at a steady pace as we move towards the end of the year. Middle market lending spreads have held at an attractive level even with increased competition in the space. This strategy is 13.8% of Real Return & Opportunistic Portfolio.

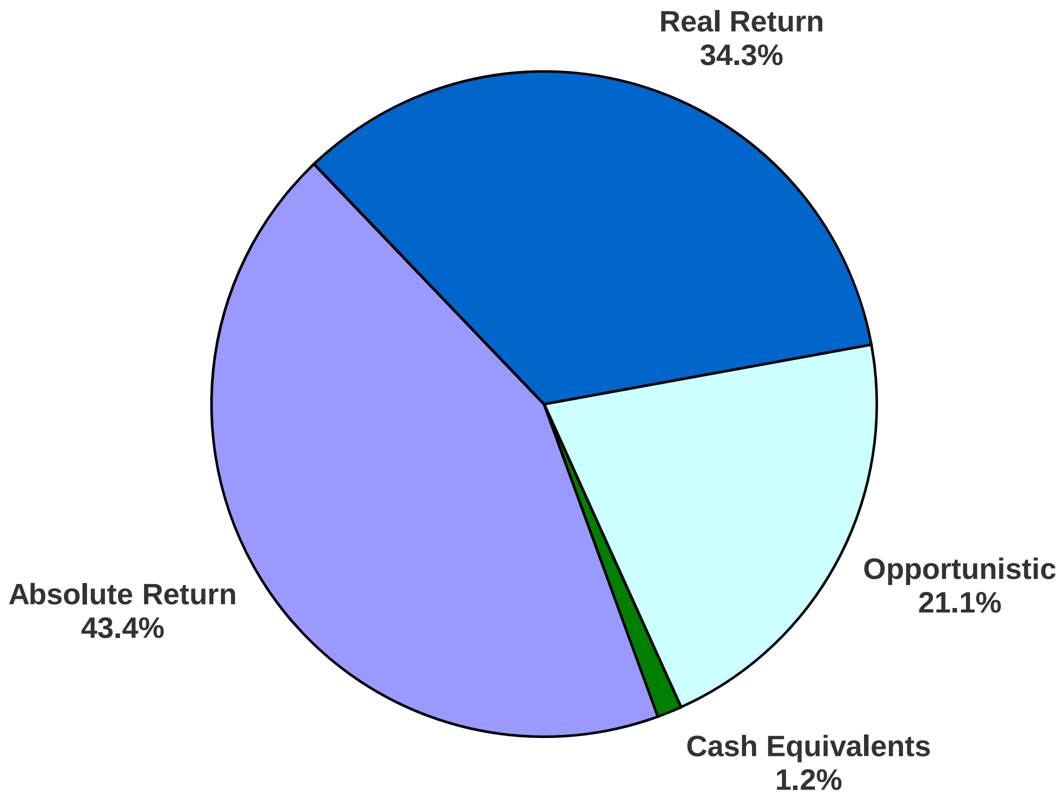
Commodities

MPSERS Plan	**1-Year**	**3-Years**	**5-Years**	**7-Years**	**10-Years**
Commodities	-13.4%	-1.3%	NA	NA	NA
DJUBS Commodity TR	-14.3%	-3.2%	-5.3%	-2.2%	2.1%

- The commodity portfolio outperformed the Dow Jones UBS Commodity Total Return Index by 38 bps for the quarter. The portfolio outperformance was driven mainly by an underweight position in natural gas and overweight positions in gold and silver. This strategy is 12.1% of Real Return & Opportunistic Portfolio.

- During the quarter, three new commitments were closed: Apollo Financial Credit Investment II $400 million (insurance related); Apollo Credit Opportunity Fund III $100 million (credit); Carlyle International Energy Partners (non-US energy).

SMRS
Absolute, Real Return and Opportunistic
9/30/13



Market Value in Millions

	9/30/13		6/30/13	
Absolute Return	$2,341	43.4%	$2,294	43.9%
Real Return	1,848	34.3%	1,752	33.5%
Opportunistic	1,136	21.1%	1,131	21.6%
Cash Equivalents	63	1.2%	52	1.0%
Total Investments	**$5,388**	**100.0%**	**$5,229**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Absolute Return
9/30/13

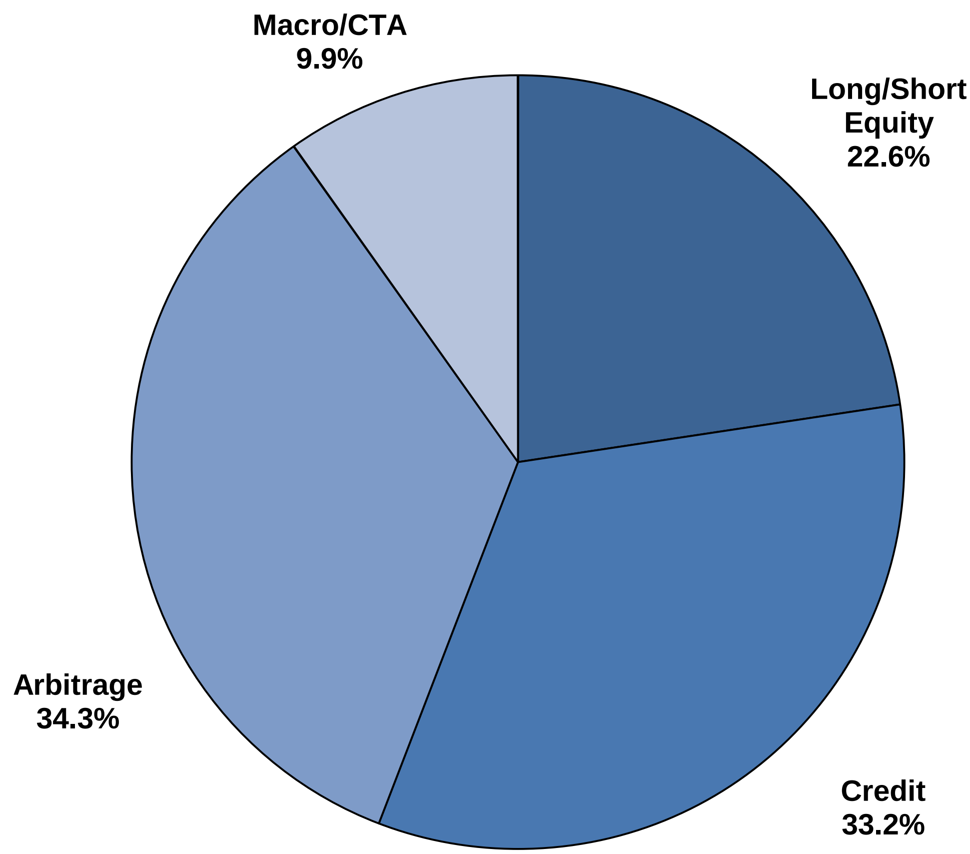
Net Market Values by Entity

	Net Market Value
Absolute Return Capital Partners, L.P.	$50,980,211
Apollo Offshore Credit Strategies Fund Ltd.	132,925,446
Brevan Howard Multi-Strategy Fund, L.P.	104,945,154
Drawbridge Opportunities Fund	106,230,959
Elliott International Limited	11,170,987
* EnTrust White Pine Partners L.P.	295,151,872
FrontPoint Multi-Strategy Fund Series A, L.P.	4,433,246
MP Securitized Credit Master Fund, L.P.	56,051,861
* Sand Hill, LLC	1,179,445,858
Spartan Partners L.P.	34,298,464
* Tahquamenon Fund L.P.	340,367,509
Total Market Value	**$2,316,001,567**

* Fund of Funds.

SMRS
Absolute Return
9/30/13

Investments By Strategy



Strategy Breakdown

Underlying Funds:	112	Median Position Size:	0.1%
Strategies:	4	Average Position Size:	0.3%
Relationships:	11	Largest Position Size:	1.9%

SMRS
Real Return and Opportunistic
9/30/13

Net Market Value by Entity

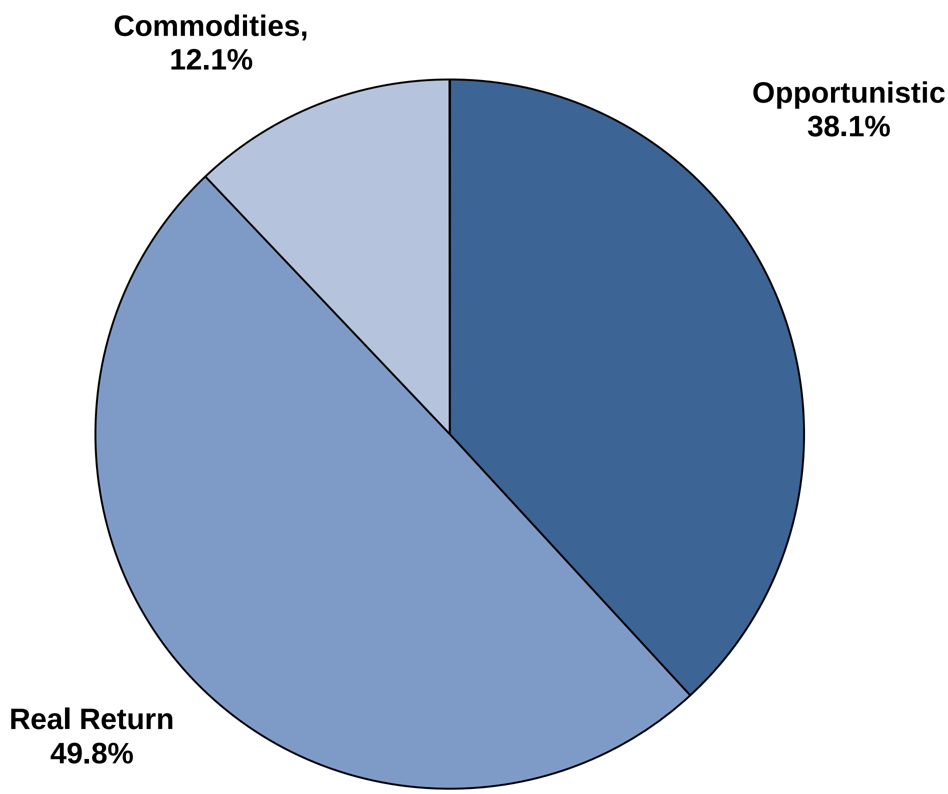
		Net Market Value	Unfunded Commitment
*	Abernathy Fund I, LLC	$332,422,777	$111,763,038
**	**Apollo Credit Opportunities Fund III LP**	**$24,389,264**	**$69,105,144**
	Apollo European Principal Finance Fund II	9,846,731	40,059,227
**	**Apollo Financial Credit Investments Fund II**	**-**	**400,000,000**
	Apollo Offshore Credit Fund Ltd	455,096,677	
	Apollo Offshore Structured Credit Recovery Fund II	59,677,206	
	Commodity Holdings	360,411,778	
	Emerald	30,777,752	
	Energy Recapitalization and Restructuring Fund LP	39,554,055	89,989,006
**	**ERR Michigan Holdings LP**	**6,223,144**	
*	Fairfield Settlement Partners, LLC	81,766,292	50,188,853
	Fortress MSR Opportunities Fund I A LP	126,311,291	77,393,092
	Galaxie Ave. Partners, LLC	100,197,779	
	Highbridge Principal Strategies - Senior Loan Fund II	71,262,979	
	Highbridge Principal Strategies - Specialty Loan Fund III	46,193,033	90,240,608
	Hopen Life Sciences Fund II	2,677,856	7,300,000
	JP Morgan Global Maritime Investment Fund LP	16,543,841	98,344,374
	KKR Lending Partners LP	74,884,862	32,917,565
	Lakewater LLC, Series 1	177,794,892	20,287,707
	Lakewater LLC, Series 2	160,823,930	78,789,385
	Lakewater LLC, Series 3	73,311,888	
	Renaissance Venture Cap Fund II LP	1,290,148	23,501,700
	Ridgewood Energy Oil & Gas II	17,172,494	107,827,506
	RK Mine Finance (Master) Fund II LP	42,504,817	76,869,591
	SJC Direct Lending Fund I, LP	61,715,189	
	SJC Direct Lending Fund II, LP	127,106,817	317,675,301
*	Social Network Holdings, LLC	481,037,985	
	Total Market Value	**$2,980,995,477**	**$1,692,252,095**

* Fund of Funds.

**** New commitment made during quarter reported.**

SMRS
Real Return and Opportunistic
9/30/13

Investments By Strategy



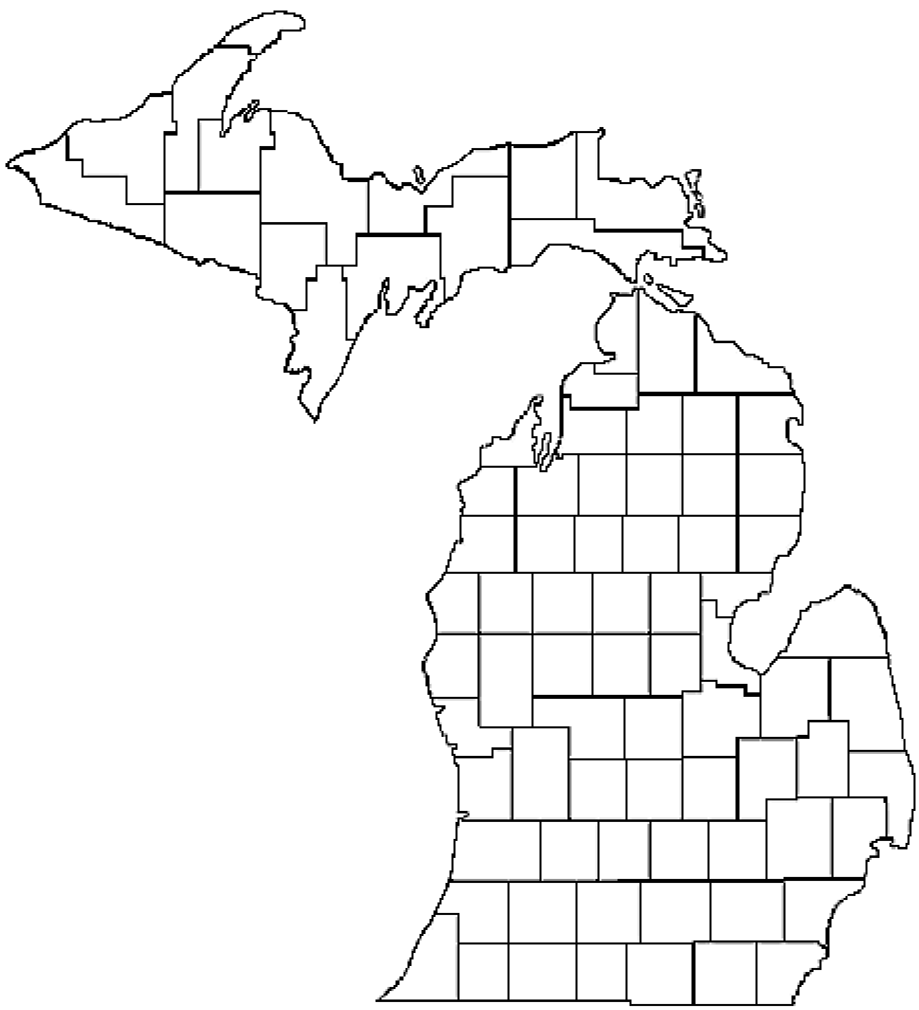
Investment Strategy	
Commodities:	$360,411,778
Opportunistic:	$1,138,142,637
Real Return:	$1,485,032,840

STATE OF MICHIGAN
RETIREMENT SYSTEMS

FIXED INCOME REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Paul R. Nelson II, CFA, Administrator
Long-Term Fixed Income Division

EXECUTIVE SUMMARY

Performance

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Long-Term Fixed Income	-0.2%	3.5%	6.8%	6.1%	5.3%
Barclays Aggregate	-1.7%	2.9%	5.4%	5.1%	4.6%
Peer Median Return	-0.9%	4.3%	6.7%	5.5%	5.0%
Rank vs. Peers	33	82	49	19	45

- Long-Term Fixed Income returns outperformed its peer group and the Barclays Aggregate Index by holding shorter duration securities than the index. The returns also benefited from an overweight position in investment grade corporate bonds which outperformed Treasury securities.

Strategy Update

- Allocation to Long-Term Fixed Income has remained stable for the last twelve months.

- Long-Term Fixed Income is looking to increase the overall rate of return by adding below investment grade (high yield) investments even though some degree of credit risk is added. This credit risk is somewhat offset by lower interest rate risk in high yield investments.

- Assets will be redeployed from internal strategy to external managers. Long-Term Fixed Income will look to diversify from Barclay's Aggregate focused investment strategies. This is due to the increase in the duration of the Aggregate as well as the fact that the index is increasingly comprised of U.S. Government securities.

Market Environment and Outlook

- Treasury rates increased during the year with the 10 year U.S. Treasury increasing by 100 bps during the year to 2.6%. Yields remain near their lowest levels in sixty years although an increase in interest rates may develop slowly.

- Real interest rates on U.S. TIPS securities remain negative for all maturities with less than seven year to maturity.

- While Treasury yields have increased over the past year the largest risk within the fixed income markets continues to be the threat of further interest rate increases. Accordingly, the portfolio duration remains short of the benchmark as we focus on intermediate securities. We have offset this short position by holding a larger allocation to corporate debt securities.

Conclusion

- Given the current level and shape of the yield curve, it seems appropriate to focus on intermediate duration issues. This area of the yield curve offers the best risk adjusted return in this environment. In an attempt to increase return, it appears appropriate to allocate to below investment grade portfolios. We will also look to diversify away from the duration risk of our benchmark by looking into other areas that offer attractive spread pick up while maintaining shorter than benchmark duration.

SMRS
LONG-TERM FIXED INCOME
9/30/13

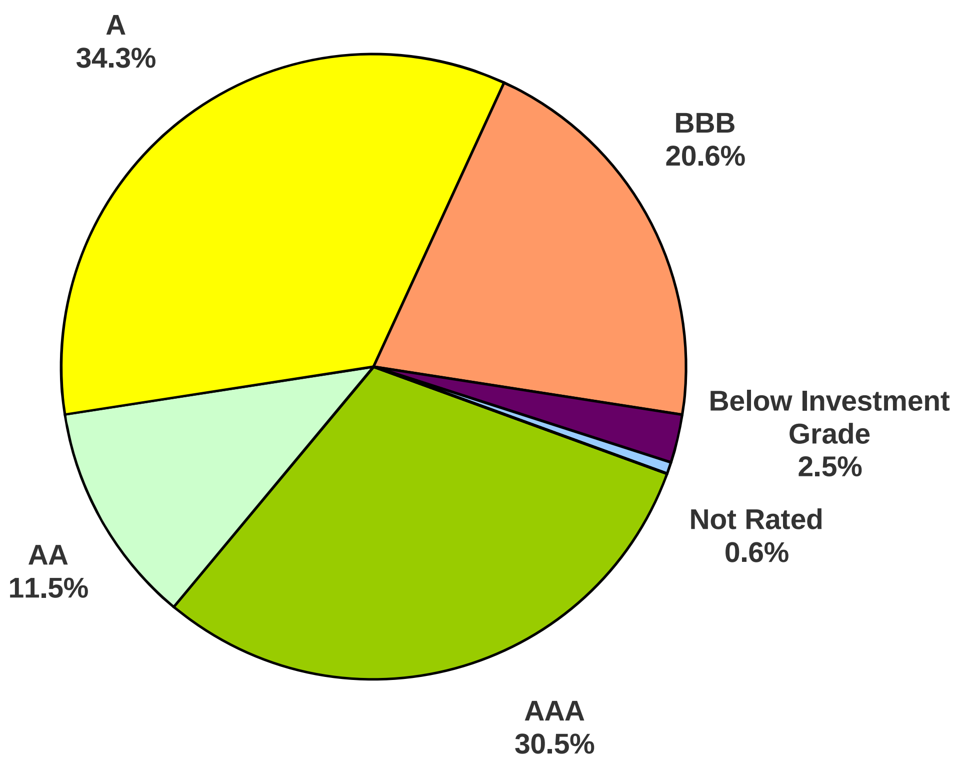
	Amount	% of Total
Core		
LTFID Internal	$4,896,776	73.0%
Metropolitan West	270,437	4.0%
Pyramis	248,062	3.7%
Dodge & Cox	229,034	3.4%
Loomis Core Plus	99,162	1.5%
Ambassador Capital Management	54,223	0.8%
Sub Total	**$5,797,694**	86.4%
Credit		
Prudential	$424,504	6.3%
Alliance Bernstein	195,033	2.9%
Sub Total	**$619,537**	9.2%
Securitized Debt		
Principal Global	$293,310	4.4%
Sub Total	**$293,310**	4.4%
TOTAL	**$6,710,541**	100.0%

SMRS

Fixed Income By Rating

Total U.S. Long-Term Fixed Income

9/30/13



Market Value in Millions

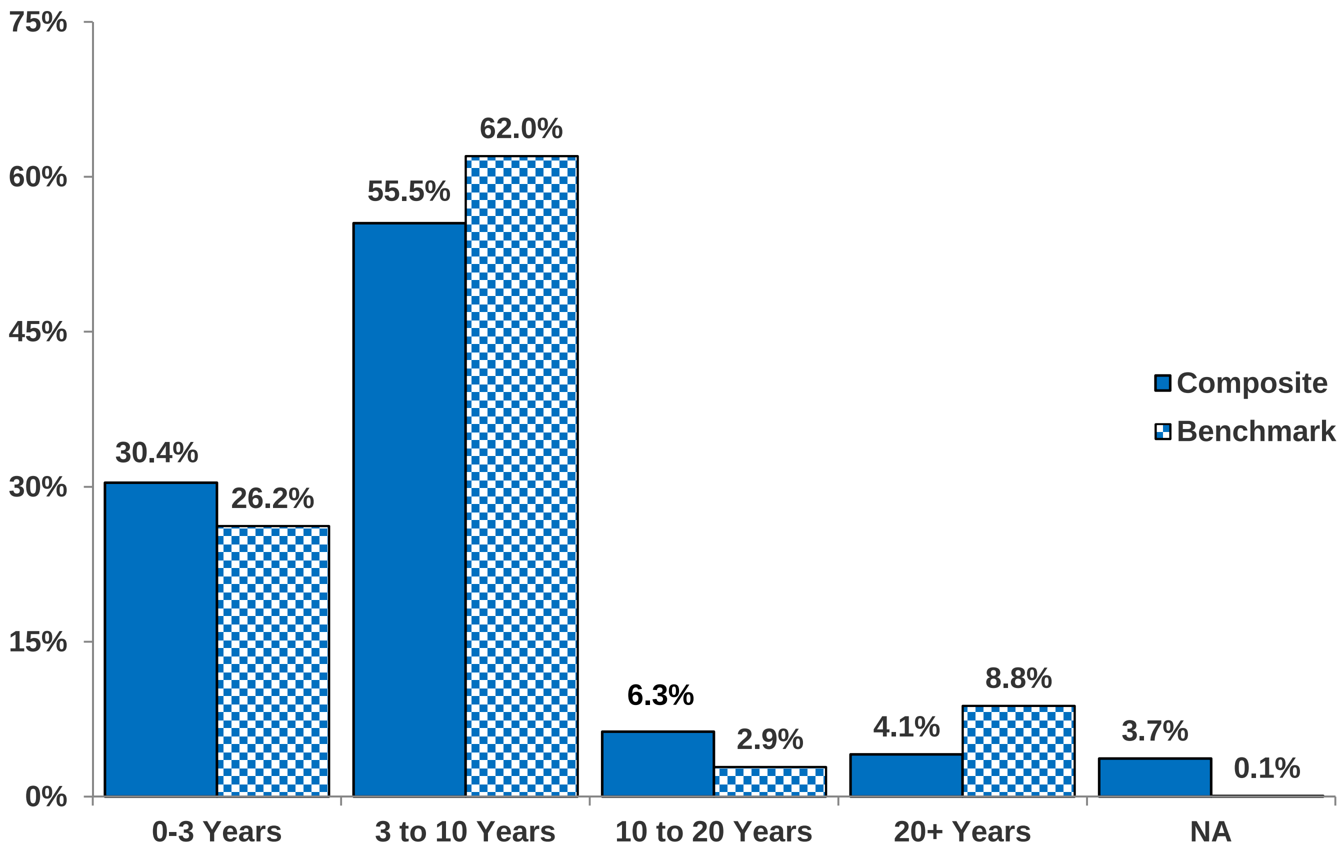
	9/30/13			6/30/13	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
AAA	$2,047	30.5%	55.2%	$2,074	31.1%
AA	774	11.5%	8.2%	747	11.2%
A	2,303	34.3%	11.5%	2,343	35.1%
BBB	1,379	20.6%	9.7%	1,333	20.0%
Not Rated	41	0.6%	15.3%	40	0.6%
Below Investment Grade	167	2.5%	0.1%	135	2.0%
Total Investments	**$6,711**	**100.0%**	**100.0%**	**$6,672**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

Average Life Distribution

Fixed Income Composite Versus Benchmark
9/30/13

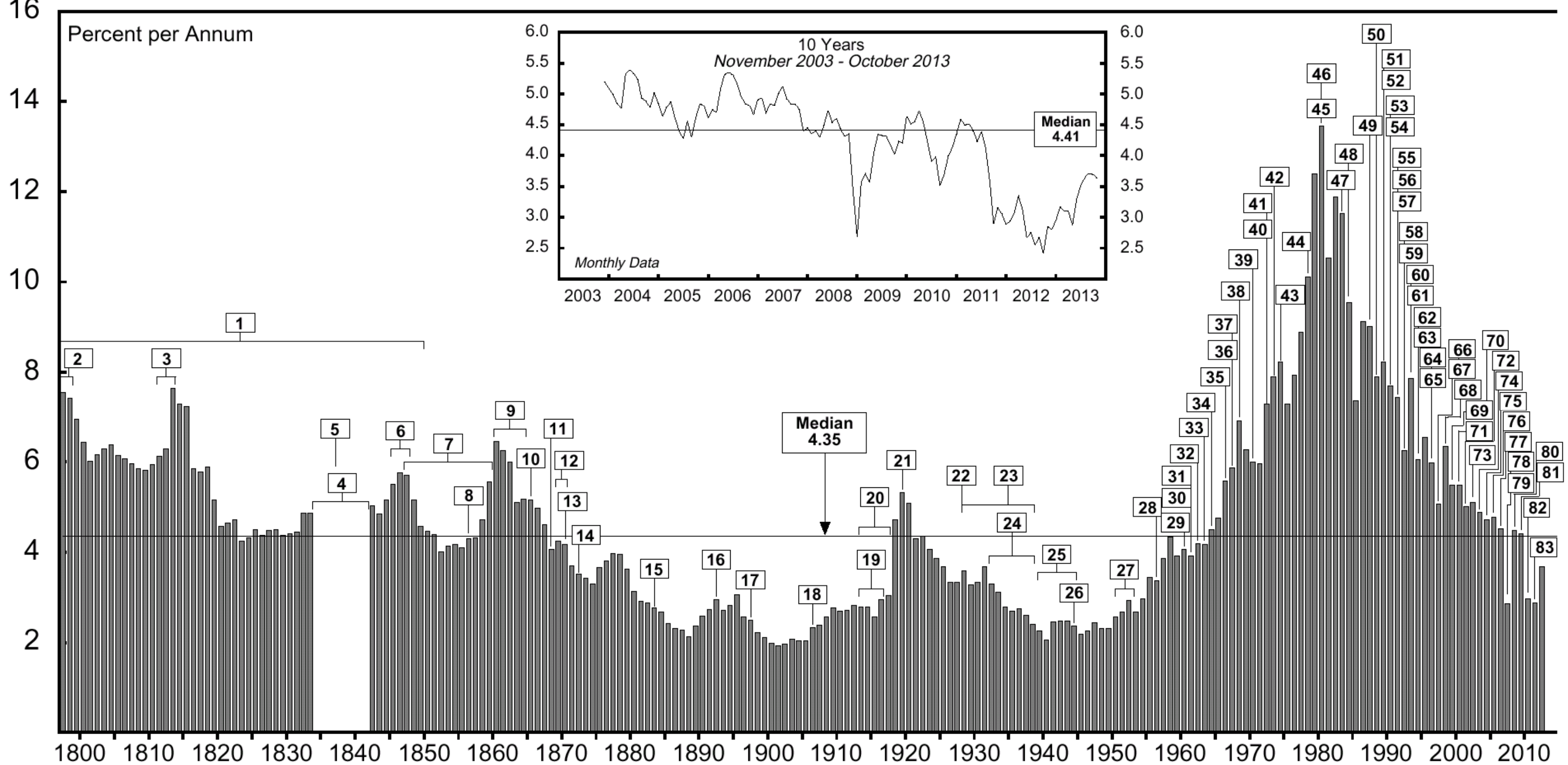


Source: Factset

Market Value in Millions

	Assets	Percent	Benchmark Weight
0-3 Years	$2,040	30.4%	26.2%
3 to 10 Years	3,725	55.5%	62.0%
10 to 20 Years	423	6.3%	2.9%
20+ Years	275	4.1%	8.8%
NA	248	3.7%	0.1%
Total	**$6,711**	**100.0%**	**100.0%**

Long-Term U.S. Government Bond Yields
1798 - 2013*



		Begin	End
1	The Industrial Revolution	1700's	Mid 1800's
2	The French Revolution	1789	1799
3	The War of 1812	1812	1814
4	Period Without Federal Debt	1835	1842
5	Depression	1837	
6	The Mexican War	1846	1848
7	The California Gold Rush	1848	1860
8	Financial Panic	1857	
9	The Civil War	1861	1865
10	The Prussian-Austrian War	1866	
11	The Suez Canal -- Opens	1869	
12	The Franco-Prussian War	1870	1871
13	The Chicago Fire	1871	
14	Depression	1873	
15	Depression	1884	
16	Depression	1893	
17	The Spanish American War	1898	
18	Depression	1907	
19	Federal Reserve System Organized	1914	1917
20	World War I	1914	1918
21	The Panama Canal -- Opens	1920	

		Begin	End
22	Financial Panic	1929	
23	The Great Depression	1929	1939
24	The New Deal	1933	1938
25	World War II	1939	1945
26	The Cold War -- Begins	1945	
27	The Korean War	1950	1953
28	Sputnik I	1957	
29	The Berlin Wall -- Built	1961	
30	Steel Price Rollback	1962	
31	The Cuban Missile Crisis	1962	
32	John F. Kennedy Assassinated	1963	
33	The Vietnam War -- Begins	1964	
34	The Great Inflation -- Begins	1965	
35	The Six Day War	1967	
36	The Tet Offensive	1968	
37	Soviets Invade Czechoslovakia	1968	
38	Apollo 11 -- U.S.A. on the Moon	1969	
39	Dollar devalued	1971	
40	U.S. Involvement in Vietnam -- Ends	1973	
41	The Arab Oil Embargo	1973	
42	President Nixon Resigns	1974	

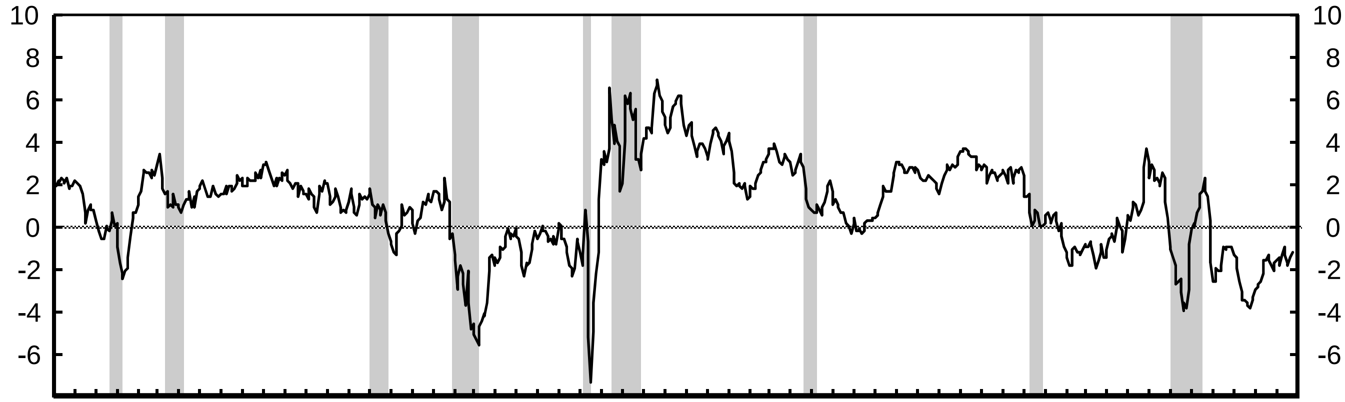
43	The Vietnam War -- Ends	1975
44	Three Mile Island	1979
45	First Space Shuttle	1981
46	President Reagan Shot	1981
47	Run on Continental Bank	1984
48	Gramm-Rudman	1985
49	Financial Panic	1987
50	The Berlin Wall -- Opens	1989
51	German Unification	1990
52	Iraq Invades Kuwait	1990
53	The Gulf War	1991
54	The Soviet Union Collapse	1991
55	The Cold War -- Ends	1992
56	Civil War in Bosnia	1992
57	U.S. Troops in Somalia	1992
58	Russian Revolt	1993
59	World Trade Center - Bombed	1993
60	Orange County Bankruptcy	1994
61	NAFTA Instituted / GATT Passed	1994
62	Republican Majority in Congress	1995
63	Oklahoma Bombing	1995

64	Asian Currency Crisis	1997
65	Hong Kong Stock Market Rout	1997
66	U.S. Intervenes to Support The Yen	1998
67	U.S. Cuts Key Interest Rates	1998
68	NATO Bombs Serbia	1999
69	Y2K Millenium Scare	2000
70	Bush - Gore Election Crisis	2000
71	Terrorist Attack on WTC & Pentagon	2001
72	War on Terror/Corporate Misconduct	2002
73	War in Iraq	2003
74	Global War on Terror	2004
75	Record Oil Prices / Hurricane Katrina	2005
76	Housing Decline/Nuclear Proliferation	2006
77	Subprime Mortgage / Credit Debacle	2007
78	Financial Institution Failures	2008
79	Emergency Economic Stabilization Act	2008
80	War on Terror/Healthcare	2009
81	Gulf Oil Spill/EU Crisis/Massive Debt	2010
82	Debt Ceiling Crisis / Credit Downgrade	2011
83	European Debt / U.S. Fiscal Cliff	2012

*Last Observation October 2013

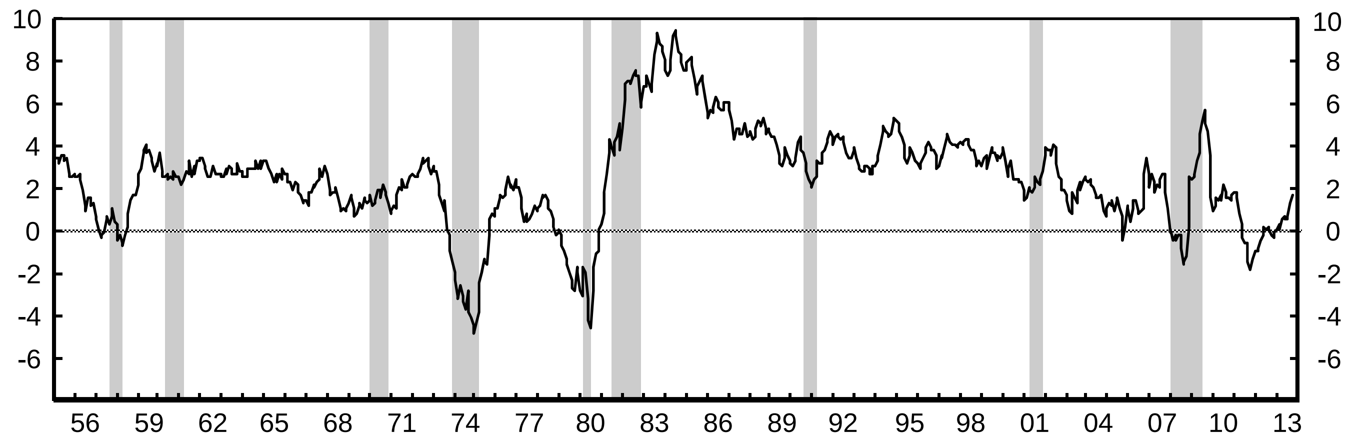
Sources: Federal Reserve Board; Bureau of Economic Analysis; U.S. Department of Commerce; A History of Interest Rates, Sidney Homer;

Real Interest Rates: Short & Long Term



91 Day Treasury Bill Rate Less Consumer Price Index*

Last Observation September 2013



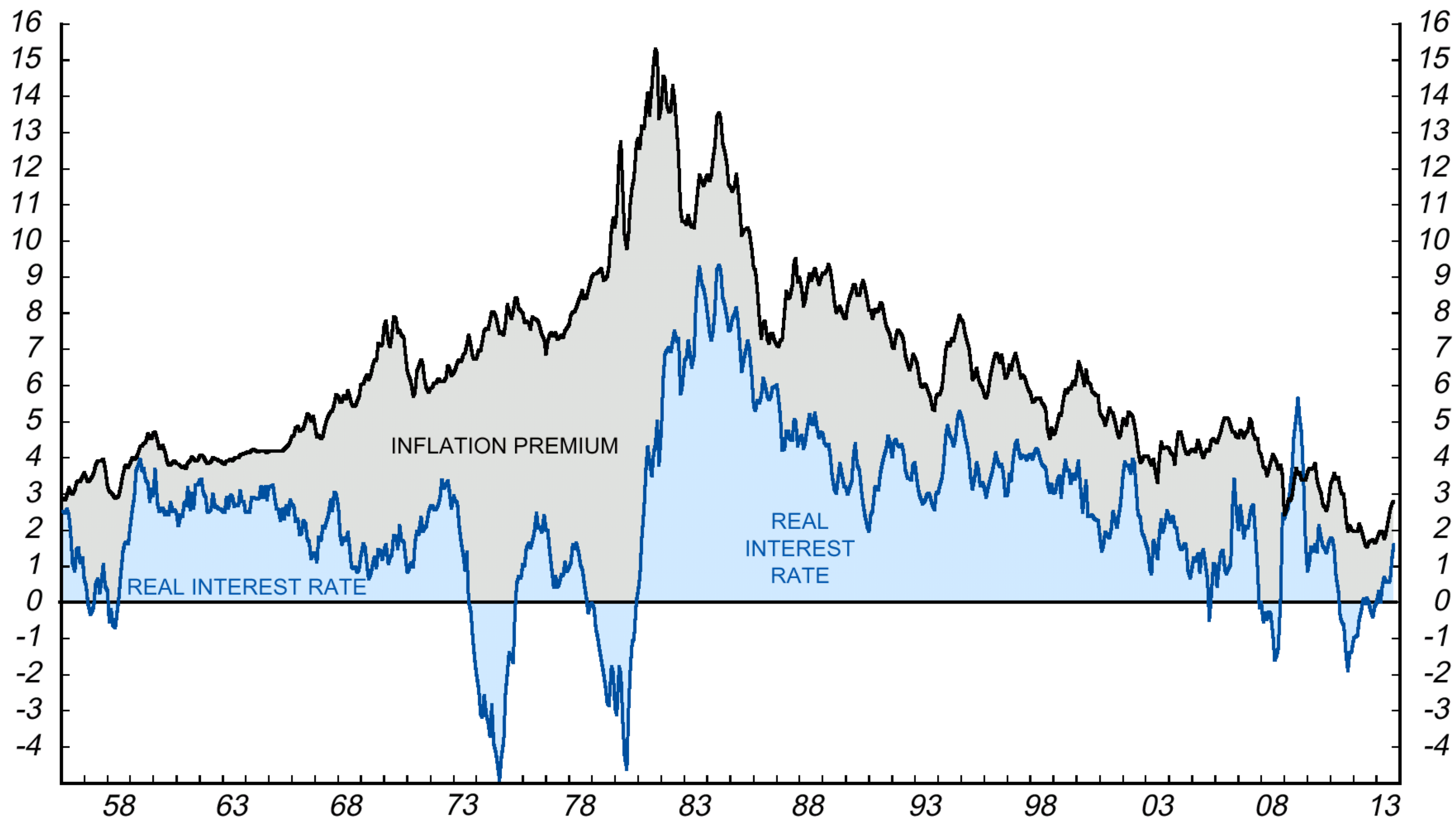
10 Year Government Yields Less Consumer Price Index*

Last Observation September 2013

*CPI data for September is preliminary.
Consumer Price Index = CPI Annual Growth Rate
Shaded areas represent recessionary periods.

*Sources: Federal Reserve Board; Bureau of Labor Statistics • *

Bond Inflation Premium



10 Year Government Yields Percent per Annum ——— Last Observation September 2013

Real Interest Rates 10 Year Government Yields - C.P.I. (Annual Growth Rate) ——— Last Observation September 2013*

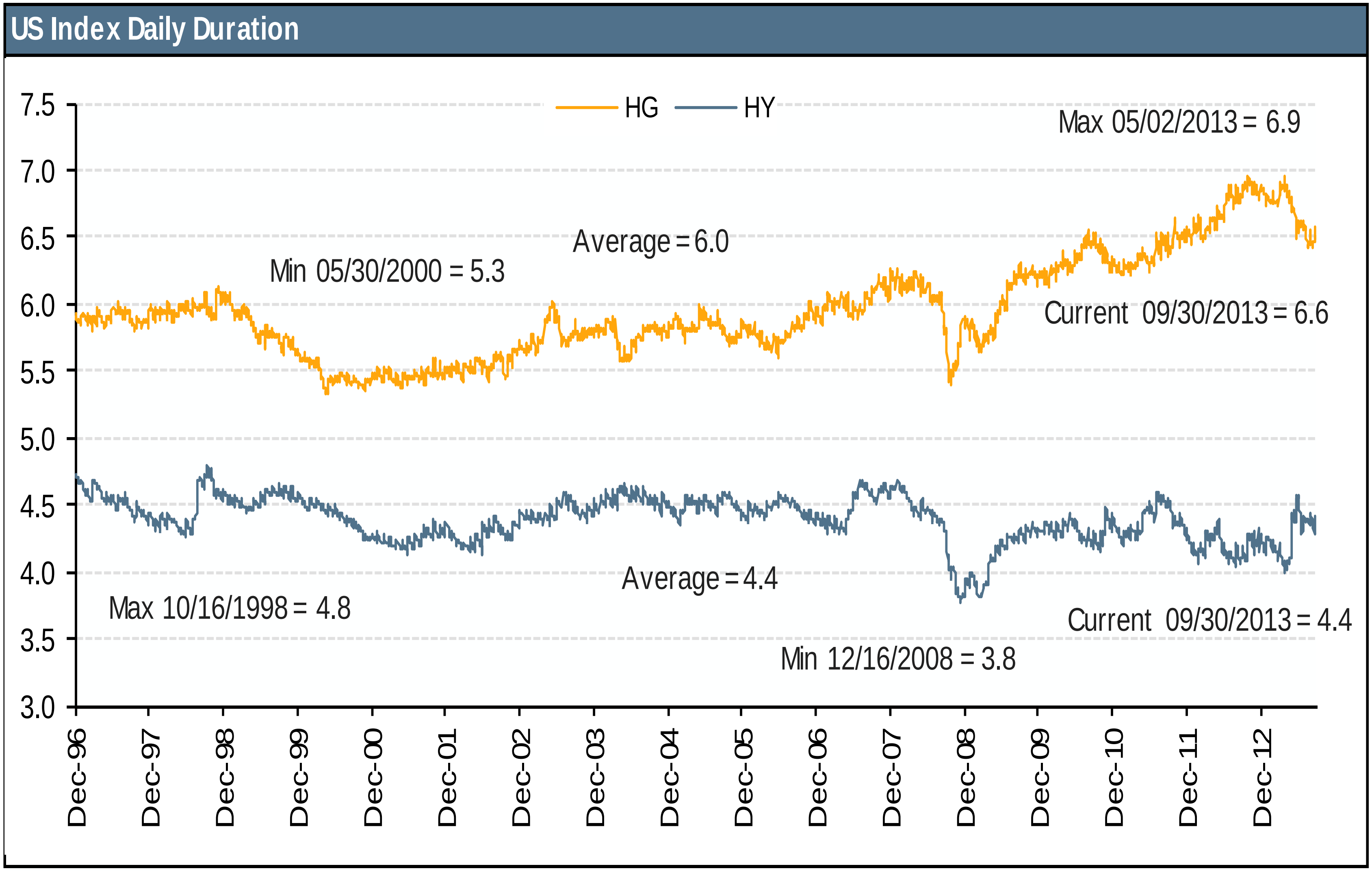
***CPI data for September 2013 is preliminary.**

Sources: Federal Reserve Board; Bureau of Labor Statistics •

Bond Risk Premium

Source: B ofA/M L Indices (C0A0, H0A0), CreditSights

Bond Index Duration Comparison



Source: CreditSights, Bofa/ML Indices data through 09/30/2013 duration is effective duration

SMRS

Fixed Income Portfolio

Top Ten Holdings

9/30/13

Name	Market Value	Rating*	% of Total Portfolio
GNMA	$538,186,690	Aaa/AAA	8.02%
U.S. Government	$359,413,614	Aaa/AA+	5.36%
Federal Home Loan Banks	$263,850,149	Aaa/AA+	3.93%
Federal National Mortgage Association	$200,131,165	Aaa/AA+	2.98%
General Electric Company	$174,928,791	A1/AA	2.61%
Wells Fargo & Company	$144,093,363	Baa1/BBB	2.15%
Private Export Funding Corporation	$116,665,476	Aaa/AA+	1.74%
JPMorgan Chase & Co.	$110,988,145	Baa1/BBB+	1.65%
Bank of America Corporation	$84,290,713	Baa3/BBB	1.26%
DTE Energy Company	$79,475,407	A1/A	1.18%
TOTAL	$2,072,023,513		30.88%

*Moodys/Standard & Poor's

SMRS

Domestic Fixed Income Internal Holdings

Portfolio Characteristics

Benchmark: Barclays Aggregate

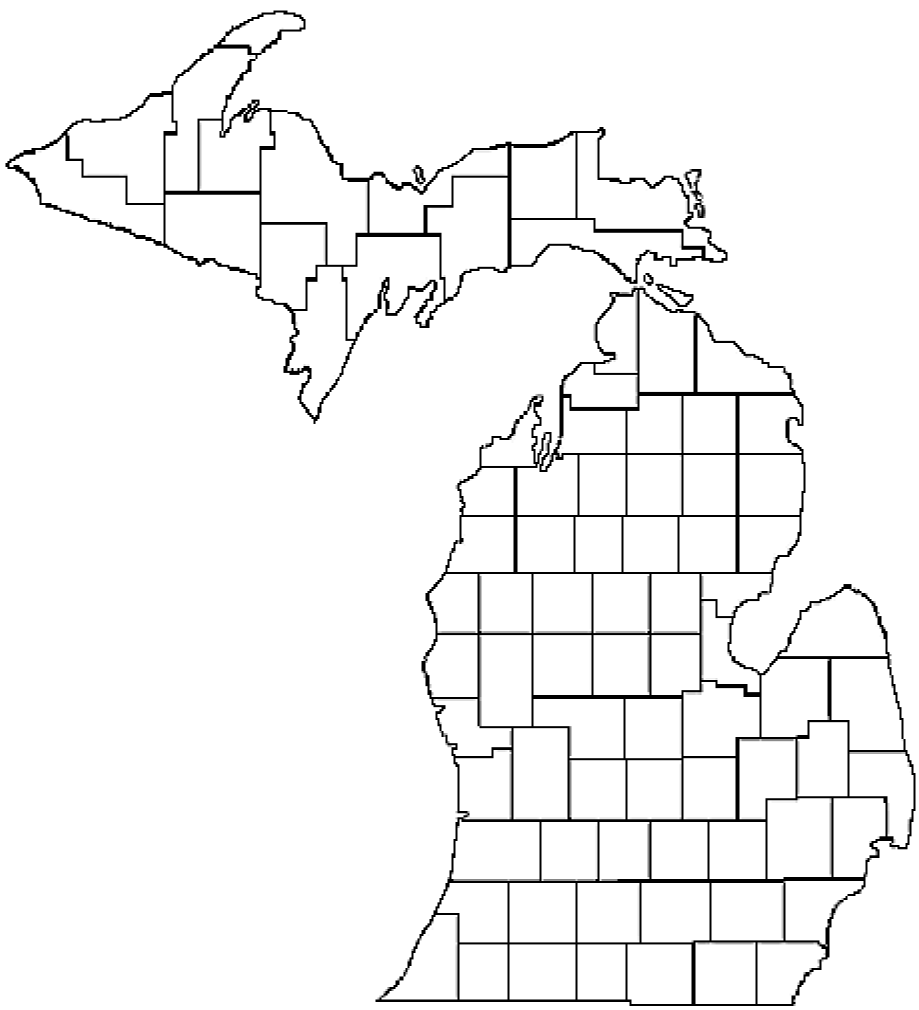
	9/30/13			6/30/13		
Characteristic	*Portfolio*	*Benchmark*	*Relative (%)*	*Portfolio*	*Benchmark*	*Relative (%)*
Maturity (Yrs)	5.1	6.9	73.9	5.2	6.9	75.4
Maturity (Yrs) w/Cash Equiv.	4.9	6.9	71.0	5.1	6.9	73.9
Duration (Yrs)	4.2	5.2	80.8	4.2	5.2	80.8
Duration (Yrs) w/Cash Equiv.	4.0	5.2	76.9	4.0	5.2	76.9
Coupon (%)	4.2	3.5	120.0	4.3	3.5	122.9
Yield to Maturity (%)	2.3	2.3	100.0	2.3	2.3	100.0
Moody's Quality	A-2	AA-2		A-1	AA-2	
S&P Quality	A+	AA-		A+	AA-	

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ALTERNATIVE INVESTMENTS REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Peter A. Woodford, Administrator
Alternative Investments Division

EXECUTIVE SUMMARY

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	14.9%	15.8%	7.8%	10.4%	14.2%
Benchmark Return	23.5%	21.3%	14.3%	9.7%	11.4%
Peer Median Return	14.2%	12.3%	7.0%	8.8%	11.4%
Rank vs. Peers	40	11	35	25	27

General Overview

- Global equity markets performed well in the third quarter, driven by positive economic data in the U.S., signs of recovery in the Eurozone, and a pickup in economic activity in China. Global IPO issuance declined significantly in the third quarter, from one year ago, despite the strong performance of equity markets. A high level of IPO activity in the U.S. was not enough to offset weakness in other regions, particularly Asia. Many private equity firms took advantage of receptive equity markets in the U.S. to take their portfolio companies public.

- There continues to be significant differences in private equity investment across geographic regions. The U.S. buyout market continues to show relative strength compared with other regions due to a relatively benign economic outlook, high levels of IPO and M&A exit activity, and accommodative credit markets. Buyout investment activity in the U.S. totaled $39 billion in the third quarter, a 26% increase from the prior quarter, but a 23% decline from the same period in 2012. European buyout activity rebounded markedly in the third quarter following a very slow second quarter. Buyout activity totaled €20 billion in the third quarter, which represents the second largest quarterly total since the global financial crisis. In contrast, private equity investment activity in Asia declined significantly during the third quarter, driven primarily by China. Investment activity decreased 35% from the prior quarter and 42% from the third quarter of 2012.

- Average debt-to-EBITDA multiple for U.S. based transactions in the third quarter averaged 5.3x, up slightly from 5.2x for 2012. The average equity contribution was 34.3% for the first three quarters of 2013, down from 39.7% in 2012. The average purchase price to EBITDA multiple in the third quarter was 8.5x, compared to 8.7x for 2012.

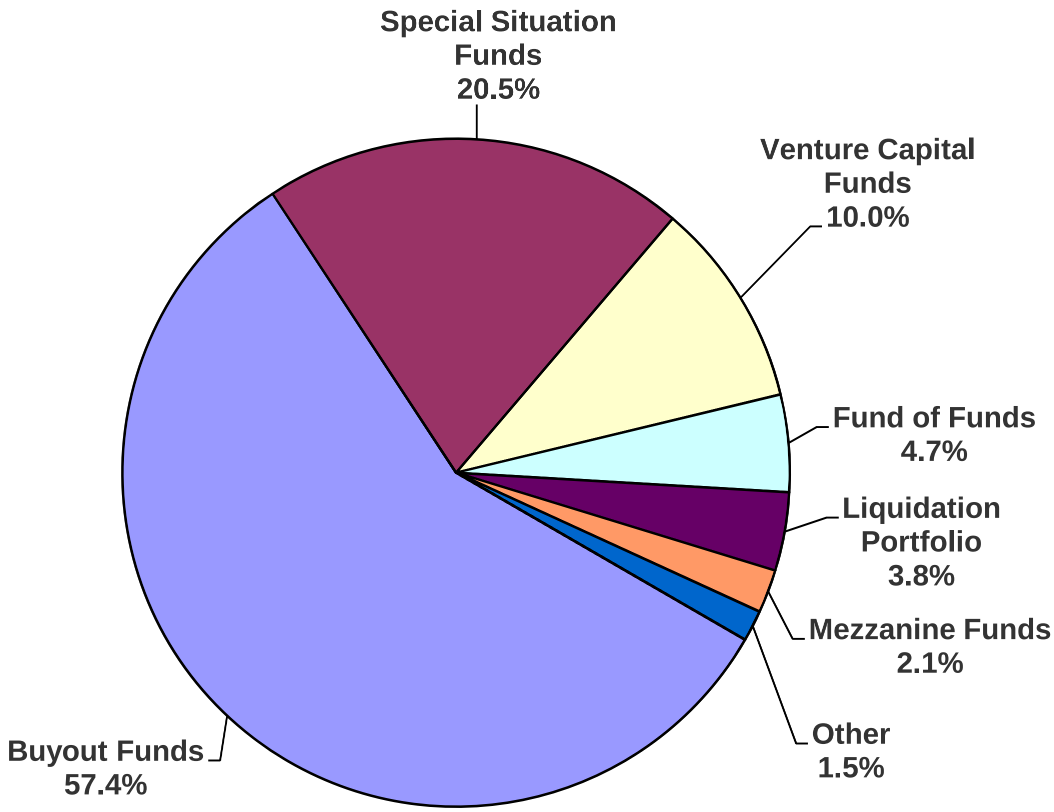
- Global M&A activity for private equity backed companies declined slightly in the third quarter.

- Private equity firms worldwide raised $71 billion in the third quarter, flat from the prior quarter, but a 39% increase from the prior year quarter. Most of the fundraising came from the U.S. and Europe focused funds, while demand for Asia-Pacific focused funds remained tepid. Buyout funds accounted for 60% of the funds raised, while venture accounted for 11%. Other private equity strategies, including infrastructure, mezzanine, and special situations, represented 27% of the total raised. Distressed funds continue to face significant headwinds, as default rates remain at historically low levels.

- InvestMichigan Update: the SMRS has committed $510 million to the program ($180 million to MGCP I, $150 million to GCMOF, and $180 million to MGCP II). In total, the program has invested approximately $240 million across 43 deals through 9/30/2013.
  - MGCP I - $136 million invested across 29 deals, net IRR 13.5%, MOIC 1.3x
  - GCMOF - $84 million invested across 9 deals, net IRR 8.9%, MOIC 1.2x
  - MGCP II - $20.7 million invested across 5 deals (fund in J-curve)

- During the quarter, one new commitment was made to AXA ASF Miller for $75 million. This commitment is intended to acquire a secondary position in CCMP II.

SMRS
Alternative Investments
9/30/13



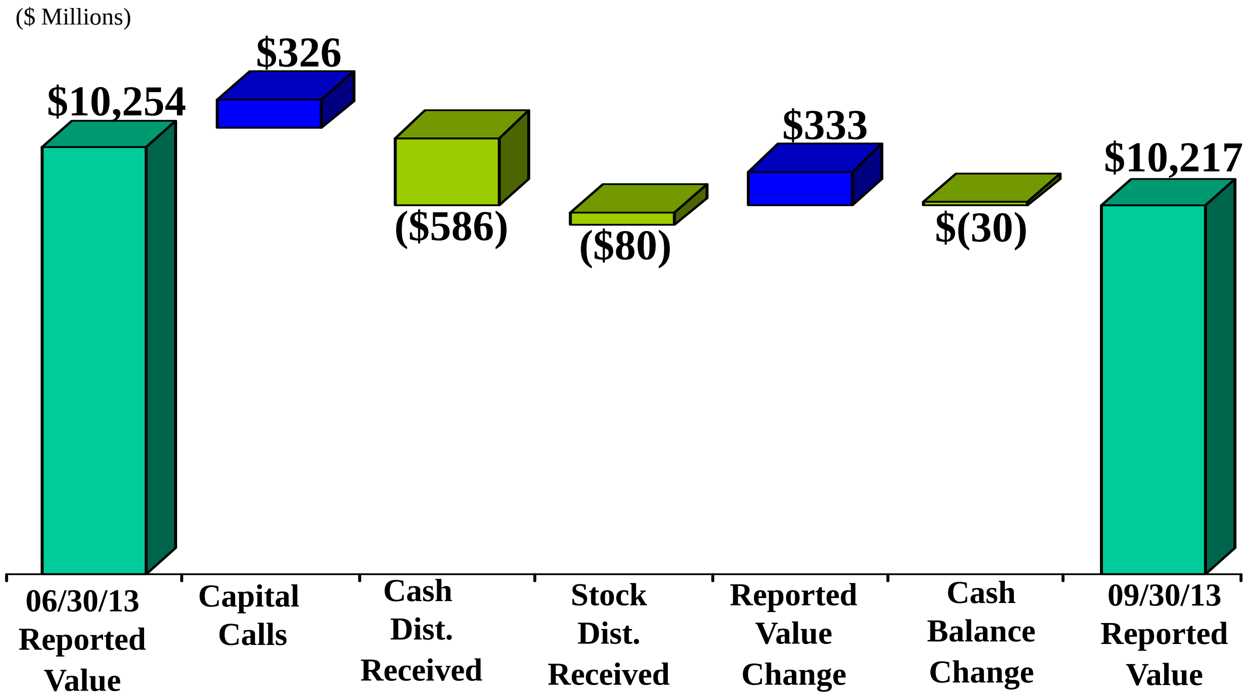
Market Value in Millions

	9/30/13		6/30/13	
Buyout Funds	$5,864	57.4%	$5,835	56.9%
Special Situation Funds	2,098	20.5%	2,091	20.4%
Venture Capital Funds	1,022	10.0%	1,023	10.0%
Fund of Funds	483	4.7%	481	4.7%
Liquidation Portfolio	389	3.8%	379	3.7%
Mezzanine Funds	214	2.1%	222	2.2%
Other	147	1.5%	223	2.1%
Total	**$10,217**	**100.0%**	**$10,254**	**100.0%**

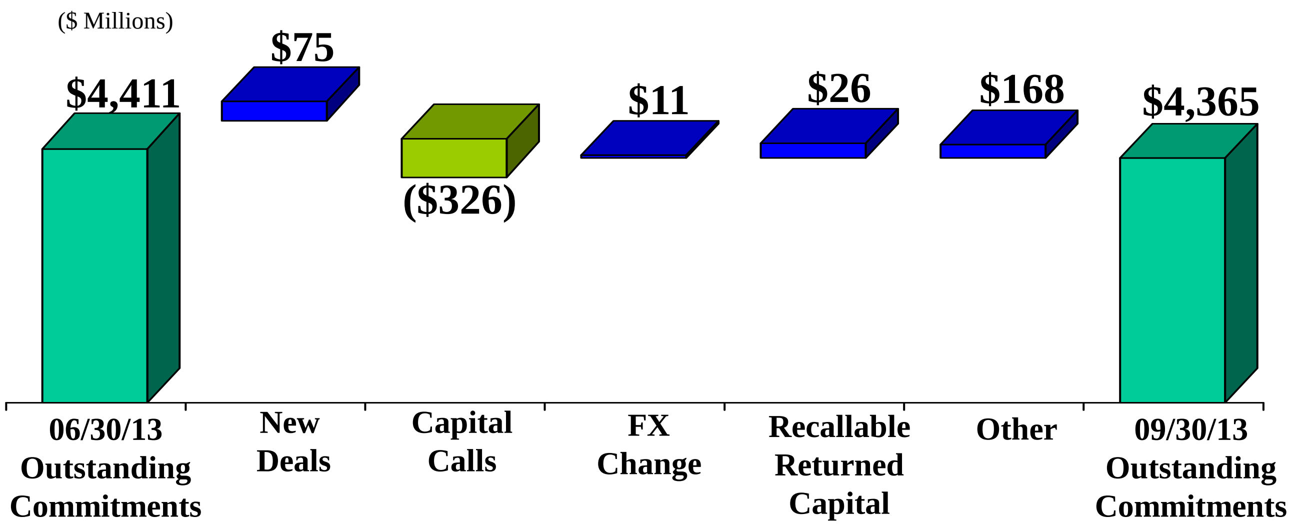
Michigan Department of Treasury, Bureau of Investments

SMRS
Alternative Investments
9/30/13

Invested Commitments

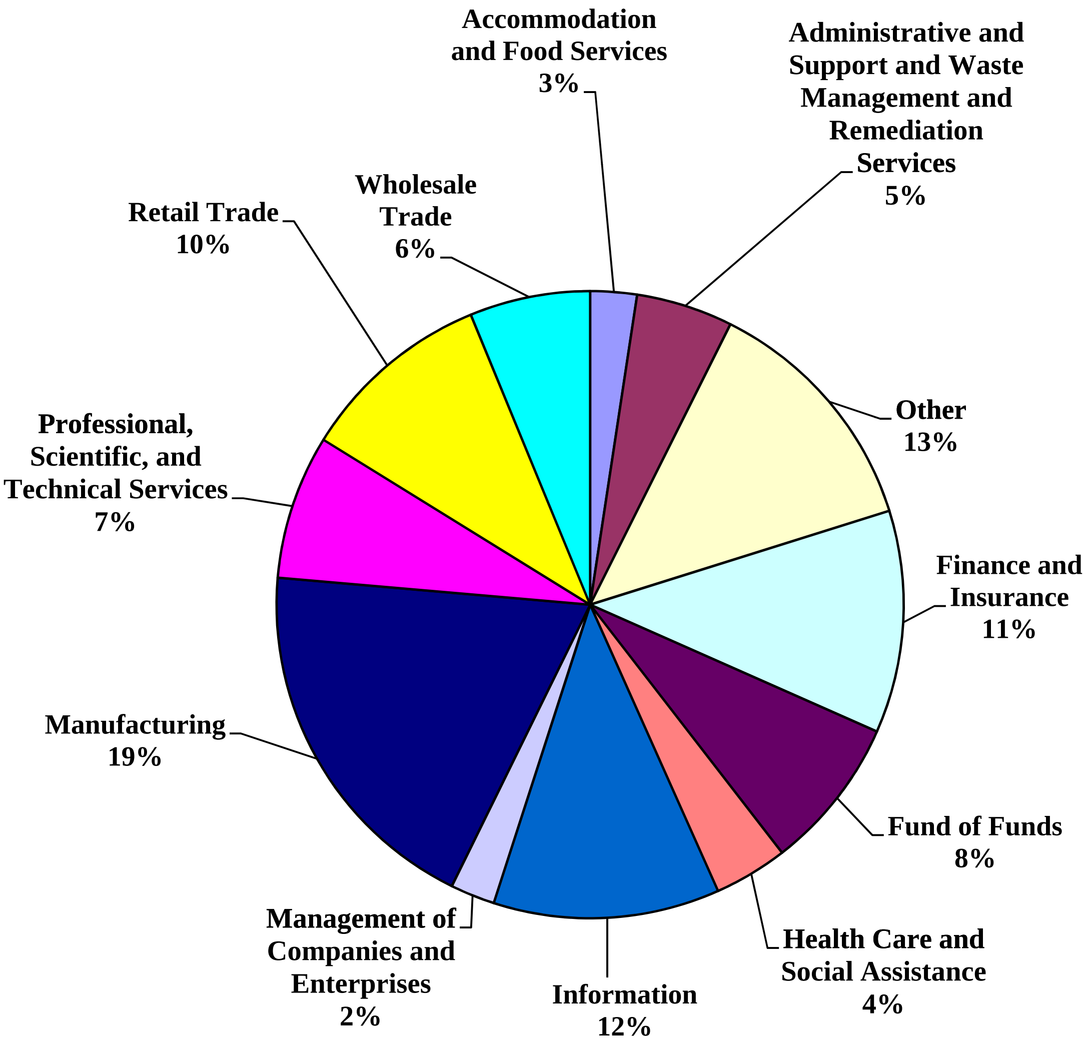


Outstanding Commitments



SMRS
Alternative Investments
9/30/13

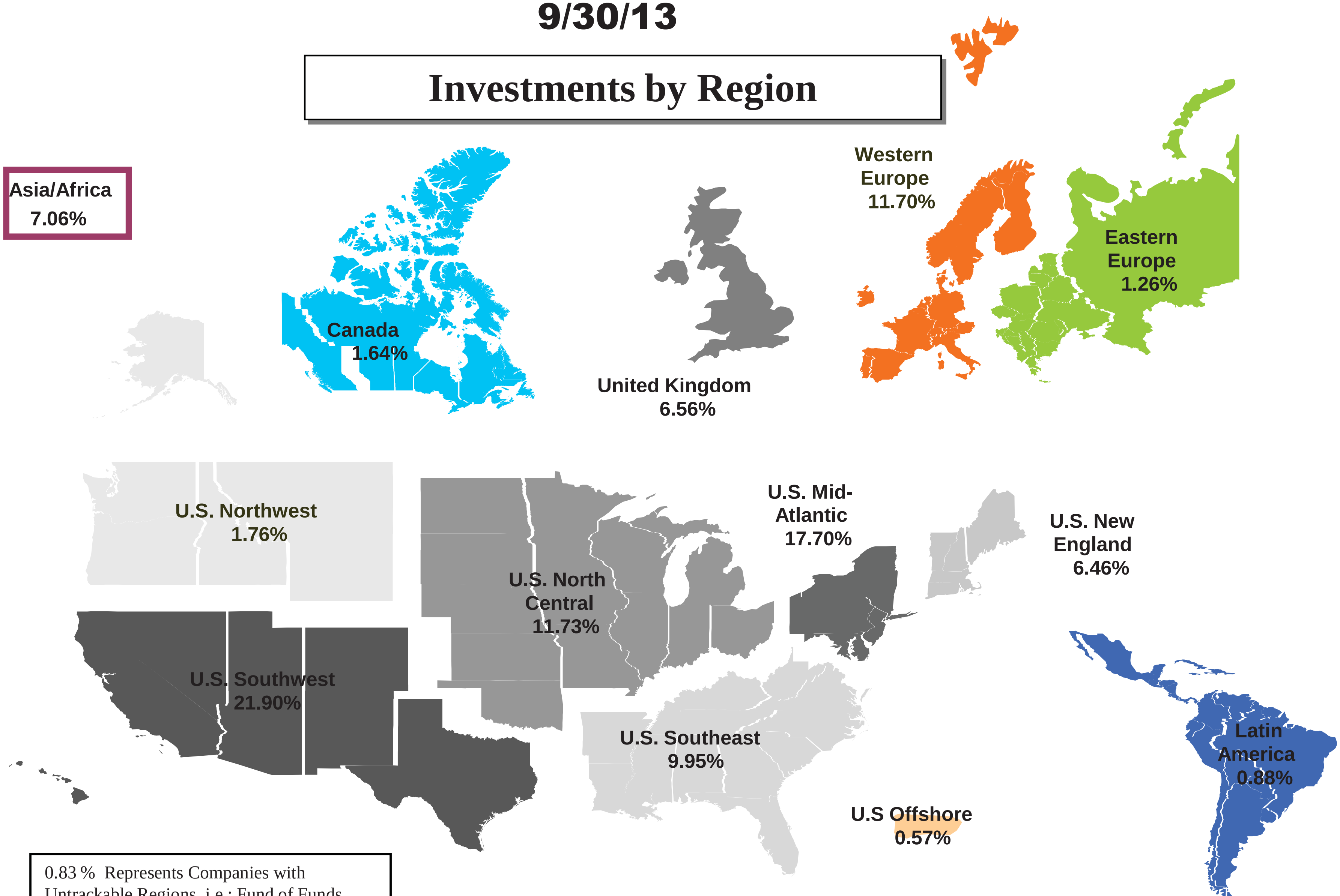
Investments by Industry



These numbers are based on the most recent available General Partner Data; primarily 6/30/13 and are subject to change.

SMRS
Alternative Investments
9/30/13

Investments by Region



0.83 % Represents Companies with Untrackable Regions, i.e.; Fund of Funds

Geographic Report: North America 72%, Europe 20%, Asia 6%, Other 2%

SMRS
Alternative Investments
9/30/13

Portfolio by Asset Strategy

($ Millions)

Investment Fund Types	Reported Value	Outstanding Commitment	Total	Percent
Large Buyout	$ 3,556	$ 1,525	$ 5,081	35%
Small Middle Market Buyout	2,308	1,068	3,376	23%
Buyout Total	**$ 5,864**	**$ 2,593**	**$ 8,457**	**58%**
Early Stage Venture Capital	$ 435	$ 84	$ 519	4%
Late-Stage Venture Capital	149	59	208	1%
Multi-Stage Venture Capital	438	52	490	3%
Venture Capital Total	**$ 1,022**	**$ 195**	**$ 1,217**	**8%**
Co-Investment Funds	$ 416	$ 6	$ 422	3%
Global Opportunity Funds	564	26	590	4%
Secondary Funds	245	233	478	3%
Distressed	312	171	483	3%
Special Situations	454	528	982	7%
Natural Resources	-	-	-	0%
Special Situations Total	**$ 1,991**	**$ 964**	**$ 2,955**	**20%**
Fund of Funds	**$ 483**	**$ 181**	**$ 664**	**5%**
Hedge Funds – Equity	**$ 1**	**$ -**	**$ 1**	**0%**
Liquidation Portfolio	**$ 389**	**$ 141**	**$ 530**	**4%**
Active Small Cap - Stock Dist.	**$ 28**	**$ -**	**$ 28**	**0%**
Total Alternative Equities	**$ 9,778**	**$ 4,074**	**$ 13,852**	**95%**
Mezzanine Debt	**$ 214**	**$ 211**	**$ 425**	**3%**
Special Situations	**107**	**80**	**187**	**1%**
Hedge Funds – Fixed Income	**6**	**-**	**6**	**0%**
Cash	**112**	**-**	**112**	**1%**
Total Alternative Fixed Income	**$ 439**	**$ 291**	**$ 730**	**5%**
Total Alternative Investments	**$ 10,217**	**$ 4,365**	**$ 14,582**	**100%**

SMRS
Alternative Investments
9/30/13

Top 10 Sponsors

($ Millions)

Asset Type	Reported Value	Outstanding Commitment	Total
Credit Suisse Group	$ 799	$ 281	$ 1,080
Kohlberg Kravis & Roberts	732	246	978
Carlyle Group	519	273	792
Blackstone Capital Partners	433	274	707
Warburg Pincus Capital	463	160	623
Glencoe Capital	545	67	612
TPG Group	478	105	583
Advent International	327	174	501
Green Equity Investors	358	141	499
Apax Partners, Inc.	290	108	398
Top 10 Total Value	**$ 4,944**	**$ 1,829**	**$ 6,773**

Cash Weighted Rates of Return*

(Net IRR)	Current Qtr.	1 Year	3 Year	5 Year	10 Year
Buyout	2.87%	15.95%	15.50%	7.39%	18.18%
Venture Capital	3.49%	5.27%	18.09%	8.22%	9.76%
Special Situations	2.78%	14.70%	14.40%	7.10%	10.78%
Fund of Funds	3.25%	7.81%	11.99%	4.58%	10.16%
Hedge Funds	1.32%	5.64%	2.97%	2.91%	4.43%
Mezzanine Debt	2.11%	13.97%	14.23%	14.68%	13.47%

*These numbers are based on most recent available General Partner reported data; primarily 06/30/13 and are subject to change.

SMRS
Alternative Investments
9/30/13

Portfolio by Vintage Year

($ Millions)

Asset Vintage	Reported Value	Outstanding Commitment	Total Exposure
1986-93	$ 1	$ 1	$ 2
1994	1	-	1
1995	2	-	2
1996	-	2	2
1997	8	3	11
1998	82	18	100
1999	131	43	174
2000	196	44	240
2001	329	51	380
2002	644	21	665
2003	231	19	250
2004	476	57	533
2005	915	109	1,024
2006*	2,919	552	3,471
2007	1,639	265	1,904
2008	1,583	665	2,248
2009	171	45	216
2010	161	132	293
2011	227	377	604
2012	275	1,444	1,719
2013	86	517	603
Cash	112	-	112
Act. Small Cap - Stock Dist	28	-	28
Total	**$ 10,217**	**$ 4,365**	**$ 14,582**

* *Liquidation portfolio is 2006 vintage*

FX Exposure

	Reported Value	Oustanding Commitment	Total Exposure	Total (USD)
Euro ($1.35365/ €)	€ 821	€ 192	€ 1,013	1,371
Pound ($1.6194/ £)	£7	£3	£10	16
Yen ($0.0101911/ ¥)	¥0	¥0	¥0	0

SMRS
Alternative Investments
9/30/13

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Accel Europe I, L.P.	$ 16,069,297	$ 1
Accel Europe II	20,892,470	3,300,000
Accel Growth Fund II, L.P.	6,474,025	5,100,000
Accel IX, L.P.	12,955,462	3,000,000
Accel VI, L.P.	3,242,367	-
Accel VII, L.P.	2,500,956	5,000,000
Accel VIII, L.P.	3,814,320	4,782,499
Accel VI-S	4,407,286	652,611
Accel X, L.P.	14,695,597	2,050,000
Accel XI, L.P.	3,762,718	4,160,000
Advent Global Private Equity III	410,413	20
Advent Global Private Equity IV	1,833,130	-
Advent Global Private Equity V	76,246,252	10,500,000
Advent International GPE VI-A LP	199,353,834	10,199,980
Advent International GPE VII-B, L.P.	48,841,601	153,500,000
Affinity Asia Pacific Fund II, L.P.	639,077	5,288,237
Affinity Asia Pacific Fund III, L.P.	202,178,862	31,470,789
Affinity Asia Pacific Fund IV, L.P.	12,733,852	110,332,642
APA Excelsior IV, L.P.	535,594	-
APA Excelsior V	195,035	545,625
Apax Europe Fund VI	90,576,322	837,082
Apax Europe V, L.P.	5,860,141	-
Apax Europe VII, L.P.	137,976,209	13,927,101
Apax Excelsior VI	3,748,622	1,614,434
Apax US VII	41,944,687	491,302
Apax VIII - A, L.P.	9,277,473	90,700,000
Apollo Investment Fund VIII, L.P.	-	100,000,000
Arboretum Ventures II	3,877,007	880,096
Arboretum Ventures III, L.P.	6,610,313	7,245,000
Ares Corporate Opportunities Fund II	37,641,280	12,012,395
Ares Corporate Opportunities Fund III, LP	72,592,731	20,846,502
Ares Corporate Opportunities Fund IV, L.P.	11,526,893	87,314,843
ARGUS Capital Partners	133,408	2,813,672
Austin Ventures VIII, L.P.	9,436,181	-
Avenue International Ltd	6,338,588	-
Avenue Special Situations Fund IV, L.P.	1,392,548	-
Avenue Special Situations Fund V, L.P.	3,677,825	-
Avenue Special Situations Fund VI (B), L.P.	56,477,682	-
** **AXA ASF Miller Co-Investment**	**54,782,038**	**20,217,962**
Axiom Asia Private Capital Fund III, L.P.	3,301,968	31,264,762
Banc Fund VI	14,378,681	-
Banc Fund VII	31,573,572	-
Banc Fund VIII	20,707,880	2,600,000
Battery Ventures V, L.P.	68,223	-
Battery Ventures VI, L.P.	6,103,463	-
Battery Ventures VII, L.P.	10,502,950	377,778
Battery Ventures VIII	26,357,937	701,800

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
BC European Capital IX	42,260,828	55,884,354
BC European Capital VII, L.P.	2,328,824	-
BC European Capital VIII, L.P.	137,785,184	14,037,350
Berkshire Fund IV, L.P.	49,705	1,898,016
Berkshire Fund V, L.P.	1,117,946	1,900,578
Berkshire Fund VI, L.P.	41,224,089	5,212,077
Berkshire Fund VII, L.P.	112,543,243	10,734,751
Berkshire Fund VIII, L.P.	32,749,203	88,985,464
Blackstone Capital Partners IV	91,894,161	5,663,545
Blackstone Capital Partners V	232,948,708	24,348,132
Blackstone Capital Partners VI, LP	84,532,313	228,817,514
Blackstone Capital Partners V-S	21,311,333	712,401
Blackstone Mezzanine Partners	2,040,868	14,141,621
Blackstone Partners III, L.P.	7,599	-
Bridgepoint Europe IV	62,802,961	13,412,256
Brockway Moran & Partners Fund III	9,707,816	4,542,530
Carlyle Asia Fund	5,006,425	1,052,845
Carlyle Europe Partners	194,337	459,415
Carlyle Europe Partners II	27,092,191	5,026,907
Carlyle Europe Partners III	120,047,382	15,596,908
Carlyle Partners II, L.P.	906,323	-
Carlyle Partners III, L.P.	247,551	3,031,427
Carlyle Partners IV, L.P.	110,270,755	16,009,296
Carlyle Partners V L.P.	254,281,861	57,629,840
Carlyle Partners VI, L.P.	1,307,106	173,692,894
Castle Harlan Partners IV	12,429,440	5,647,298
Castle Harlan Partners V	18,969,461	48,882,345
CCMP Capital Investors II	138,560,800	11,281,485
CCMP Capital Investors III, L.P.	495,869	49,504,131
Clarus Life Sciences II, L.P.	29,698,072	10,790,000
Clarus Lifesciences I	20,292,520	4,079,460
Clearstone Venture Partners II (idealab)	5,020,500	-
Clearstone Venture Partners III	25,142,738	1,612,000
CM Liquidity Fund, L.P.	-	25,000,000
CMEA Ventures VI	10,264,582	1,575,000
CMEA Ventures VII, L.P.	18,821,483	6,400,000
Coller International Partners III, L.P.	828,059	-
Coller International Partners IV	22,503,423	9,000,000
Coller International Partners V, L.P.	125,652,691	43,600,000
Coller International Partners VI, L.P.	32,159,864	74,566,482
Crescent Mezzanine Partners VI, L.P.	16,099,641	58,521,803
CSFB Fund Co-Investment Program	113,889	-
CSG / DLJ Fund Program II	94,418,948	19,689,362
CSG Fund Investment Program III - 2004	103,923,492	8,143,256
CSG Fund Investment Program III - 2006	110,374,715	28,798,645
CSG Fund Investment Program V, L.P.	70,582,227	48,411,572
CSG Fund Investment Program VI, L.P.	2,775,771	32,600,000
CSG Seasoned Primary Fund Investment Program	388,796,343	141,255,929
DLJ Fund Investment Program I	28,072,233	1,698,066
DLJ Investment Partners II	1,148,565	0

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
DLJ Investment Partners III	23,101,897	73,464,657
DLJ Merchant Banking Partners III, L.P.	19,562,993	2,840,873
DLJ Merchant Banking Ptrs II, L.P.	1,527,881	1,856,746
Doughty Hanson & Co IV	88,462,364	3,249,882
Doughty Hanson & Co V	95,635,716	39,746,090
Doughty Hanson Co. III L.P.	26,649,380	3,102,822
Dover Street VIII, L.P.	9,049,582	60,412,500
EDF Ventures III	4,263,912	164,738
Essex Woodlands Health IV	2,728,608	-
Essex Woodlands Health V	8,677,744	-
Essex Woodlands Health Ventures Fund VIII	54,596,741	16,500,000
Essex Woodlands Health VI	13,459,372	1,062,500
Essex Woodlands Health VII	49,953,640	1,000,000
FirstMark Capital Fund II (fka: Pequot PEFII)	1,637,734	-
FirstMark Capital III (fka: Pequot PEFIII)	4,362,343	272,000
FirstMark Capital IV (fka: Pequot PEFIV)	45,405,128	3,961,386
Flagship Ventures Fund 2004	21,464,819	-
Flagship Ventures Fund 2007, L.P.	54,327,659	525,000
Flagship Ventures Fund IV, L.P.	11,965,942	8,100,000
Fox Paine Capital Fund II, LP	21,250,208	16,183,351
Frontenac VIII	3,979,945	1,800,000
Glencoe Capital Michigan Opportunities Fund, LP	112,581,282	54,540,967
Glencoe Capital Partners II	7,370,037	355,381
Glencoe Capital Partners III	9,680,441	6,120,760
Glencoe Stockwell Fund	281,274,864	-
Glencoe Stockwell Fund II, L.P.	134,216,002	6,447,777
Globespan Capital Partners IV (Jafco)	16,213,483	475,000
Globespan Capital Partners V, LP	74,204,577	6,937,500
Green Equity Investors III	9,297,505	9,112,215
Green Equity Investors IV	91,872,345	1,136,036
Green Equity Investors V	238,548,743	25,966,435
Green Equity Investors VI, L.P.	18,848,919	105,153,645
Grotech Partners V	402,254	-
Grotech Partners VI	11,477,331	-
GSO Capital Opportunities Fund II, L.P.	8,504,141	32,485,922
H.I.G. Bayside Debt & LBO Fund II, LP	8,678,553	8,893,557
H.I.G. Brightpoint Capital Partners II	603,017	-
H.I.G. Capital Partners IV, L.P.	21,359,792	3,374,167
H.I.G. Europe Capital Partners L.P.	25,568,653	5,963,943
HarbourVest Int'l III Direct	5,374,891	1,000,000
HarbourVest Int'l III Partnership	5,986,456	1,200,000
HarbourVest IV Partnership Fund LP	163,187	600,000
HarbourVest Partners V - Direct Fund LP	238,081	-
HarbourVest V Partnership	1,250,705	300,000
HarbourVest VI - Direct Fund LP	8,004,976	750,000
HarbourVest VI Partnership	30,023,067	2,250,000
Healthcare Venture V	1,179,955	-
Healthcare Venture VI	1,072,451	-
Healthcare Venture VII	4,751,713	487,500
Healthcare Venture VIII	22,544,624	6,300,000

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
InterWest Partners IX	10,712,886	2,400,000
JAFCO America Technology Fund III	771,405	-
JP Morgan Chase 1998 Pool Participation Fund	3,556,039	1,604,605
JP Morgan Chase 1999/2000 Pool Participation Fund	3,312,250	4,017,243
JP Morgan Partners Global Investors	35,585,977	3,113,676
JPMorgan Global Investors Selldown	29,229,375	5,538,204
Kelso Investment Associates VII	53,946,147	4,970,176
Kelso Investment Associates VIII	110,699,121	31,877,381
Khosla Ventures III, L.P.	62,553,550	8,000,000
Khosla Ventures IV, L.P.	20,311,128	29,250,000
KKR 2006 Fund, L.P.	222,967,355	20,163,816
KKR Asia	105,929,595	5,388,287
KKR Asian Fund II, L.P.	-	50,000,000
KKR China Growth Fund	16,481,150	33,103,197
KKR E2 Investors (Annex) Fund	17,435,708	15,681,230
KKR European Fund II	103,489,484	-
KKR European Fund III	97,765,978	27,716,810
KKR European Fund LP 1	4,047,976	307,605
KKR Millennium Fund	132,125,476	-
KKR North America Fund XI, L.P.	31,766,405	93,906,484
Lightspeed Venture Partners VI	9,763,222	3,299,089
Lightspeed Venture Partners VII	38,171,794	1,385,436
Lion Capital Fund I (HME II)	1,848,058	13,712,006
Lion Capital Fund II	43,061,401	5,508,223
Lion Capital Fund III, L.P.	44,929,354	34,164,970
Long Point Capital Fund	15,239	41,415
Long Point Capital Fund II	14,443,168	1,166,069
Matlin Patterson Global Opportunities Partners	36,896	-
MatlinPatterson Global Opportunities Partners II	2,773,907	92,719
MatlinPatterson Global Opportunities Partners III	66,420,739	16,021,439
Menlo Ventures IX, L.P.	12,463,818	-
Menlo Ventures VIII	2,314,897	-
Menlo Ventures X, L.P.	20,030,562	6,000,000
Menlo Ventures XI, L.P.	9,098,238	10,000,000
MeriTech Capital Partners II, L.P.	4,932,658	1,850,000
Meritech Capital Partners III, L.P.	41,090,233	1,200,000
Meritech Capital Partners IV, L.P.	12,479,582	7,400,000
MeriTech Capital Partners, L.P.	442,207	6,187,500
Michigan Growth Capital Partners II, L.P.	22,188,133	155,622,296
Michigan Growth Capital Partners, LP	161,025,800	31,596,194
MPM BioVentures III	7,828,066	-
New Leaf Ventures II, L.P.	24,688,808	5,075,000
Nordic Capital VI, L.P.	40,918,831	-
Nordic Capital VII	60,185,630	15,380,363
Nordic Capital VIII, L.P. (Alpha)	5,477,131	48,152,874
North Castle Partners III	3,850,478	473,486
NV Partners II	154,725	43,053
Oak Investment Partners X, L.P.	14,167,676	-
Oak Investments Partners IX, L.P.	2,897,917	-
OCM Opportunities Fund IX, L.P.	11,147,257	63,750,000

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
OCM Opportunities Fund VII (B), L.P.	12,667,331	25,177,315
OCM Opportunities Fund VII, L.P.	11,951,087	-
OCM Opportunities Fund VIII B, L.P.	38,992,468	1,875,000
OCM Opportunities Fund VIII, L.P.	34,679,729	-
OCM Principal Opportunities Fund IV	33,737,064	5,002,377
One Liberty Fund III	1,044,062	-
One Liberty Fund IV	1,888,082	-
One Liberty Ventures 2000	14,202,906	-
Paine & Partners Capital Fund III, LP	117,001,411	15,047,010
Parthenon Investors II	12,322,727	3,279,179
Parthenon Investors III	59,425,031	8,416,458
Parthenon Investors IV, L.P.	10,292,135	28,881,754
Peninsula Capital Fund III	1,647,006	1,400,000
Peninsula Capital Fund IV	18,479,113	2,201,026
Permira Europe III LP	5,732,336	290,358
Permira Europe IV	117,660,391	8,663,360
Phoenix Equity Partners IV	11,070,283	4,111,546
Primus Capital Fund IV	5,262	500,000
Primus Capital Fund V	14,585,381	712,500
Providence Equity Partners V, L.P.	63,691,069	12,925,473
Providence Equity Partners VI, L.P.	251,076,498	34,029,771
Questor Partners Fund II	14,842,764	5,794,612
RFE Investment Partners VII, LP	24,620,999	633,332
RFE Investment Partners VIII, L.P.	6,037,243	22,231,539
RFE IV Venture	441,214	-
Riverside Capital Appreciation Fund VI, LP	-	75,000,000
Riverside Micro Cap Fund I, LP	63,492,828	4,210,126
Riverside Micro-Cap Fund II, L.P.	28,831,645	7,728,598
Silver Lake Partners II	14,200,881	3,531,586
Silver Lake Partners III	70,448,916	33,824,623
Silver Lake Partners IV, L.P.	-	50,000,000
Sprout Capital IX	2,049,644	-
Sprout Capital VIII, L.P.	128,616	-
TCW Shared Op Fund III	2,756,989	-
TCW Shared Op Fund IV	10,911,024	4,524,779
TCW Shared Op Fund V	24,658,804	11,653,868
TCW/Crescent Mezzanine Partners III, L.P.	5,843,935	4,552,763
TCW/Crescent Mezzanine Partners IV, L.P.	38,464,449	6,316,434
TCW/Crescent Mezzanine Partners V, LLC	98,496,885	17,440,192
The Huron Fund III, L.P.	27,938,742	8,672,500
The Huron Fund IV, L.P.	2,170,000	32,830,000
The Shansby Group 4	38,011,672	520,829
The Shansby Group 5 (TSG5)	120,256,122	12,629,757
TPG IV (Texas Pacific Group IV)	27,162,423	211,725
TPG Partners III, LP	40,430,167	2,087,002
TPG Partners VI, L.P.	205,506,915	66,731,449
TPG V (Texas Pacific Group V)	204,560,096	35,462,505
Trilantic Capital Partners V (North America) Fund A, L.P.	6,647,044	43,554,085
TSG6, L.P.	31,774,527	97,730,941
Tullis - Dickerson Capital II	6,276,113	-

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Tullis - Dickerson Capital III	9,545,760	-
Unitas Asia Opportunity Fund	419,625	-
Unitas Asia Opportunity Fund II	48,151,249	26,604,144
Unitas Asia Opportunity Fund III	44,197,559	45,971,298
Warburg Pincus Equity Partners, L.P.	11,265,475	-
Warburg Pincus International Partners	24,009,277	-
Warburg Pincus Private Equity IX	93,653,473	-
Warburg Pincus Private Equity VIII, L.P	42,942,804	-
Warburg Pincus Private Equity X, L.P.	248,657,381	-
Warburg Pincus Private Equity XI, L.P.	41,881,232	160,000,000
Warburg Pincus Ventures Int'l	505,120	-
Weiss, Peck & Greer V (adm: Opus Capital)	2,700,808	386,240
WestAm COREplus Private Equity QP	10,945,431	2,110,761
WestAm Special Private Equity Partners	7,967,343	2,317,427
Wind Point Partners III	2,627,914	-
Wind Point Partners IV	139,961	1,541,518
Wind Point Partners V, L.P.	9,761,238	455,013
Wind Point Partners VI	48,014,007	7,110,116
Wind Point Partners VII	56,291,928	21,239,679
Total Alternative Investments *	**$ 10,078,129,498**	**$ 4,364,950,849**
Cash	85,787,349	-
Active Small Cap Cash	25,694,931	-
Active Small Cap	27,655,683	-
Grand Total	**$ 10,217,267,461**	**$ 4,364,950,849**

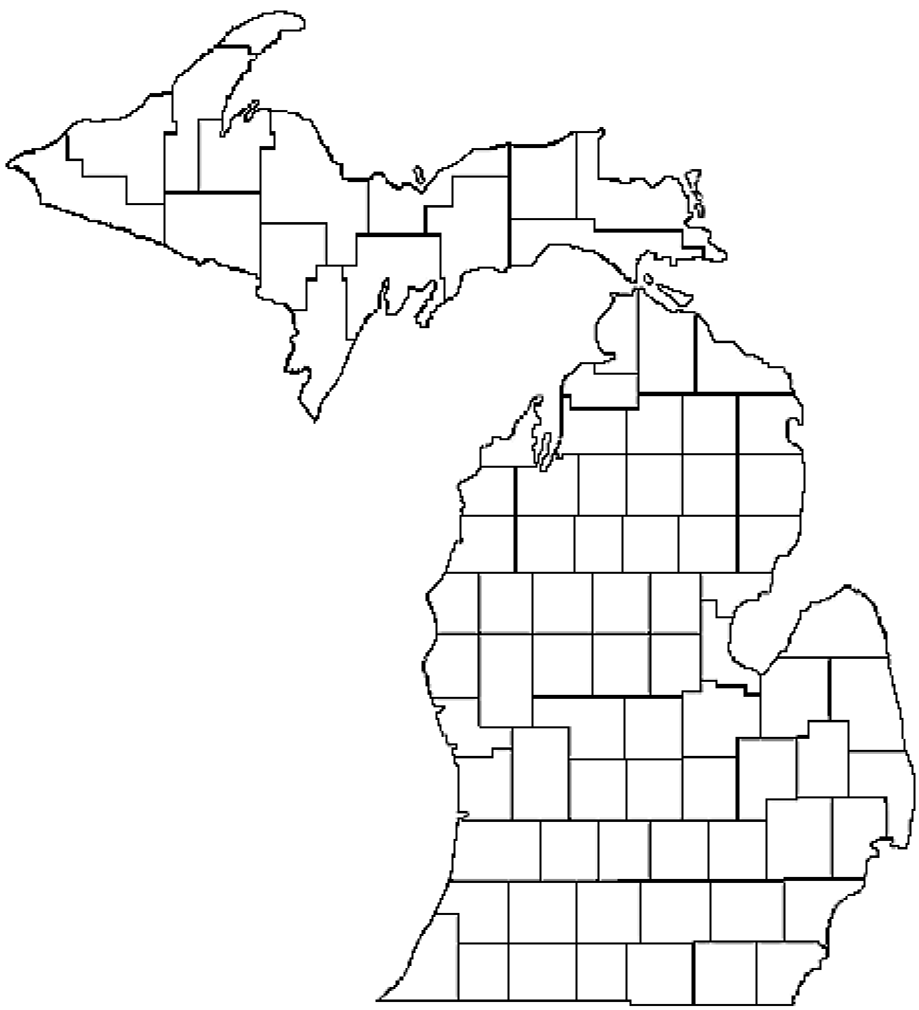
* Total Alternative Investment amounts do not include Cash and Active Small Cap
** New commitment made during quarter reported

STATE OF MICHIGAN
RETIREMENT SYSTEMS

REAL ESTATE AND INFRASTRUCTURE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Brian C. Liikala, Administrator
Real Estate & Infrastructure Division

EXECUTIVE SUMMARY
Real Estate

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Return	8.2	11.1	-2.5	1.7	5.2
NCREIF NPI	9.6	11.2	2.0	4.2	7.4
Peer Median Return	11.5	11.8	-0.5	1.7	5.4
Rank vs. Peers	77	65	74	53	52

- Total real estate market value ended the third quarter at $5.5 billion with a total return of 1.6%. High quality, cash flowing, core real property assets have appreciated as investors seek current yield, and protection from volatility.

- Valuations increased this quarter for the majority of the Real Estate and Infrastructure Division's (REID) U.S. property types due to strong rent growth in apartments, and increased occupancies in both retail and industrial warehouse properties. Office properties that were relying on employment growth for increased leasing continue to recover slowly overall, with a few major urban markets being the exceptions (i.e. New York City, San Francisco, Houston, etc.).

- The gross market value of the portfolio is estimated at $10.9 billion and the loan-to-value ratio is 49%.

- The REID is working with its general partners in executing sales of non-strategic properties in secondary markets with limited upside potential at attractive values and capitalizing on the sale of portfolios of core assets at historically low capitalization rates. Also, the general partners that specialize in credit strategies have been investing in distressed debt opportunities and mezzanine financing at discounted pricing, yielding attractive returns.

- In the commercial mortgage-backed securities (CMBS) market, spreads over the swap rate for AAA-rated securities increased 7 bps from prior quarter and now stand at 76 bps. CMBS delinquencies declined to 6.6% (60-day delinquent). New issuance for CMBS in 2013 is projected by Commercial Mortgage Alert to exceed $85 billion.

- Unfunded capital commitments for real estate totaled $241 million. Market transaction activity is expected to increase as the void between buyers and sellers diminish and the availability of low interest rate debt increases. Our real estate managers are being very selective, taking advantage of opportunities from owners and lenders in markets that have potential for growth and long-term liquidity.

- There were two new commitments approved for the quarter. A $300 million commitment to Blackstone IH3, a single family for rent investment portfolio and a $50 million commitment to Rialto Mezzanine Partners that will provide mezzanine real estate financing.

- The strategy for REID includes investing in distressed assets at a discount, consistently communicating with lenders for distressed debt opportunities, developing apartments in major urban markets, selling core properties to institutional investors and traded and non-traded REITs flush with capital and paying historically low capitalization rates, and exhibiting patience in order to find properties in markets that have strong economic fundamentals.

EXECUTIVE SUMMARY
Infrastructure

- Total market value of infrastructure investments ended the third quarter at $322 million (not including short-term cash investments) with a total return of .6% for the quarter. Total return since inception has exceeded expectations and our benchmark, as both REID's timing into the sector and execution of opportunities have served well.

- The objective for this asset class is to provide an attractive risk/return profile, low correlation with other asset classes, a predictable and defensible cash flow return, and an annual total return that exceeds the benchmark (400 bps over U.S. CPI). Target investments for the asset class will also contain CPI enhancers to provide some degree of protection from inflation.

- The Division seeks investment managers that are experienced in infrastructure with a strategy that will satisfy the objectives of the fund. The managers will possess a commitment to long-term ownership, responsible and proven service delivery, access to institutional quality investments, and provide alignment of interest.

- Fund flows to the infrastructure sector continue to remain robust, as investor sentiment toward the asset class continues to improve with several funds raising over $5 billion in capital. Opportunities include North American energy, European transportation, alternative energy, and emerging market fundamental infrastructure projects.

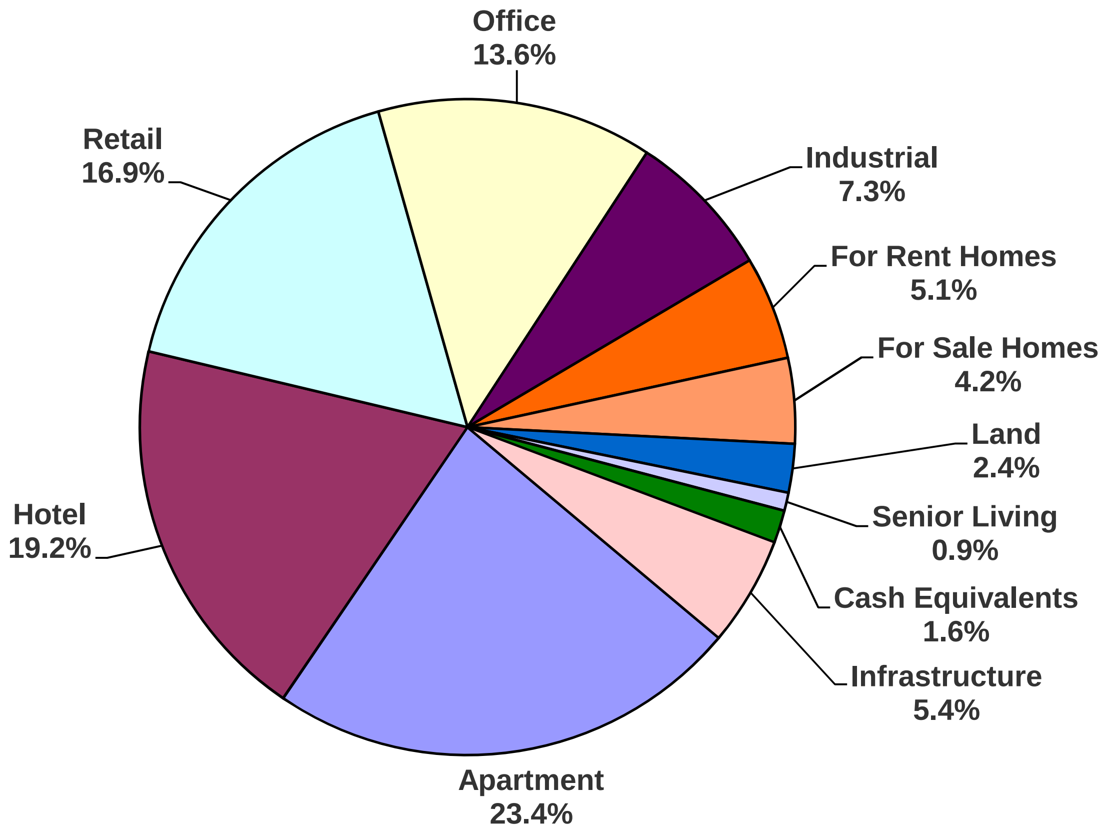
- REID is reviewing additional core and multi-strategy infrastructure investment opportunities and actively meeting with major infrastructure managers in the industry. Total commitments to date are $555 million; additional commitments will be made over the next several years.

SMRS

Real Estate and Infrastructure Holdings

By Property Type

9/30/13



Market Value in Millions

	9/30/13		6/30/13	
Apartment	$1,384	23.4%	$1,344	24.6%
Hotel	1,134	19.2%	1,153	21.1%
Retail	1,003	16.9%	966	17.6%
Office	805	13.6%	791	14.4%
Industrial	429	7.3%	424	7.8%
For Rent Homes	300	5.1%	0	0.0%
For Sale Homes	251	4.2%	228	4.2%
Land	143	2.4%	148	2.7%
Senior Living	53	0.9%	52	0.9%
Total Investments	$5,502	93.0%	$5,106	93.3%
Infrastructure	322	5.4%	296	5.4%
Cash Equivalents	97	1.6%	72	1.3%
Total	**$5,921**	**100.0%**	**$5,474**	**100.0%**

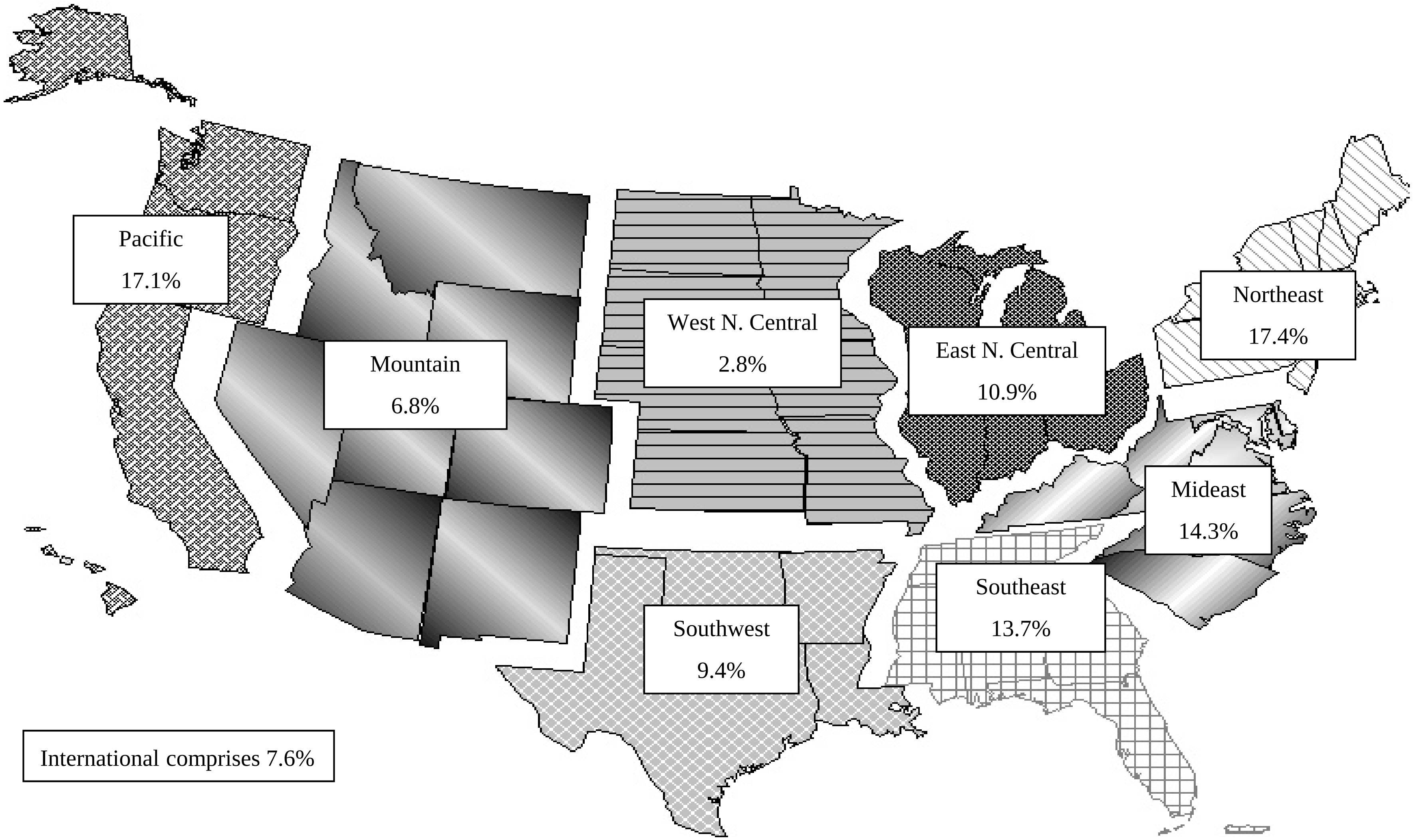
Michigan Department of Treasury, Bureau of Investments

Real Estate by Region

Based on Net Market Value

(excludes cash & cash equivalents)

9/30/13



Geographic regions defined by NCREIF, whose property index composition is: Pacific 29.5%, Mountain 5.7%, West N. Central 1.7%, Southwest 10.9%, East N. Central 7.7%, Southeast 10.3%, Northeast 20%, Mideast 14.2%

Top Ten
Advisors or Companies

Advisor or Company		Net Market Value
Clarion Partners (formerly ING Clarion)	$	929,287,204
MWT Holdings, LLC		896,388,742
Edens & Avant Investments, LP		698,004,902
Blackstone Real Estate Advisors		453,400,783
Kensington Realty Advisors, Inc.		297,643,624
Principal Real Estate Investors		274,709,328
Five Star Realty Partners, LLC		216,144,649
Bentall Kennedy LP		207,536,668
CIM Group, Inc.		200,409,866
KBS Realty Advisors, Inc.		123,722,326
	$	4,297,248,092

Occupancy
by Property Type

	Apartment	Office	Industrial	Retail	Hotel
SMRS Portfolio	95.8%	89.1%	88.5%	94.1%	71.6%
National Average	91.8%	84.8%	88.0%	95.0%	65.6%

Real Estate

Net Market Values by Ownership Entity

9/30/13

		Net Market Value		Unfunded Commitment
801 Grand Avenue Capital, LLC	$	105,518,802	$	0
AGL Annuity Contract GVA 0016		315,112,282		0
Avanath Affordable Housing I, LLC		15,543,346		7,336,046
Beacon Capital Strategic Partners IV, LP		17,678,183		0
Beacon Capital Strategic Partners V, LP		17,716,744		4,500,000
BlackRock Retail Opportunity Fund, LLC		10,810,525		0
* **Blackstone R/E IH3 Co-Inv Partners**		300,000,000		0
Blackstone Real Estate Partners V, LP		60,067,008		2,208,906
Blackstone Real Estate Partners VI, LP		93,333,775		4,564,854
Capri Select Income II		5,115,428		0
Capri Urban Investors, LLC		21,295,495		0
CIM Fund III, LP		98,927,146		6,933,371
CIM Urban REIT, LLC		83,431,977		0
CIM VI (Urban REIT), LLC		18,050,743		7,130,450
City Lights Investments, LLC		117,363,856		6,500,000
Cobalt Industrial REIT		50,406,360		0
Cobalt Industrial REIT II		68,215,436		0
CPI Capital Partners N.A., LP		4,937,217		0
CPI Capital Partners N.A., Secondary, LP		13,887,243		0
Devon Real Estate Conversion Fund, LP		5,967,527		0
Domain Hotel Properties, LLC		770,039,494		0
Dynamic Retail Trust		57,655,902		0
Edens & Avant Investments, LP		640,349,000		0
Gateway Capital R/E Fund II, LP		89,358,827		1,276,875
Great Lakes Property Group Trust		281,795,063		0
Invesco Mortgage Recovery Feeder Fund		21,961,723		8,068,649
JBC Opportunity Fund III, LP		17,024,031		0
KBS/SM Fund III, LP		54,419,304		0
L & B Medical Properties Partners, LP		2,507,604		4,000,000
Landmark Real Estate Partners V, LP		30,616,908		3,900,000
LaSalle Asia Opportunity Fund II, LP		5,454,359		0
LaSalle Asia Opportunity Fund III, LP		39,498,975		4,000,000
Lion Industrial Trust		120,304,192		0
Lion Mexico Fund, LP		38,943,518		0
Lowe Hospitality Investment Partners		1,295,167		0
MERS Acquisitions, Ltd.		120,893,607		0
MG Alliance, LLC		6,220,602		13,932,112
Morgan Stanley R/E Fund V - International		6,764,230		0
Morgan Stanley R/E Fund VI - International		38,188,826		0
Morgan Stanley R/E Fund V - U.S.		9,699,638		0
MSRE Mezzanine Partners LP		49,839		0
Morgan Stanley R/E Special Situations Fund III		64,085,437		0
MWT Holdings, LLC		896,388,742		0
Northpark-Land Associates, LLLP		26,907,686		0
Paladin Realty Brazil Investors III (USA), LP		31,678,614		9,900,000
Principal Separate Account		169,190,525		0
Proprium RE Spec Situations Fund LP		81,920		5,000,000
Rialto Real Estate Fund, LP		43,131,505		8,277,006
Rialto Real Estate Fund II, LP		25,327,567		43,306,004
* **Rialto Mezzanine Partners Fund**		21,113,573		28,886,427
SM Brell II, LP		69,303,022		0
Stockbridge Real Estate Fund II-C, LP		28,974,182		0
Strategic LP		183,147,968		52,512,654
Trophy Property Development LP		62,448,098		11,250,000
True North High Yield Investment Fund II		45,379,545		7,213,251
Venture Center, LLC		34,235,957		0
Western National Realty Fund II, LP		24,594,062		455,264
	$	5,502,408,306		-
Short-Term Investments and Other		64,408,107		-
Total Real Estate Investments	**$**	**5,566,816,412**	**$**	**241,151,869**

* New commitment made during the quarter reported

Infrastructure Investments
Net Market Values by Ownership Entity
9/30/13

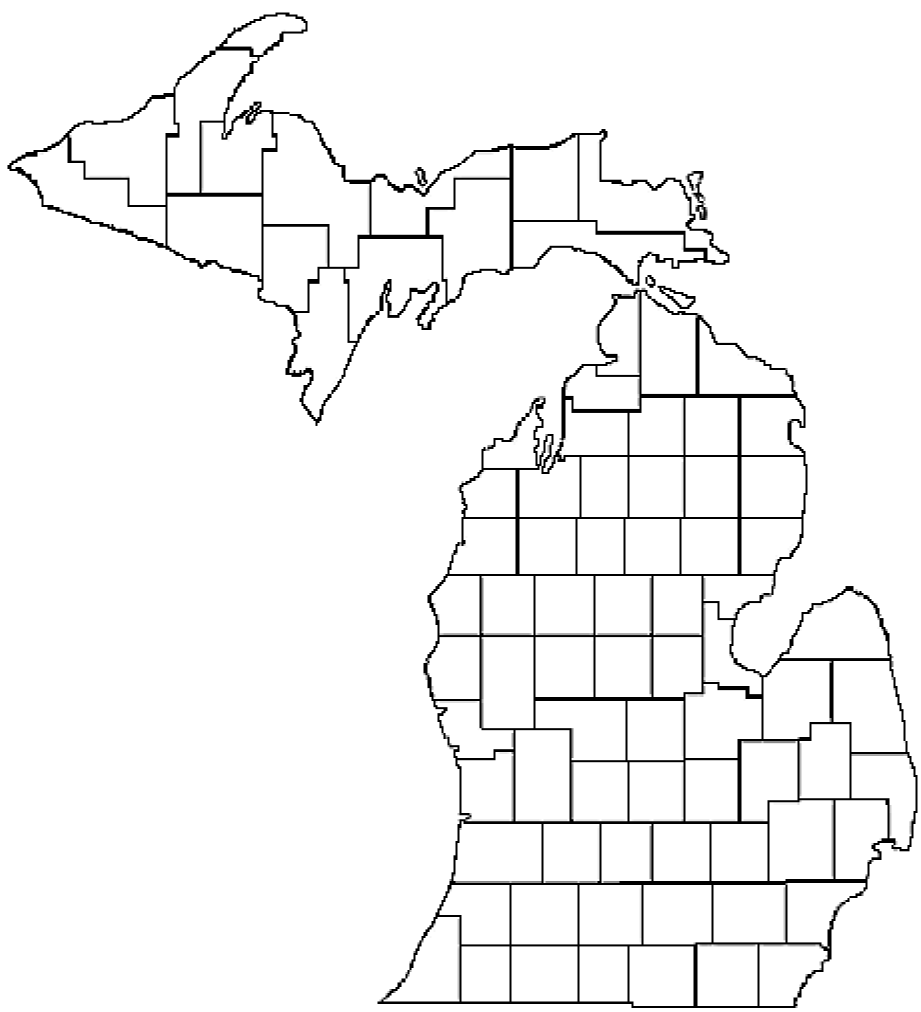
	Net Market Value	Unfunded Commitment
Balfour Beatty Infrastructure Partners, LP	$ 8,866,177	$ 32,405,269
Blackstone Energy Partners, LP	22,199,942	39,870,886
CSG Infrastructure Investment Program, LP	43,538,125	58,144
Customized Infrastructure Strategies, LP	69,679,048	31,489,056
Dalmore Capital Fund	60,295,114	4,723,966
JP Morgan AIRRO India Sidecar Fund US, LLC	72,501,094	6,321,825
JP Morgan AIRRO Fund II US, LLC	11,248,268	86,905,000
KKR Global Infrastructure Investors, LP	33,854,203	41,883,000
	$ 322,181,970	-
Short-Term Investments and Other	32,148,174	-
Total Infrastructure Investments	**$ 354,330,144**	**$ 243,657,146**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

BASKET CLAUSE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

DECEMBER 3, 2013



Karen M. Stout, CPA, CGFM, Administrator
Trust Accounting Division

SMRS

Basket Clause Investments

9/30/13

	Value
Total Absolute and Real Return	$4,451,579,276
Total International Equity	300,299,809
Total Long-Term Fixed Income	3,267,410
Total Basket Clause Investments	**$4,755,146,495**

The basket clause investments at September 30, 2013, were $4.76 billion or 8.8% of the total portfolio value of $54.15 billion.

The Public Employee Retirement System Investment Act, 1965 PA 314, MCL 38.1132 *et seq*, authorizes the State Treasurer to invest up to 30% of the system's assets in investments "not otherwise qualified under the act." MCL 38.1140d(1). Commonly referred to as Section 20d (after the authorizing section of PA 314) or Basket Clause investments, this provision gives the State Treasurer the flexibility to take advantage of market opportunities not specifically authorized in PA 314 while conserving protections against imprudent investment.

Disclaimer

This presentation was given solely for the purpose of explaining the structure, investment process, and returns for the State of Michigan Retirement Systems. It should not be interpreted in any way as financial advice.