INVESTMENT ADVISORY COMMITTEE MEETING

June 18, 2013

STATE OF MICHIGAN RETIREMENT SYSTEMS
QUARTERLY INVESTMENT REVIEW

Andy Dillon, State Treasurer

Prepared by Bureau of Investments
Michigan Department of Treasury

INVESTMENT ADVISORY COMMITTEE MEETING

June 18, 2013

Agenda

9:30 a.m.	**Call to Order and Opening Remarks**
9:40 a.m.	**Approval of Minutes of 3/7/13, IAC Meeting** • **Meeting Dates for 2014** • **Meeting Topics**
9:45 a.m.	**Executive Summary & Performance for Periods Ending 3/31/13**
10:00 a.m.	**Current Asset Allocation Review**
10:10 a.m.	**Round Table Discussion**
10:20 a.m.	**Apollo Global Management –** ***Marc Rowan – Co-founder and Senior Managing Director of Apollo Global Management, LLC***
10:50 a.m.	**Review of Investment Reports** • **Fixed Income Review:** o **Fixed Income –** ***Paul Nelson*** o **Private Market Credit Strategy –** ***Jim Elkins***
11:30 a.m.	**Adjournment**

Reports Received and Filed:

- ***Capital Markets Overview***
- ***Economic and Market Review and Outlook***
- ***Domestic Equity***
- ***International Equity***
- ***Absolute and Real Return/Opportunistic***
- ***Real Estate & Infrastructure***
- ***Alternative Investments***
- ***Basket Clause***

2013 Meeting Schedule

Thursday, September 5, 2013
Tuesday, December 3, 2013

All meetings start at 9:30 a.m.

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MEETING TOPICS

I. Proposed Meeting Dates for 2014

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

II. Meeting Topics

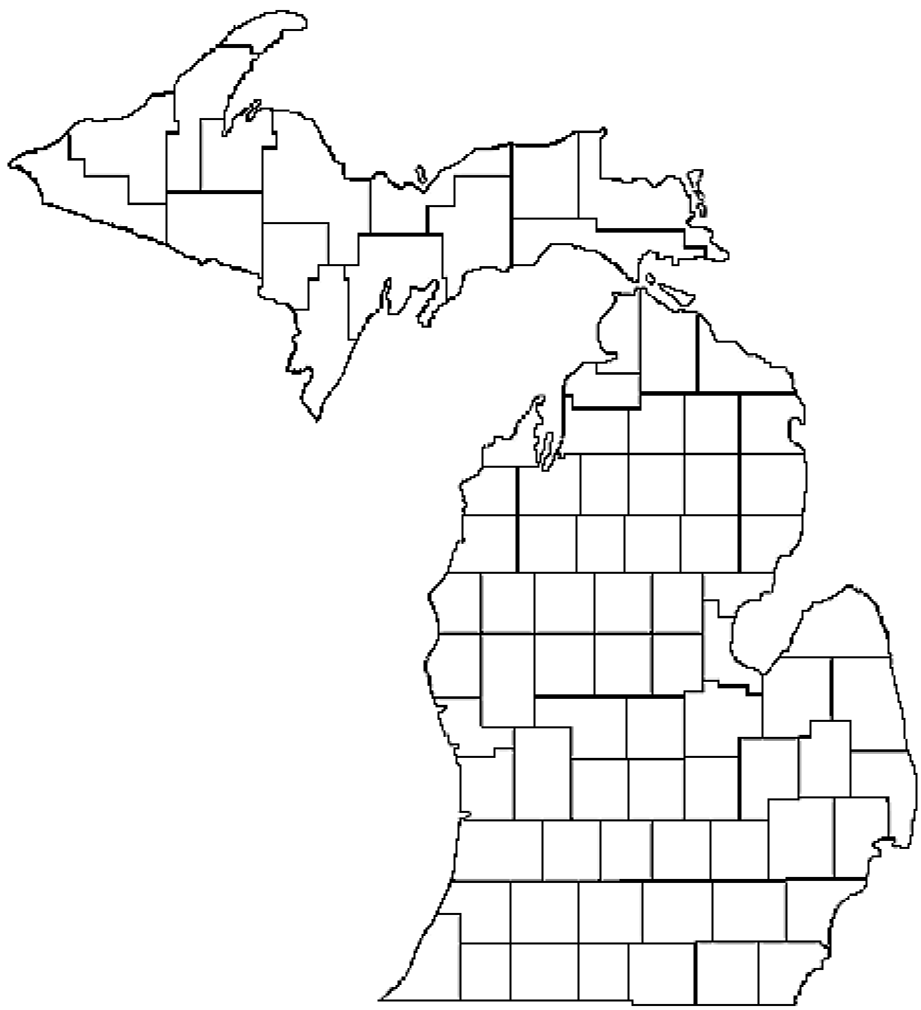
- **Possible topics for future meetings:**
  - **Real Estate**
  - **What are we struggling with**
  - **Pros and cons on different investment approaches to asset allocation**
  - **U.S. versus Foreign Fixed Income**
  - **Distressed Funds**
  - **Rebalance policy**
  - **Number of managers**
  - **Hedge Funds / Absolute Return**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

MINUTES

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

INVESTMENT ADVISORY COMMITTEE

The Investment Advisory Committee (IAC) held its quarterly meeting on Thursday, March 7, 2013, at the Bureau of Investments, Great Lakes Conference Room, 2501 Coolidge Road, Suite 400, East Lansing, Michigan.

Members Present:

Nick A. Khouri, Chairman
James B. Nicholson
L. Erik Lundberg – via Telephone
Mike Zimmer, LARA
John E. Nixon, DTMB

In attendance from the Department of Treasury: Jon Braeutigam, Gregory Parker, Peter Woodford, Karen Stout, Brian Liikala, Richard Holcomb, Jack Behar, Jim Elkins, Rick DiBartolomeo, Paul Nelson, Kevin Fedewa, Indu Sambandam, Marge McPhee, and Emma Khavari.

Others in attendance: Phil Stoddard, Jim Voytko, Molly Jason, Karl Borgquist, Cara Dobie, and June Morse. Special guests from Blackstone: Stephen Schwarzman and John Dionne.

Call to Order

Chairman Khouri called the March 7, 2013, Investment Advisory Committee meeting to order at 9:33 a.m. He thanked everyone for taking time from their busy schedules to attend the March Investment Advisory Committee meeting.

Approval of Minutes of December 6, 2012

Chairman Khouri asked for a motion to approve the minutes of the December 6, 2012, Investment Advisory Committee meeting. Mr. James Nicholson so moved, Mr. John Nixon seconded; there were no objections.

Opening Remarks

Chairman Khouri noted that Mr. Erik Lundberg joined the meeting via telephone as he was in Los Angeles, California. Chairman Khouri gave a brief recap of the progression of the meetings which began several meetings ago with a discussion about asset allocation overall, eventually bringing in the liability side, and then funding ratios under different scenarios. At the last meeting, public equity was the center of the discussion and at this meeting private equity will be the center of the discussion. Private equity is approximately 20% of the portfolio with a market value exceeding $10 billion plus another $4 billion in unfunded commitments. Private equity is challenging in that it is illiquid and there are challenges in benchmarking performance. Last year the return for private equity was 14%. The advantage of being in the private equity space is the ability to access investments that are not available in the public markets. Chairman Khouri asked that the discussion answer the questions of how does it fit into the overall portfolio, what are the goals, what is the risk-adjusted return, and how has performance in the past met those returns. He also noted that there will be a guest speaker, Mr. Stephen Schwarzman from Blackstone to provide insights into the private equity markets. Chairman Khouri turned the meeting over to Mr. Jon Braeutigam.

Executive Summary

Mr. Jon Braeutigam noted that he would discuss the performance portion of the Executive Summary and then Mr. Greg Parker would discuss the asset allocation and touch on the capital markets and the economic backdrop portions of the Executive Summary. Mr. Braeutigam began by discussing the one, three, five, seven, and ten-year annualized returns. These are gross returns and are compared to the gross returns of other large public plans. Mr. Braeutigam discussed the rankings versus the peers noting that the three-year number was good, the seven-year number is on the mark with peers, and the ten-year number is close as well. He also noted that private equity has done very well over the long term, especially over the past ten years. Mr. Braeutigam turned the meeting over to Mr. Greg Parker to review the asset allocation portion of the Executive Summary.

Mr. Greg Parker began the review of the asset allocation portion of the Executive Summary by noting that over the past twelve months, the system paid out $2.9 billion net of contributions. These funds came primarily from the proceeds of the sale of $3.4 billion of domestic equity. He discussed the allocation to international equity, which has increased by 1.7% over the past year due entirely to asset appreciation. He also noted that the split has changed from a 25% active/75% passive to approximately 50% active/50% passive split, which is in line with domestic equity and the strategic target for active/passive split. International has also gone from an 80% developed/20% emerging split to a 70% developed/30% emerging split. Also, the allocation for long-term fixed income is a little over 13% versus the peers which is 24.2%. A higher allocation to long-term fixed income would make it difficult for the plan to earn the 8% target rate. There was a discussion about the long-term fixed income rate of return and the trend to immunize pension plans. During the discussion, Mr. Lundberg recalled a study that stated that about 20% of the corporate liabilities have been immunized and if this went to 30% over the next ten years that would absorb all the available corporate AA investment grade bonds. Credit spreads were also discussed in relation to the immunization of pension plans.

Mr. Parker highlighted the capital markets portion of the Executive Summary noting that interest rates are low and European sovereign rates are contracting as well. Foreign stocks were strong over the past twelve months returning 17.4%. He mentioned that the way valuation is viewed by staff in developed international markets and U.S. markets is very close, although emerging markets continue to sell at a discount to these markets. Large cap stocks are still favored over small caps stocks because of the valuation discrepancy. He touched on hedge funds and noted that many peers are turning to hedge funds as a solution to earning higher returns. He indicated that hedge funds as measured by the HFRI Fund-of-Funds Conservative Index over the past twenty years returned only 5.6%.

Mr. Parker reviewed the economic backdrop portion of the Executive Summary noting that there are four aspects that he reviews which are GDP, jobs, housing, and corporate profits. The GDP had measured basically negligible growth and some of the reasons that economists point to are the 'fiscal cliff' debate in the fourth quarter and Hurricane Sandy. Economists are predicting a 2% economic growth for 2013. He noted that the number of jobs lost have still not been fully recovered and are not likely to be recovered for another two years. This is the longest jobs recovery short of the Great Depression. He discussed housing starts and housing sales, which are at low levels, but are off the bottom. Housing prices have recovered and are showing positive rates of return. He also noted that corporate profits peeked a year ago and are now lower at the end of 2012 than in 2011. Profit and profit margins are at all-time highs and he discussed some of the reasons for this, which are outsourcing, technology, and reduce capital spending levels where companies are not reinvesting back into their business. He concluded noting that long-term strategic allocation to the private equity asset class is 16%; however, today it is at 20.6%.

Chairman Khouri introduced Mr. Stephen Schwarzman, Chairman, CEO, and Co-founder of Blackstone, which is one of the largest private equity firms in the world. Chairman Khouri asked Mr. Schwarzman to talk about private equity, how the business has changed over the past ten years, going forward, and what large investors should look for in private equity.

Blackstone Presentation – *Mr. Stephen Schwarzman, Chairman, CEO and Co-Founder of Blackstone*

Mr. Stephen Schwarzman thanked everyone for inviting him here and for supporting Blackstone since 1992. He noted that he and a partner started the business and employed one secretary. At the present time Blackstone has approximately 1,800 people at the firm and another 400 permanent consultants, and they have 24 offices around the world. They started the business with $400,000 and they now have approximately $210 billion in assets. They are in several different types of businesses (private equity, real estate, hedge funds, and credit, to name a few) and have 81 companies in private equity alone. He discussed their method of operations, and noted that they have a joint meeting every Monday morning with members of their team, in every one of their offices around the world. During this meeting there is much discussion of what is happening in the world. This method keeps everyone up-to-date on world events and capital markets allowing for informed choices in their investing while continually teaching those in the company. He noted that in Europe there is little to no growth because they have mismanaged their economies along with their banking system and as a result it is tough to buy private equity in Europe. He discussed real estate and noted that Blackstone is the largest real estate owner in the world, other than governments. He indicated in real estate you are provided all the statistics unlike in private equity.

Mr. Schwarzman also discussed the Federal deficit and answered and discussed several questions pertaining to the Federal budget and Federal Reserve interest rate policy. Mr. Schwarzman discussed how Blackstone's approach to private equity had changed over the past five years stating his belief that the more you do, the better you get. He noted that the business has changed in that there is now more overhead. The overhead is in hiring people who are operational experts in businesses. He discussed how Blackstone has changed and reduced their costs for health care and technology by taking their individual companies and grouping them and receiving discounts because of their size. Mr. Schwarzman discussed an investment that was done in the energy space for the plan that has done very well. He concluded his presentation answering questions and discussing several different asset classes.

Performance, 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 Thursday, June 6, 2013. Chairman Khouri adjourned the meeting at 11:45 a.m.

Approved:

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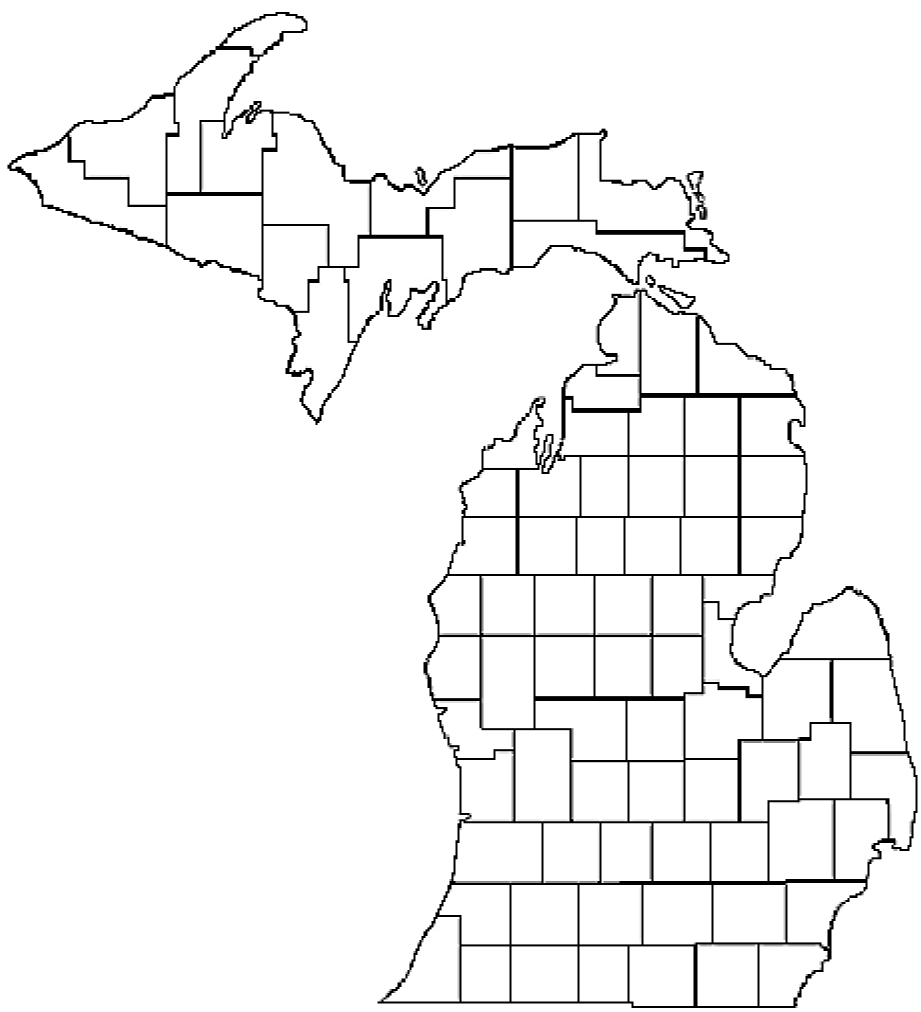
Nick Khouri, Chairman

STATE OF MICHIGAN
RETIREMENT SYSTEMS

EXECUTIVE SUMMARY

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 2013



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

EXECUTIVE SUMMARY

March 31, 2013

Performance

Some key performance highlights.

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	10.4%	9.8%	4.2%	5.1%	8.2%
Policy Return	10.9%	10.0%	5.1%	5.2%	8.4%
Peer Median Return	10.5%	9.5%	4.8%	5.3%	8.5%
Rank vs. Peers	53	42	73	64	69

- The plan underperformed its policy benchmark over the past year. Positive contributions from good selectivity within international equity, long-term fixed income and absolute return strategies as well as an over-weight to private equity were all more than off-set by weak selectivity within private equity and real/opportunistic strategies. Short term cash was a drag on performance over the period as well.

- Over the past year, the plan also underperformed the peer median rate of return. The plan received positive relative contributions through good selectivity within private equity and an under-weight to fixed income. However, this was off-set through poor selectivity within fixed income and an over-weight to short term cash. The combination of absolute, real return, and opportunistic strategies dragged slightly on relative performance as well.

- Over the longer ten-year period, the plan has slightly underperformed peers by -0.3%. The plan's return has been within 10 bps or better than the peer median rate of return eight out of the past ten consecutive years. The plan underperformed peers during March 2009 – March 2010 by -8.1% and the March 2003 – March 2004 period by -5.2%.

Asset Allocation

Using equities to pay benefits, increasing diversifying strategies.

- The systems paid out $2.9 billion net of contributions over the past twelve months. This figure represents 5.7% of the March 31, 2012, market value.

- The plans put to work just under $1.2 billion into Absolute Return and Real Return/Opportunistic strategies over the past year. Approximately half the amount was funded through a draw-down in short-term cash, and the rest through a combination of sales in international equity, long-term fixed income, and real estate.

- The plans have outstanding commitments to fund approximately $5.9 billion in illiquid asset classes, primarily private equity. This figure is about 11.1% of the March 2013 market value and is an additional liquidity consideration. By contrast, the current outstanding commitments are roughly $1.1 billion lower than five years ago.

- According to State Street peer universe data, the peer median allocation for the long-term fixed income asset class is 24.1% versus the plan allocation of 13%. With the 10-year U.S. Treasury yielding less than 2% and cash yielding approximately 20 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. Identifying and allocating to higher yielding, fixed-income like strategies is a top priority of 2013, the execution of this strategy is market dependent.

Capital Markets

An update on stocks and bonds.

- Interest rates remain very low. The U.S. 10-year Treasury closed April at a rate of 1.7%, credit spreads are normally priced at 1.3% over, high-yield spreads contracted to a level that is now 44 bps below normal, and Italian and Spanish ten-year sovereign rates dropped by 160 bps since a year ago and they are now the lowest they have been since late 2010.

- U.S. long-term fixed income is priced to return a very low rate of return. At the end of December, the **Barclays Government/Credit Index had a yield to maturity of only 1.6%**. The plan currently has 13.3% of the assets allocated to this asset class.

- The returns in domestic equities continue to be strong. The broad domestic market index, S&P 1500, returned 14.4% over the past year. Over the past one, three, five, and ten years small caps have annually outperformed large caps by 2.2%, 2.5%, 3.4%, and 3.8% respectively. Paradoxically, over the past year the three best performing sectors were "defensive" or lower volatility sectors: telecom, health care, and consumer staples.

- Foreign stocks have underperformed the U.S. by 5.5%, 8.1%, 6.2%, and 2.1% annualized over the past one, three, five, and seven years respectively. Emerging markets have trailed developed markets over the past one and three years annualized by -8.5% and -1.8% respectively. Before costs, the currency hedged developed market index outperformed the dollar priced benchmark by 5.3% over the past year ending March.

Economic Backdrop

U.S. doing alright, Europe double dips, and Abenomics.

- Growth in the U.S. is positive, though tepid. GDP is growing at a rate of 2.5%, though below expectations. 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 recovered. With 2.6 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 have still yet to recover from the 2008 financial crisis. The Eurozone is currently in the midst of its second recession since the crisis. In March 2013, the Eurozone member country Cyprus received a €10 billion Euro bank bailout

- In response to the poor economic conditions in Japan, Prime Minister Shinzo Abe is attempting to jump-start the economy by pushing through a number of large and controversial measures. These measures are referred as the "three arrows" of Abenomics; a massive fiscal stimulus, aggressive monetary easing, and structural reforms to boost Japan's competitiveness.
  - 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. 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 Japan's economy.
  - 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.

Highlighted Asset Class – Fixed Income

A summary

Long-Term Fixed	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	5.0%	6.4%	6.6%	6.8%	5.7%
Barclays Aggregate	3.8%	5.5%	5.5%	5.9%	5.0%
Peer Median Return	6.5%	7.8%	6.6%	6.6%	6.0%
Rank vs. Peers	77	82	55	41	64

- The strategic objectives of fixed income are income, diversification, liquidity, and capital preservation. A commonly cited benchmark for the asset class is the Barclays Aggregate Index.

- U.S. long-term fixed income is priced to return a very low rate of return. At the end of March, the Barclays Aggregate Index had a coupon yield of 3.4%, and a yield to maturity of only 1.6%. The RV Kuhns and Associates 2013 long-term return assumption for fixed income is 3.5%.

- The index's sensitivity to changes in interest rates has increased over time as well, as measured by the modified adjusted duration. At the end of April, the index had duration of 5.3 years; an historic high for the index measuring more than .7 years higher than normal. **With rates historically low and duration historically high, many are making the argument that passively investing in the Barclays Index has never been riskier.**

- Fixed income rates of return are greatly influenced by Federal Reserve policy. Short term interest rates are set very low, at the end of March Fed Funds rates were 1.9% lower than the prevailing rate of inflation. Due to policy decisions known as quantitative easing (QE), longer term rates are also influenced lower. It is not possible to say with certainty what the exact effects are, but **many economists have come to believe that the impact on longer term rates due to QE is 100 – 200 bps**.

- At its December meeting, the Federal Reserve announced additional QE policy guidelines that are sometimes referred to as an Evans Rule, named after Chicago Fed president Charlie Evans. The rule states that the additional accommodations should remain at least as long as the unemployment rate remains above 6.5%, inflation expectations one to two years out is no more than 2.5% and long-term inflation expectations well anchored.
  - The unemployment rate in April was 7.5%, a decrease from 8.1% the year prior. Based on the current trends, the unemployment rate will fall below 6.5% and the lost jobs will be fully recovered sometime around the third quarter of 2014.
  - In March, the rate of inflation was measured to be 1.5%. Longer term expectations for inflation are around the rule's 2.5%. A five-year inflation expectation model developed by the Fed measured 2.7% in March, or slightly below average with the expectations stable. At the end of March, a market derived ten-year inflation (breakeven) forecast is estimating the long-term rate of inflation to be 2.5%.

- At the end of March, 2013 the plan had 13.3% of the total assets ($6.8 billion) allocated to the long-term fixed income asset class with 75% of the assets managed internally. The funds are mostly (97%) in bonds rated as investment grade.

- The plans have been active in the alternative credit space as well. At the end of March 2013, the fund had an additional $2.5 billion allocated to that space and another $600 million in unfunded commitments.

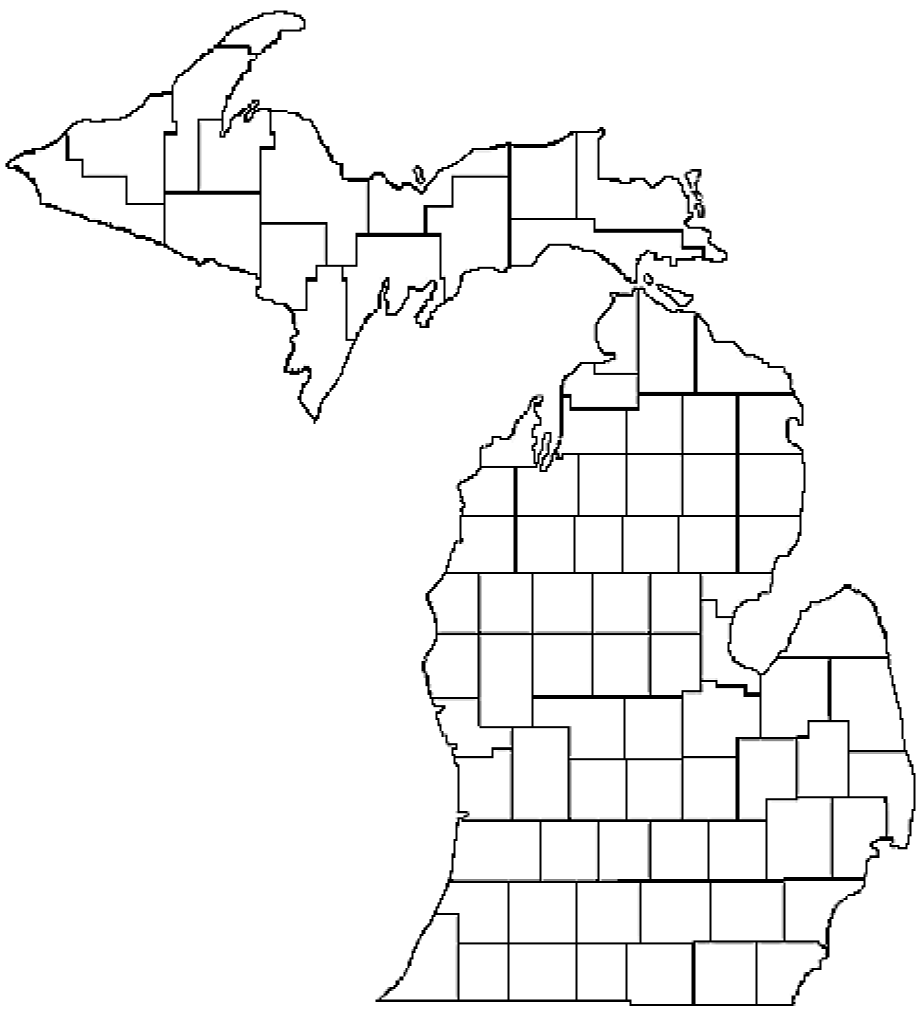
STATE OF MICHIGAN
RETIREMENT SYSTEMS

PERFORMANCE

FOR PERIODS ENDING
MARCH 31, 2013

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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.

Exceed individual asset class benchmarks over the long term.

Diversify assets to reduce risk.

MPSERS PENSION

Time-Weighted Rates of Return

Periods Ending March 31, 2013

	% of Portfolio 03/31/13	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**	**8.2**	**69**	**5.1**	**64**	**4.2**	**73**	**9.8**	**42**	**10.4**	**53**	**4.5**	**65**
Median - Greater than $10 Billion[2]		8.5		5.3		4.8		9.5		10.5		4.8	
MPSERS Total Plan Policy		8.4		5.2		5.1		10.0		10.9		4.2	
DOMESTIC EQUITIES	**28.1**	**8.7**	**50**	**5.1**	**29**	**6.3**	**34**	**12.0**	**51**	**14.1**	**44**	**10.7**	**47**
Median[2]		8.7		4.6		5.6		12.0		13.7		10.6	
S&P 1500 Index		9.0		5.2		6.3		13.0		14.4		10.9	
ALTERNATIVE INVESTMENTS	**19.9**	**14.0**	**20**	**11.3**	**12**	**6.1**	**26**	**15.3**	**12**	**14.5**	**18**	**3.0**	**48**
Median[2]		11.3		8.9		4.0		12.2		12.2		2.8	
Alternative Blended Benchmark[4]		11.8		8.3		9.1		15.9		18.9		0.4	
INTERNATIONAL EQUITIES	**14.7**	**9.5**	**70**	**1.5**	**75**	**0.6**	**37**	**5.6**	**49**	**10.5**	**42**	**3.5**	**83**
Median[2]		11.3		3.2		0.5		5.7		10.4		4.6	
International Blended Benchmark[3]		9.1		0.6		-0.2		4.1		8.9		3.3	
BONDS	**13.0**	**5.7**	**64**	**6.8**	**41**	**6.6**	**55**	**6.4**	**82**	**5.0**	**77**	**0.5**	**39**
Median[2]		6.0		6.6		6.6		7.8		6.5		0.4	
Barclays Aggregate		5.0		5.9		5.5		5.5		3.8		-0.1	
REAL ESTATE	**9.7**	**5.0**	**58**	**2.0**	**41**	**-3.3**	**72**	**11.5**	**50**	**8.8**	**49**	**2.5**	**46**
Median[2]		6.5		1.8		-1.9		11.4		8.7		2.3	
NCREIF - Property Blended Index[5]		7.3		4.5		1.0		11.9		9.1		2.2	
NCREIF Open Fund Index Net		5.8		2.4		-1.8		14.0		9.7		2.4	
REAL RETURN AND OPPORTUNISTIC	**4.9**							**7.0**		**5.4**		**2.5**	
50% (CPI +500bp) + 50% (8% accuarial rate)								**7.7**		7.3		2.3	
ABSOLUTE RETURN	**4.0**					**-2.3**		**4.8**		**8.4**		**3.8**	
HFRI FOF Cons 1 mth lagged						-0.9		2.3		4.1		3.0	
COMMODITY INVESTMENTS	**0.7**							**1.8**		**-3.3**		**-2.3**	
DJ-UBS Commodity Index TR								1.4		-3.0		-1.1	
INFRASTRUCTURE INVESTMENTS	**0.5**									**11.8**		**2.7**	
CPI + 400 bp 3 month lagged										5.8		0.2	
CASH EQUIVALENTS	**4.5**	**1.7**		**1.5**		**0.9**		**0.3**		**0.4**		**0.1**	
1 Month T-Bill		1.6		1.4		0.2		0.1		0.1		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] 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.

[4] 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.

[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 3/31/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MPSERS	10.4	7.7	9.8	13.3	4.2	4.0	5.1	6.3	6.5	8.2
Public Plan - Median (> $10 billion)*	10.5	7.4	9.5	14.6	4.8	4.2	5.3	6.4	6.5	8.5
Rank	53	44	42	74	73	62	64	57	60	69
bp Difference - Median	-7	+25	+33	-132	-66	-14	-18	-7	-2	-39

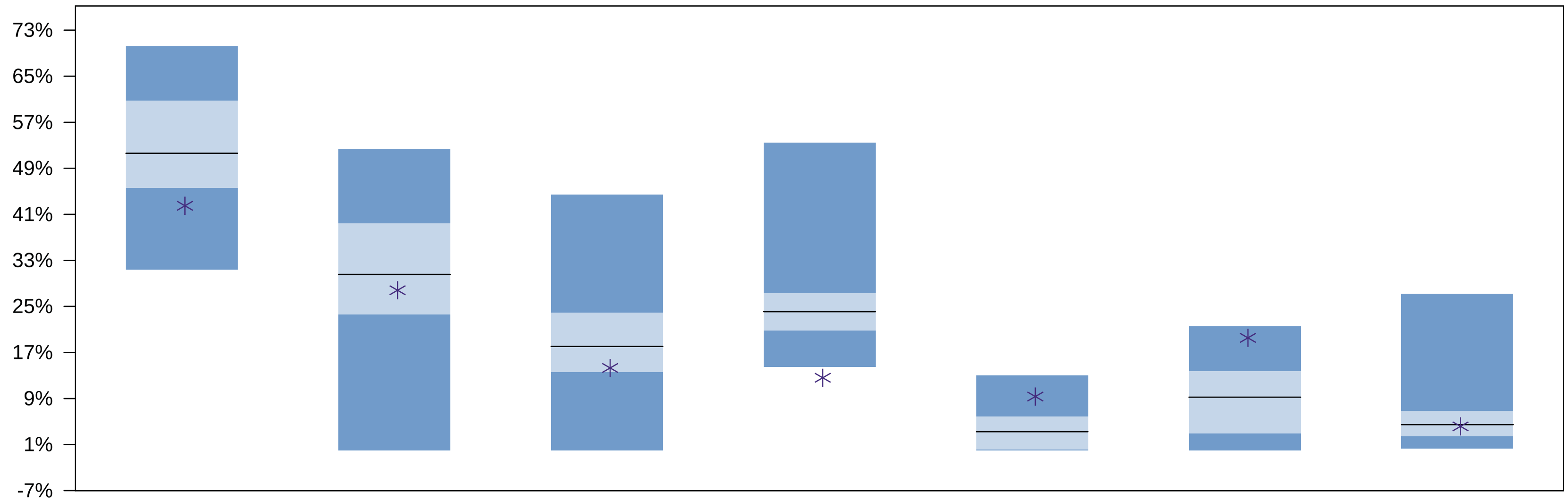
Consecutive For Years Ending

	3/13	3/12	3/11	3/10	3/09	3/08	3/07	3/06	3/05	3/04
MPSERS	10.4	5.0	14.2	24.3	-25.5	3.3	12.1	15.0	7.7	24.5
Public Plan - Median (> $10 billion)*	10.5	4.4	14.0	32.4	-28.1	1.7	12.0	14.6	7.7	29.6
Rank	53	24	43	88	21	26	46	45	53	85
bp Difference - Median	-7	+63	+26	-810	+259	+157	+7	+38	-4	-516

*State Street Public Funds Universe > $10 Billion.

MPSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $10 Billion (SSE) - Allocation
3/31/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	70.19		52.41		44.45		53.40		12.99		21.50		27.18	
25th Percentile	60.82		39.51		23.96		27.28		5.87		13.79		6.83	
50th Percentile	51.61		30.57		18.06		24.09		3.24		9.23		4.46	
75th Percentile	45.58		23.62		13.54		20.84		0.10		2.91		2.40	
95th Percentile	31.43		0.00		0.00		14.52		0.00		0.00		0.35	
No. of Obs	35		35		35		35		35		35		32	
TOTAL PUBLIC SCHOOL	42.83	88	28.15	56	14.67	71	12.96	98	9.69	12	19.89	10	4.52	47

Provided by State Street Investment Analytics

MSERS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 3/31/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSERS	10.4	7.6	9.7	13.2	4.0	3.9	5.0	6.2	6.4	8.0
Public Plan - Median (> $1 billion)*	10.5	7.2	9.6	14.8	4.9	4.2	5.3	6.3	6.5	8.5
Rank	53	31	42	77	79	69	70	56	57	67
bp Difference - Median	-6	+42	+13	-168	-85	-27	-25	-10	-10	-48

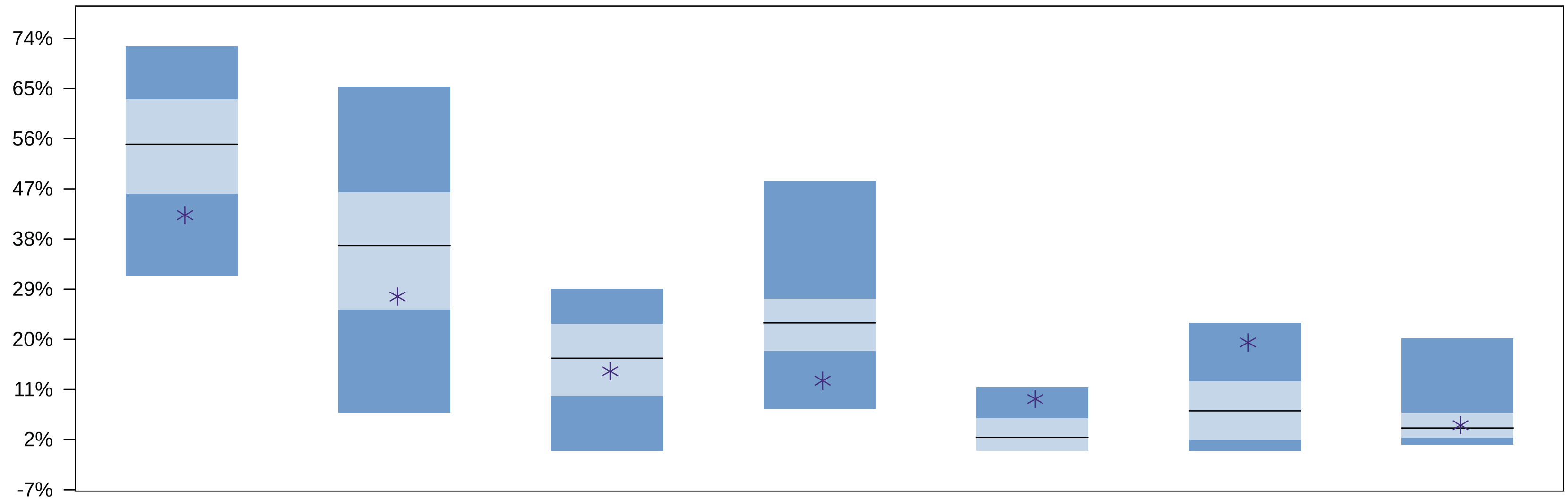
Consecutive For Years Ending

	3/13	3/12	3/11	3/10	3/09	3/08	3/07	3/06	3/05	3/04
MSERS	10.4	4.8	14.1	24.1	-25.7	3.1	12.1	15.0	7.6	24.2
Public Plan - Median (> $1 billion)*	10.5	4.2	14.4	32.5	-27.9	1.2	11.9	14.4	7.7	29.6
Rank	53	21	55	91	28	20	39	33	51	90
bp Difference - Median	-6	+64	-24	-847	+228	+191	+23	+62	-1	-539

*State Street Public Funds Universe > $1 Billion.

MSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
3/31/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	72.57		65.26		29.02		48.40		11.42		22.93		20.13	
25th Percentile	63.09		46.40		22.83		27.35		5.88		12.43		6.83	
50th Percentile	55.02		36.80		16.61		22.93		2.39		7.15		4.07	
75th Percentile	46.11		25.30		9.84		17.82		0.01		1.99		2.34	
95th Percentile	31.43		6.85		0.00		7.52		0.00		0.00		1.10	
No. of Obs	72		72		72		72		72		72		69	
TOTAL EMPLOYEES	42.64	86	28.03	67	14.61	58	12.92	92	9.65	12	19.80	10	4.93	40

Provided by State Street Investment Analytics

MSPRS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 3/31/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSPRS	10.4	7.6	9.8	13.1	4.0	3.9	5.1	6.3	6.4	8.1
Public Plan - Median (> $1 billion)*	10.5	7.2	9.6	14.8	4.9	4.2	5.3	6.3	6.5	8.5
Rank	53	31	38	77	79	68	67	55	54	67
bp Difference - Median	-10	+43	+18	-174	-85	-22	-20	-4	-5	-43

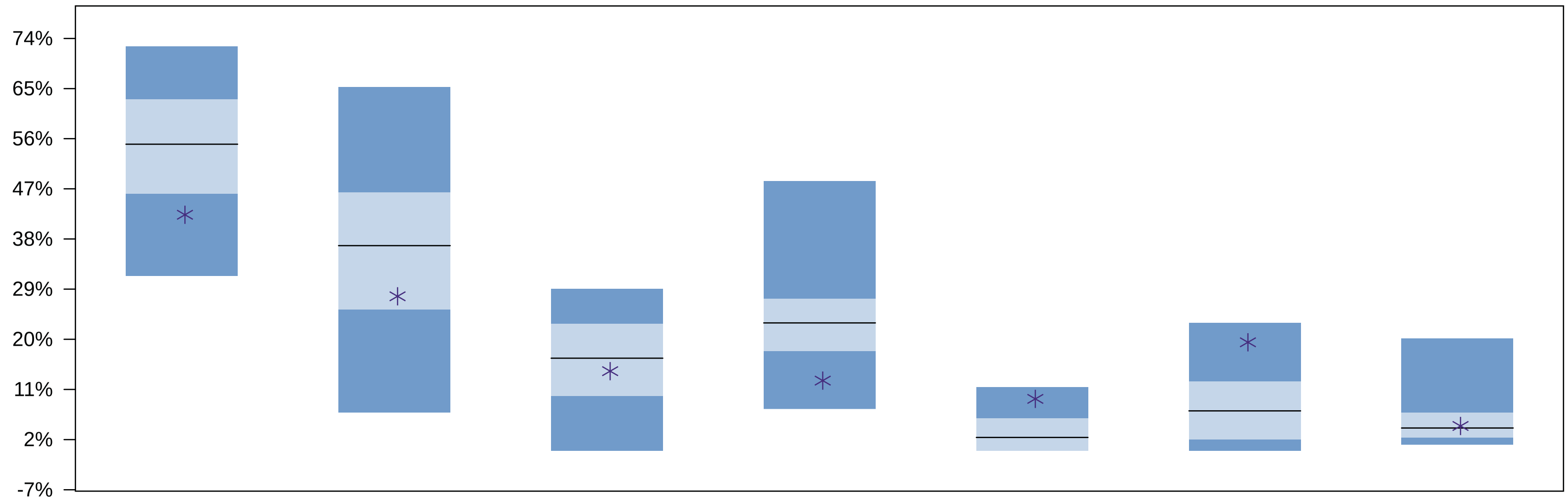
Consecutive For Years Ending

	3/13	3/12	3/11	3/10	3/09	3/08	3/07	3/06	3/05	3/04
MSPRS	10.4	4.9	14.3	23.6	-25.5	3.4	12.2	15.0	7.7	24.2
Public Plan - Median (> $1 billion)*	10.5	4.2	14.4	32.5	-27.9	1.2	11.9	14.4	7.7	29.6
Rank	53	20	53	91	25	19	38	33	50	90
bp Difference - Median	-10	+70	-10	-891	+243	+220	+31	+68	0	-540

*State Street Public Funds Universe > $1 Billion.

MSPRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
3/31/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	72.57		65.26		29.02		48.40		11.42		22.93		20.13	
25th Percentile	63.09		46.40		22.83		27.35		5.88		12.43		6.83	
50th Percentile	55.02		36.80		16.61		22.93		2.39		7.15		4.07	
75th Percentile	46.11		25.30		9.84		17.82		0.01		1.99		2.34	
95th Percentile	31.43		6.85		0.00		7.52		0.00		0.00		1.10	
No. of Obs	72		72		72		72		72		72		69	
TOTAL POLICE	42.71	86	28.08	67	14.63	58	12.94	92	9.66	12	19.81	10	4.81	41

Provided by State Street Investment Analytics

MJRS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 3/31/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MJRS	10.2	7.5	9.7	12.6	3.8	3.7	4.9	6.0	6.2	7.7
Public Plan - Median (> $1 billion)*	10.5	7.2	9.6	14.8	4.9	4.2	5.3	6.3	6.5	8.5
Rank	60	37	43	92	81	72	71	72	74	86
bp Difference - Median	-30	+33	+9	-227	-108	-42	-40	-29	-32	-78

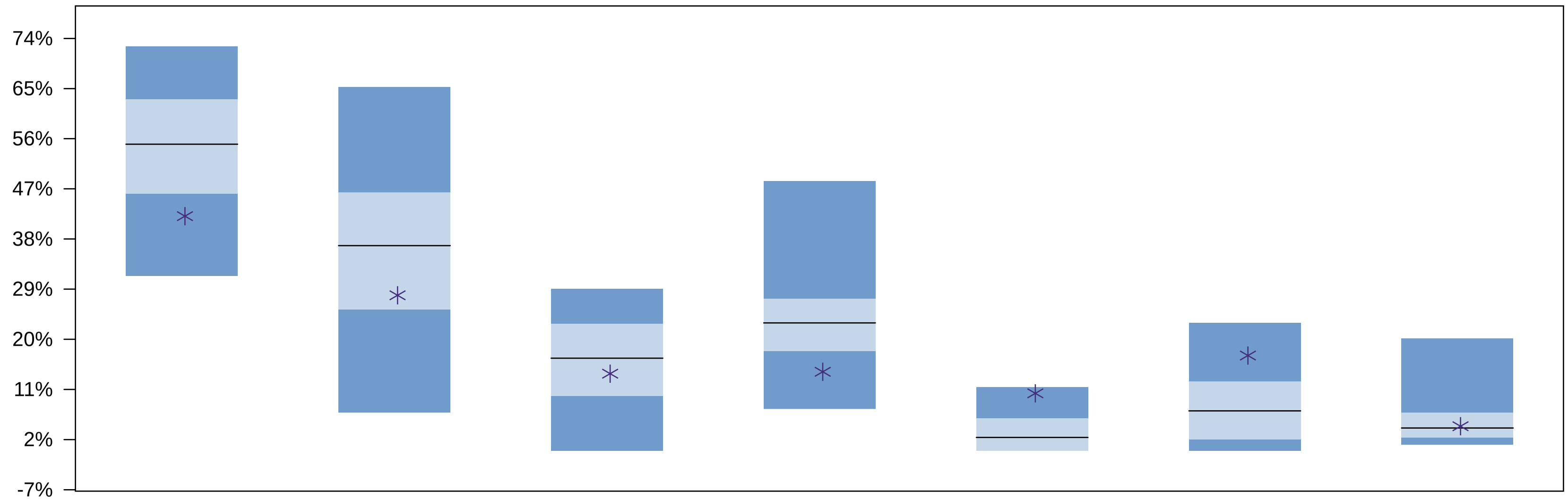
Consecutive For Years Ending

	3/13	3/12	3/11	3/10	3/09	3/08	3/07	3/06	3/05	3/04
MJRS	10.2	4.9	14.2	21.7	-24.9	3.4	12.0	14.4	7.2	23.1
Public Plan - Median (> $1 billion)*	10.5	4.2	14.4	32.5	-27.9	1.2	11.9	14.4	7.7	29.6
Rank	60	21	55	93	21	19	42	47	70	95
bp Difference - Median	-30	+68	-16	-1088	+299	+219	+13	+8	-48	-653

*State Street Public Funds Universe > $1 Billion.

MJRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
3/31/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	72.57		65.26		29.02		48.40		11.42		22.93		20.13	
25th Percentile	63.09		46.40		22.83		27.35		5.88		12.43		6.83	
50th Percentile	55.02		36.80		16.61		22.93		2.39		7.15		4.07	
75th Percentile	46.11		25.30		9.84		17.82		0.01		1.99		2.34	
95th Percentile	31.43		6.85		0.00		7.52		0.00		0.00		1.10	
No. of Obs	72		72		72		72		72		72		69	
TOTAL JUDGES	42.46	86	28.26	66	14.19	60	14.52	87	10.66	6	17.44	17	4.75	41

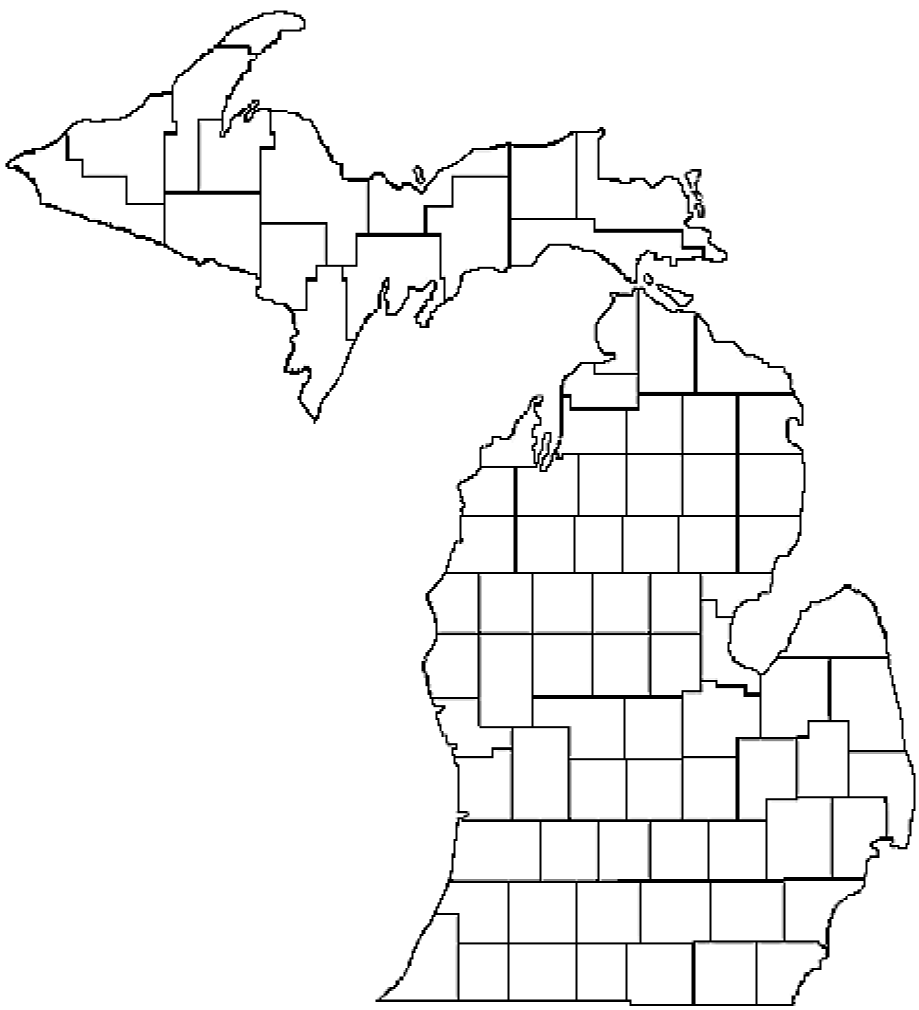
Provided by State Street Investment Analytics

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ASSET ALLOCATION REVIEW

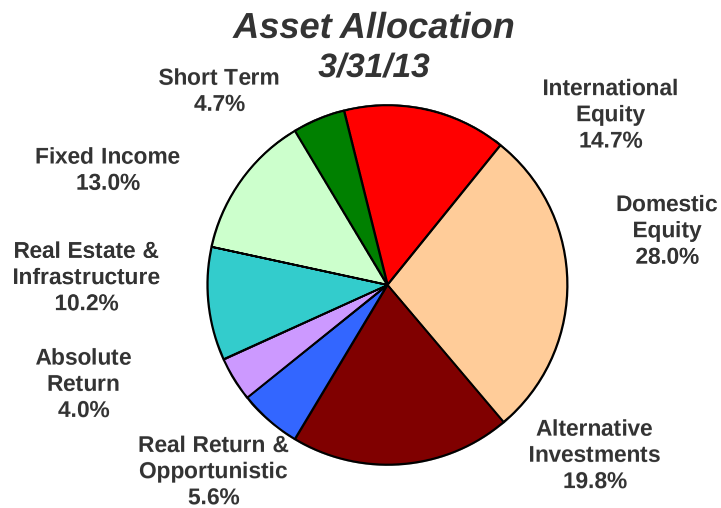
INVESTMENT ADVISORY COMMITTEE MEETING

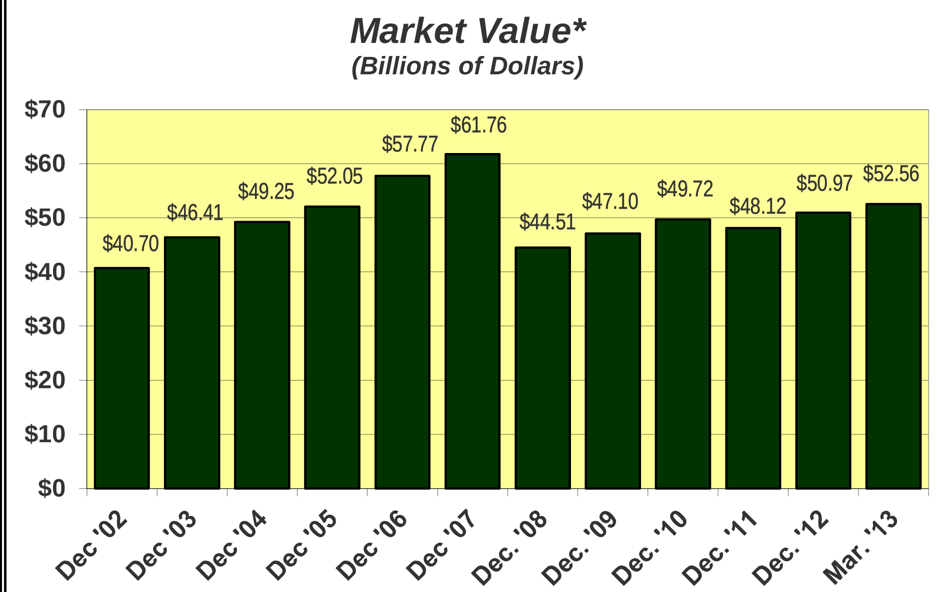
JUNE 18, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

STATE OF MICHIGAN RETIREMENT SYSTEMS
PROFILE - MARCH 2013





Asset Allocation By Market Value
(In Millions)

Investment Strategies	3/31/13		12/31/12	
Domestic Equity	$14,722	28.0%	$13,408	26.3%
Alternative Investments	10,429	19.8%	10,533	20.6%
International Equity	7,745	14.7%	7,392	14.5%
Fixed Income	6,806	13.0%	6,771	13.3%
Real Estate & Infra.	5,372	10.2%	5,238	10.3%
Real Return & Opport.	2,919	5.6%	2,704	5.3%
Short Term***	2,465	4.7%	2,945	5.8%
Absolute Return	2,099	4.0%	1,981	3.9%
TOTAL	$52,557	100.0%	$50,972	100.0%

Market Value By Plan ~ 3/31/13
(in Millions)

	Pension Plan Mkt. Value	OPEB** Mkt. Value	Combined Mkt. Value	%
MPSERS	$39,325	$1,678	$41,003	78.0%
MSERS - (closed)	9,576	582	10,158	19.3%
MSPRS	1,106	39	1,145	2.2%
MJRS - (closed)	250	1	251	0.5%
TOTAL	$50,257	$2,300	$52,557	100.0%

Short Term Equivalents *(in Billions)*

Short Term Strategy***	$2.5	
Short Term in Other Inv. Strategies	0.7	
TOTAL SHORT TERM	$3.2	6.1% of Total Funds

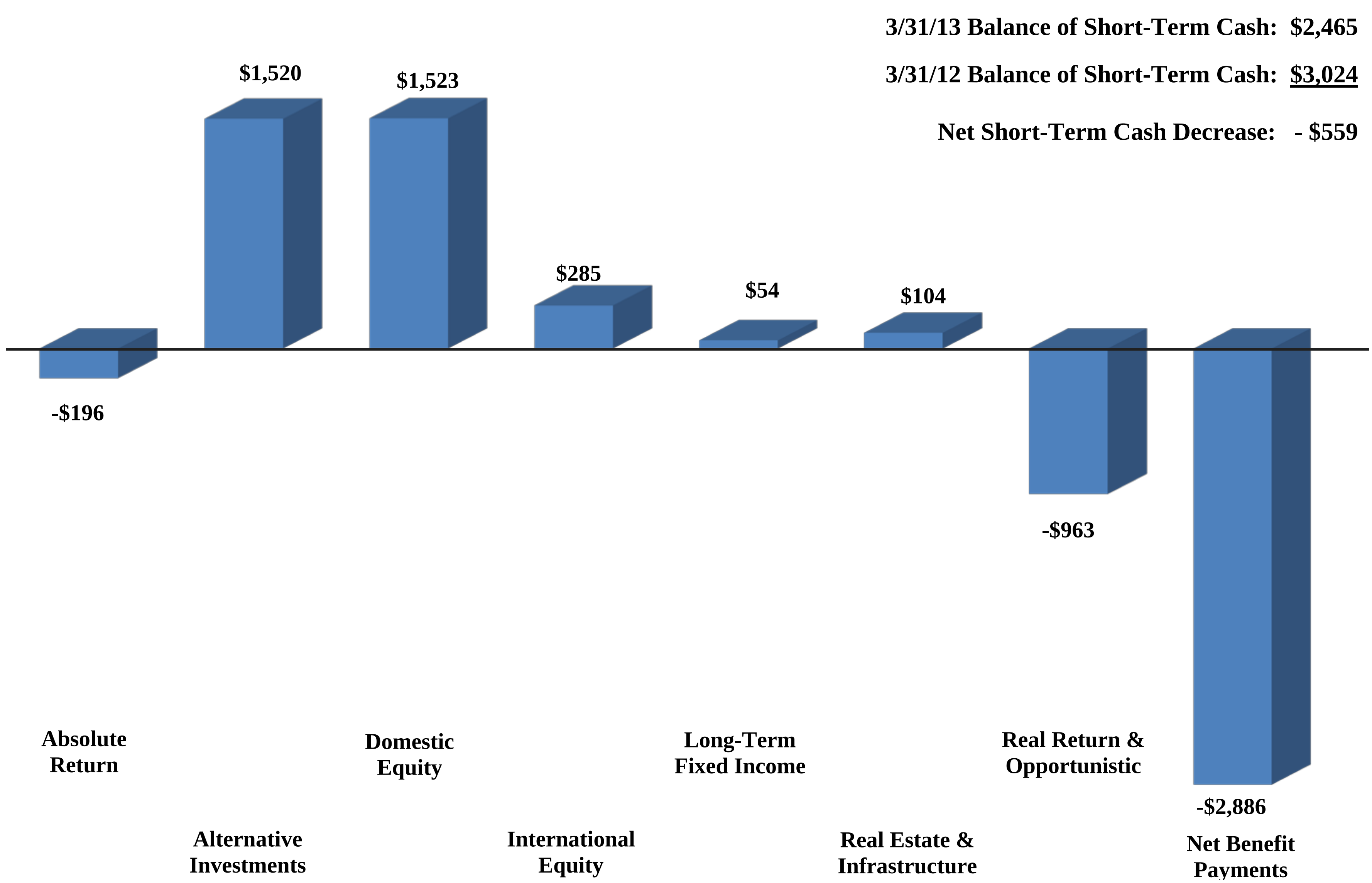
18th Largest DB Public Pension Fund in the U.S.
21st Largest DB Pension Fund in the U.S.

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
March 2012 ~ March 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 3/31/13*	*Target 9/30/13*	*Target* 9/30/14*	*Actual 3/31/13*	*Target 9/30/13*	*Target* 9/30/14*	*Actual 3/31/13*	*Target 9/30/13*	*Target* 9/30/14*	*Actual 3/31/13*	*Target 9/30/13*	*Target* 9/30/14*	*Ranges*
Broad U.S. Equity	28.1%	28.5%	31.0%	28.0%	28.5%	31.0%	28.1%	28.5%	31.0%	28.1%	29.0%	29.0%	20% - 50%
Alternative Invest.	19.9%	18.5%	16.0%	19.9%	18.5%	16.0%	19.8%	18.5%	16.0%	17.4%	14.5%	14.0%	10% - 25%
Broad Int'l Equity	14.8%	15.5%	16.0%	14.7%	15.5%	16.0%	14.7%	15.5%	16.0%	14.3%	15.0%	15.0%	10% - 20%
U.S. Fixed Income Core	13.0%	14.0%	15.0%	12.9%	14.0%	15.0%	12.9%	14.0%	15.0%	14.5%	17.0%	19.0%	10% - 25%
Real Estate Core	9.7%	8.0%	6.0%	9.6%	8.0%	6.0%	9.7%	8.0%	6.0%	10.7%	10.0%	7.0%	5% - 15%
Real Return / Opportunistic	5.5%	5.0%	5.0%	5.5%	5.0%	5.0%	5.5%	5.0%	5.0%	5.6%	5.0%	5.0%	0% - 10%
Absolute Return	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	3.5%	4.0%	0% - 12%
Cash	4.5%	5.0%	4.0%	4.9%	5.0%	4.0%	4.8%	5.0%	4.0%	4.8%	4.0%	4.0%	1% - 9%
Infrastructure	0.5%	1.5%	3.0%	0.5%	1.5%	3.0%	0.5%	1.5%	3.0%	0.6%	2.0%	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%	
Expected Return			7.7%			7.7%			7.7%			7.9%	
Expected Risk (1 yr.)			13.9%			13.9%			13.9%			11.8%	

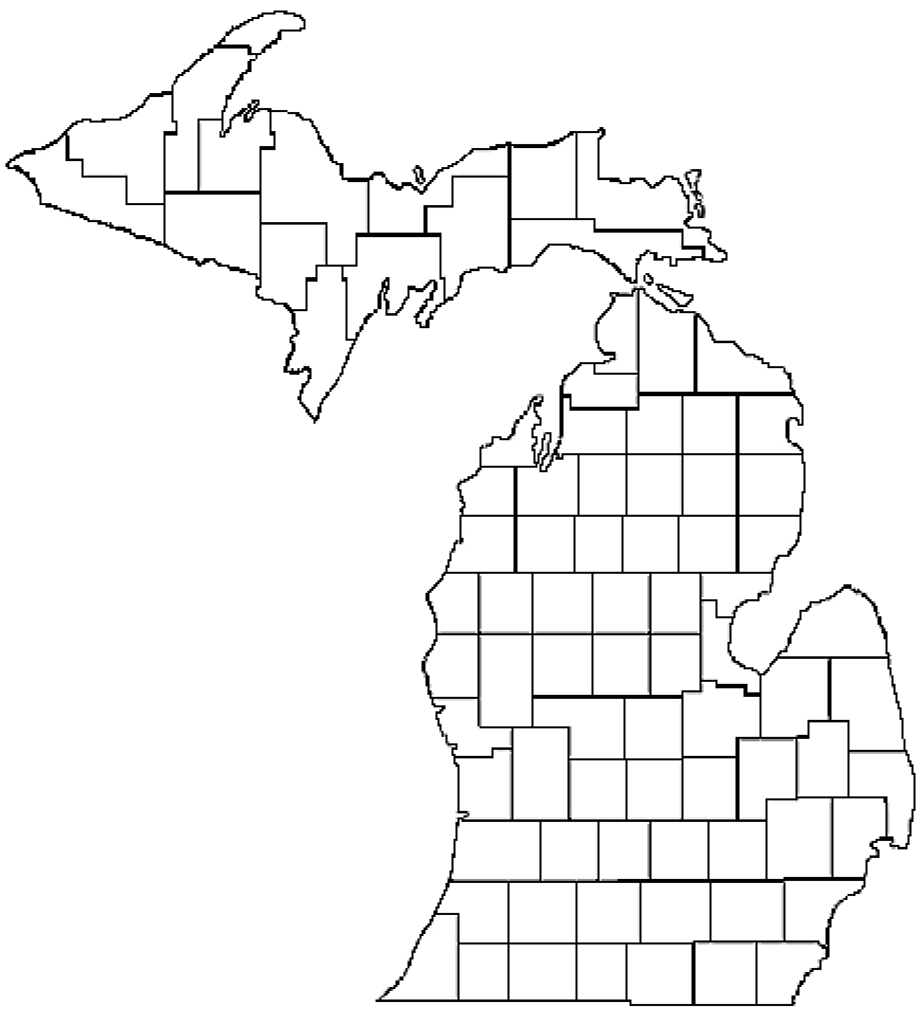
***Complies with basket clause and international restrictions.**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

CAPITAL MARKETS OVERVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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%	11.8%	Trim
International Equity	8.7%	20.8%	11.5%	Hold
Domestic Equity	7.9%	18.0%	9.0%	Trim
Infrastructure	7.4%	13.8%	6.4%	Add
Real Estate (Core)	7.0%	12.5%	7.3%	Trim
Real Ret/Opportunistic	6.0%	11.5%	7.4%	Add
Absolute Return	6.8%	9.8%	5.8%	Hold
Long-Term Fixed	3.5%	5.8%	5.0%	Trim
Short-Term	2.3%	3.0%	1.6%	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

Central banks easy Monetary Policies lead to higher equities, lower rates, and yet no inflation.

- The broad domestic equity benchmark posted returns of 14.4% over the past year ending March. Small caps earned an extra 2.2% over large-caps. However, uncharacteristically in this kind of return backdrop, "defensive" sectors such as telecom, health care and consumer staples bested the economically sensitive sectors such as information technology, materials and energy by a double digit margin.

- Within the international equity markets, developed markets have outperformed emerging markets over the past one and three years on an annualized basis by 8.5% and 1.8% respectively. This is despite the poor growth found in the majority of the developed market economies.

- Japan is aggressively fighting deflation with a quantitative easing program that is 2.3X of the U.S. Federal Reserve's policy after adjusting for the size of the two economies. The immediate effect is a weakening of the Yen (82.87 to 94.22) and an increase in the Japanese stock market. For the year ending March 31, 2013, the TOPIX is up 23.6% in Yen terms but just 8.4% when expressed in U.S. dollars. Before costs, the currency hedged developed market index outperformed the dollar priced benchmark by 5.3%

- The 10-year U.S. Treasury rate ended April at 1.67% falling 0.24% from the year earlier. Investment grade corporate interest rate spreads are 23 basis points (bps) higher than normal while high yield spreads are 44 bps lower than normal. At the end of March, the Barclays Government/Credit Index had a yield to maturity of only 1.6%.

- Over the past few years, the plan has shifted allocation towards non-publicly traded, credit-oriented strategies. Including unfunded commitments, these strategies make up roughly 5% of the total assets. The advantages of these strategies are good cash flows, better than 8% expected returns, and diversification away from volatile equities.

- 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 1.5%. Because of these facts, inflation oriented strategies (such as real return, commodities, infrastructure, etc.) will be targeted selectively.

Domestic Equity

Good returns, defensive sectors shine, and Apple soars.

- The returns in domestic equities continue to be strong. The broad domestic market index, S&P 1500, returned 14.4% over the past year and 13.0% over the past three years. The large-cap S&P 500 index made a new all-time closing high on April 30, ending the month at a level of 1597.57. This is despite the fact that earnings growth has been lackluster. The March 2013 trailing one-year reported earnings for the S&P 500 measured $86.51. This was actually down $0.44 from the year earlier meaning that the increase in the price was entirely due to multiple expansion rather than growth in earnings.

- Domestic equity remains attractively priced relative to bonds, though slightly less compelling than a year ago. Valuation metrics are mixed meaning there is uncertainty whether the returns in absolute over the next cycle will be as strong as the historical average. The price trend is moderately positive though, suggesting the market might continue to trend higher in the near-term.

- Small caps extended their streak of outperforming large caps. Over the past one, three, five, and ten years small caps have annually outperformed large caps by 2.2%, 2.5%, 3.4%, and 3.8% respectively. Relative to large, small caps sell at an above average premium. The plan is underweighted U.S. small cap stocks.

- At the sector level, something completely different is happening. Over the past year, the three best performing sectors were "defensive" or lower volatility sectors; telecom, health care, and consumer staples. The cyclical, high Beta sectors (information technology, materials, and energy) were the worst performing.

- The return of the information technology sector was the only sector to post a negative (-0.5%) total return for the past year. A key reason for this was the price performance of Apple. Since March 2012, the company lost one-quarter of its market value falling from $599.55 to $442.66 per share. On September 19, 2012, the company hit its all-time closing price of $702.10 per share. At the end of March 2013, the plan owned 1.1 million shares of Apple, representing 3.26% of the domestic equity portfolio, an overweight of 83 bps.

International Equity

Developed economies are doing poorly, yet markets continue to go up.

- International Equities continue to underperform Domestic. Over the past one, three, five, and seven years the broad international market index, MSCI ACWI ex USA, underperformed the domestic S&P 1500 index by 5.5%, 8.1%, 6.2%, and 2.1% annualized respectively. It is only in the longer term, over the past ten years, that international equity outpaced domestic by 2.4% annualized.

- Within International Equities, emerging markets have underperformed developed markets over the past one and three years annualized by -8.5% and -1.8% respectively.

- The plan is underweight international equities relative to the strategic policy (14.7 vs. 16.0) as well as to a global benchmark. The split between active and passive strategies is now close to 50/50. Emerging market exposure is approximately 30% of total international equity, this is a 6.7% overweight.

- The economic backdrop of most foreign developed countries is poor. This is especially true in Europe where the economies are not expected to grow in 2013 at all. 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.

- Perhaps due to the monetary stimulus, the price trend (measured in local currency) of developed international markets is the best it has been since 2007, or nearly six years. Given this backdrop, currency hedging strategies should be given consideration. The trend in prices for emerging markets is still neutral to slightly bearish.

Interest Rates

Rates go lower still.

- Interest rates are still historically very low. At the end of April, the 10-year U.S. Treasury rate was 1.67%, down 24 bp from a year ago. Italian and Spanish 10-year sovereigns were a full 160 bps lower than a year ago, the lowest they have been since late 2010.

- Fed funds short-term rates are less than 0.25% and the U.S. 10-year Treasury rate ended the year yielding 1.67%. With rates at or below the latest year-over-year inflation rate of 1.5%, investors of U.S.
  10-year (or shorter dated) bonds stand a high probability of losing purchasing power if held to maturity.

- The yield curve remains fairly steep as measured by the difference between the ten and two-year U.S. Treasury rates. These rates rank in the top third in terms of steepness since 1977 increasing the opportunities to "ride down the yield curve".

- Credit spreads are still wider than their historic average at 1.25% over. On the other hand, high yield spreads are 44 bps lower than normal at 4.3% over.

- As expected, borrowers are taking advantage of the historically low rates; and 2012 was a record year for U.S. high-grade issuance. Apple issued a massive $17 billion in debt in April 2013.

- The index's sensitivity to changes in interest rates has increased over time as measured by the modified adjusted duration. At the end of April, the Barclays Aggregate Index had duration of 5.3 years; an historic high for the index measuring more than 0.7 years higher than normal.

- An outcome of the 2008 financial crisis is the primary dealers are holding a fraction of the inventory they once did. This is because there are fewer of them, but also due to increased regulations. Today, dealers hold about a fifth of what they held in 2007.

Real Estate

Yields and growth, what's not to like?

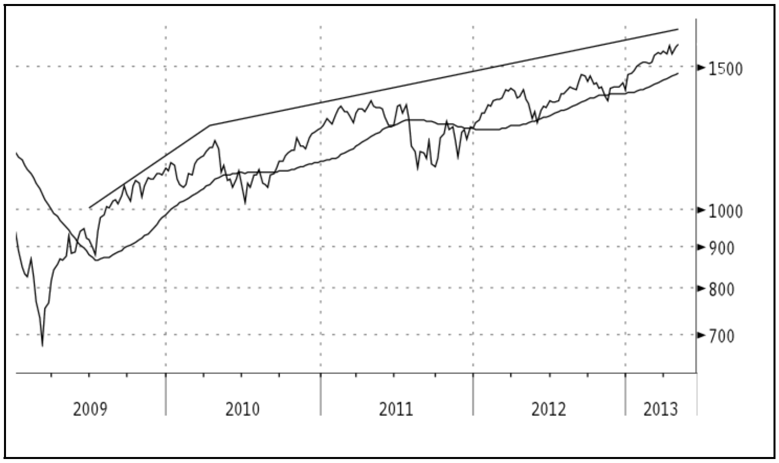
- The returns in publicly traded REITs have been strong mostly due to their high dividend payouts. The FTSE Nareit Index has returned 15.3%, 17.2%, 6.8%, and 14.4% over the past one, three, five, and ten years respectively. Privately held real estate normally lags the REIT index by one year. Because of this fact, the plan's real estate returns should continue to see positive returns though valuations are a question.

- The REIT index is attractively 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 is positive and accelerated higher during the quarter ending March 2013. This indicates that this index has some room to run higher. Private market transactions take time to execute; therefore, it is unlikely that the plan would add to real estate given the existing backdrop, and would be more inclined to selectively pare holdings at a good price.

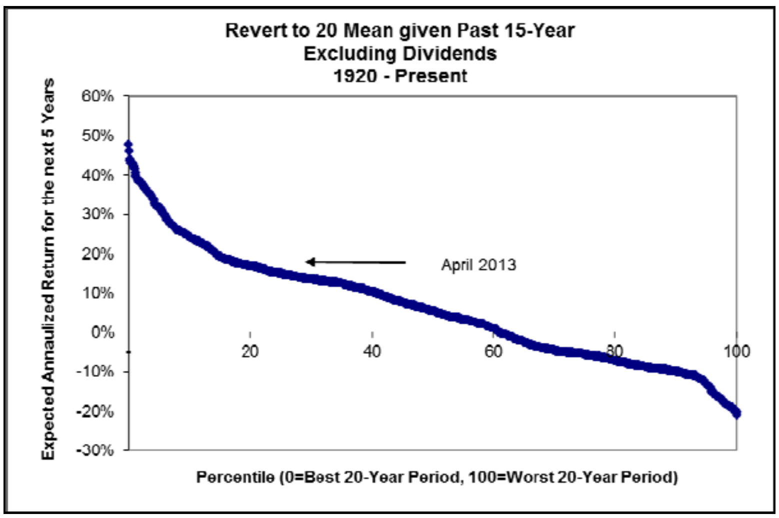
Domestic Equities

S&P 500 – 12/31/08 – 4/30/13



- At the beginning of 2012, the S&P 500 price broke out above the 200-day moving average.
- The market hit its 52-week highs during the quarter.
- The technical backdrop is upward sloping.

Returns Based Outlook



- Since 1920, the median 20-year price return for the S&P 500 is 183% or 5.3% annualized.
- The S&P 500 has increased by 43.6% over the past 15 years.
- Using the 20-year median price return as a projection, the S&P 500 price return would be 14.5% over the next 5 years based on the previous 15-year return.

Earnings Based Outlook

Scenerio	Price Return Estimate	Total Return Estimate
Super Bull	22.0%	25.7%
Bull	10.9%	15.3%
Base	3.4%	7.2%
Bear	7.2%	-4.3%
Super Bear	-15.0%	-12.4%

Assumptions

	2017 Earnings	2017 P/E Ratio	Dividend Payout
High	$173	25.0	62%
Mid	$122	15.5	54%
Low	$71	10.0	42%

Based on Robert Shiller data

International Equities

Developed Markets

<u>MSCI EAFE</u> – 12/31/01 – 4/30/13

- 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 one without resistance.

Emerging Markets

<u>MSCI Emerging Markets</u> – 12/31/01 – 4/30/13

- 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.

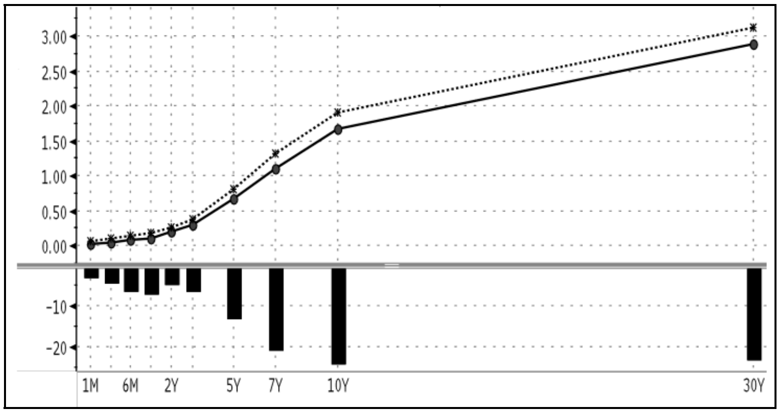
Count of Markets Priced
Below a 200-Day Moving Average

	Developed	Emerging
March 31, 2013	2	6
December 31, 2012	0	0
December 31, 2011	5	2

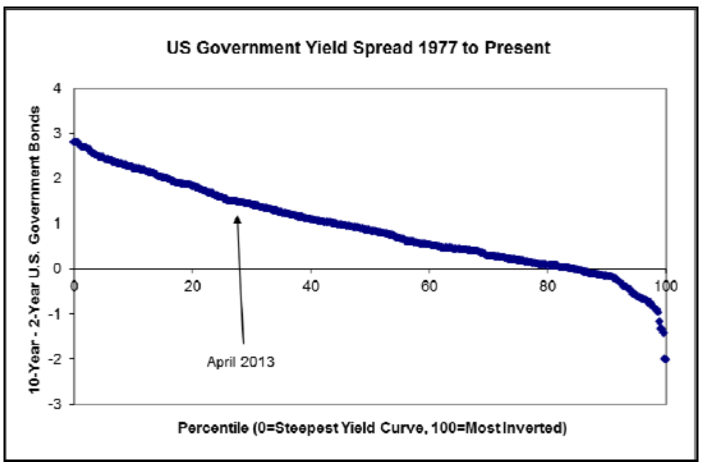
Prices above/below a 200-day moving average is a proxy for the near term direction of the stock market.

U.S. Cash and Fixed Income

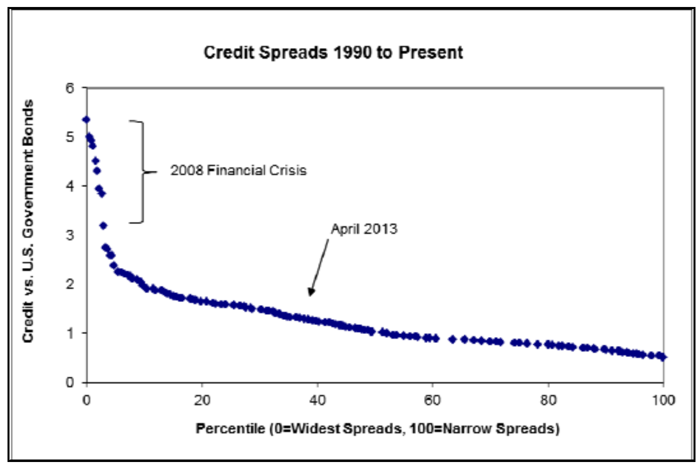
4/30/12 – 4/30/13



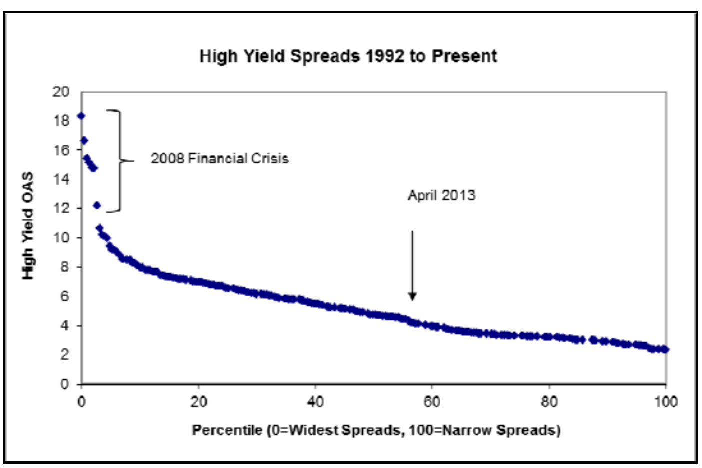
- Rates are basically unchanged, though lower, year-over-year.
- Rates at the short end are still very low.



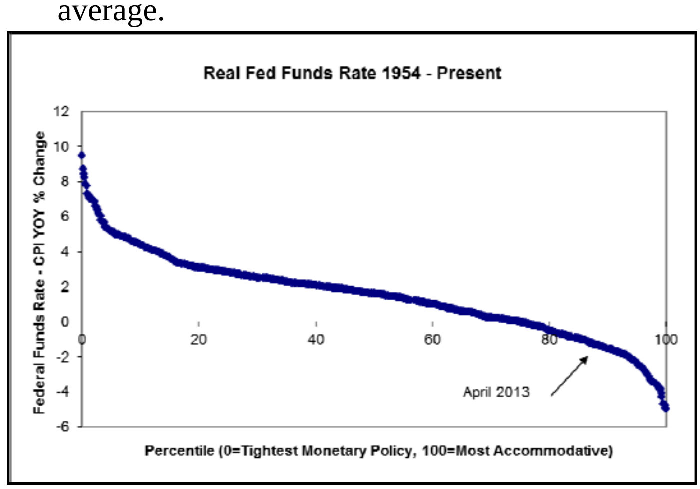
- The yield curve is moderately elevated.
- 57 bps of flattening to get to average.



- Credit spreads have compressed.
- Credit spreads are 23 bps above the historic average.



- Today, high yield spreads are 44 bps below their historic average of +4.76%.



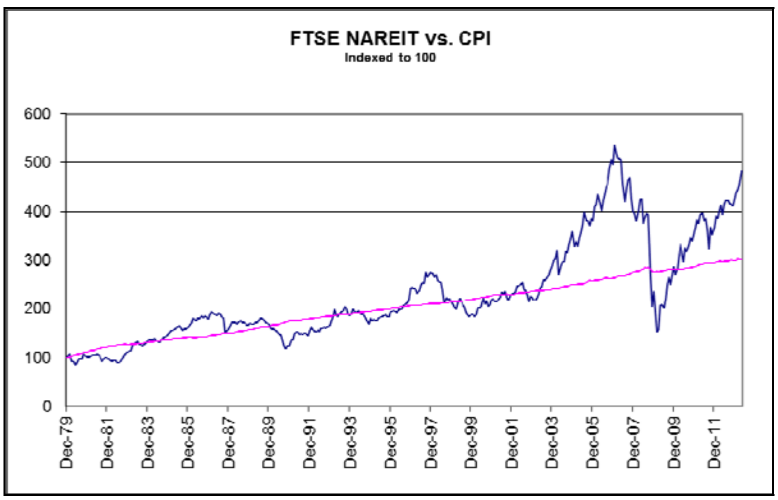
- The Fed maintains an extremely accommodative stance.
- The Fed has announced its intention to keep rates low through mid-2015.

U. S. Real Estate

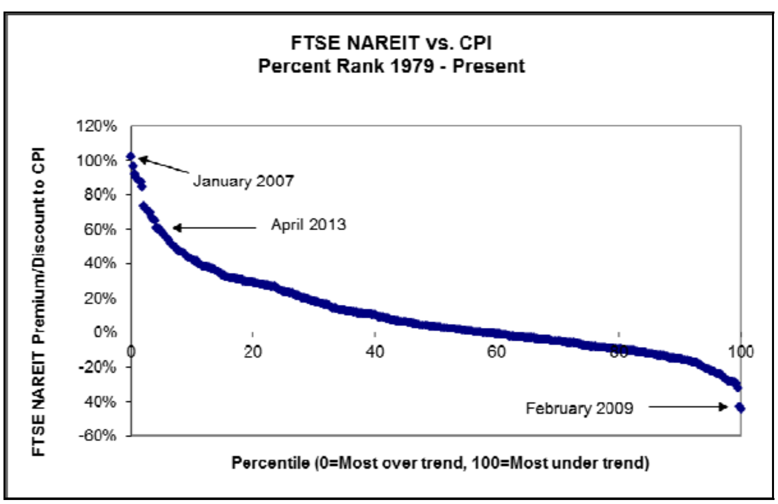
FTSE NAREIT Index – 12/31/05 – 4/30/13

- 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 above its 200-day moving average.
- The trend rate of price appreciation has re-accelerated.

Return Outlook

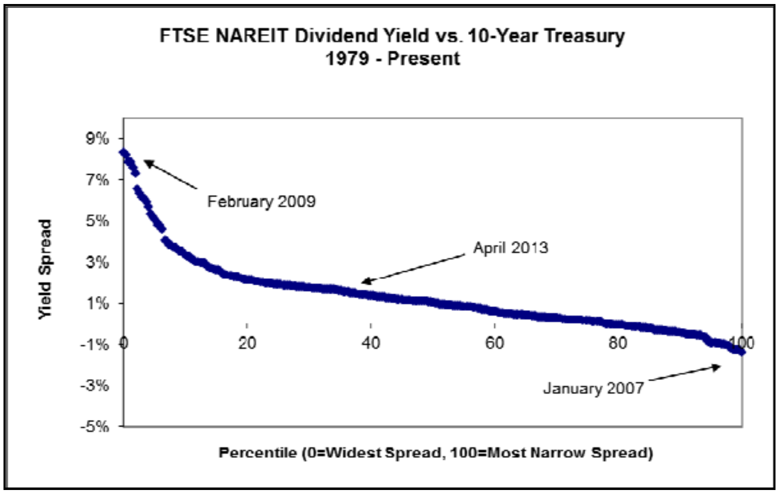


- REITs prices have trended around CPI.

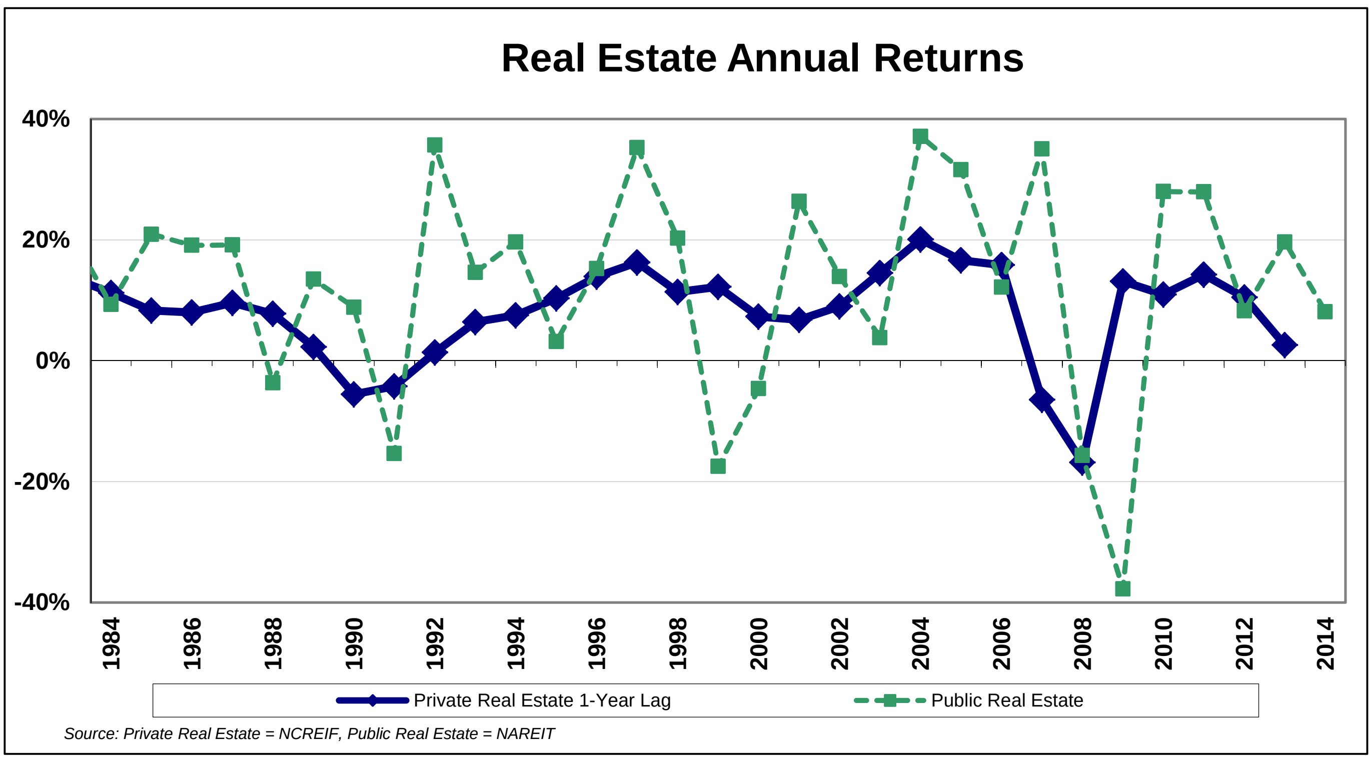


- REITs have priced lower ~ 95% of the time.
- REITs are very expensive when compared to the CPI.

U.S. Real Estate - Continued



- The Index normally yields 0.99% more than 10-Year Treasuries.
- Current dividend yield is at 3.1%.
- When compared against the 10-Year Treasury, REITs are moderately 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 remains fairly positive.

Commodities

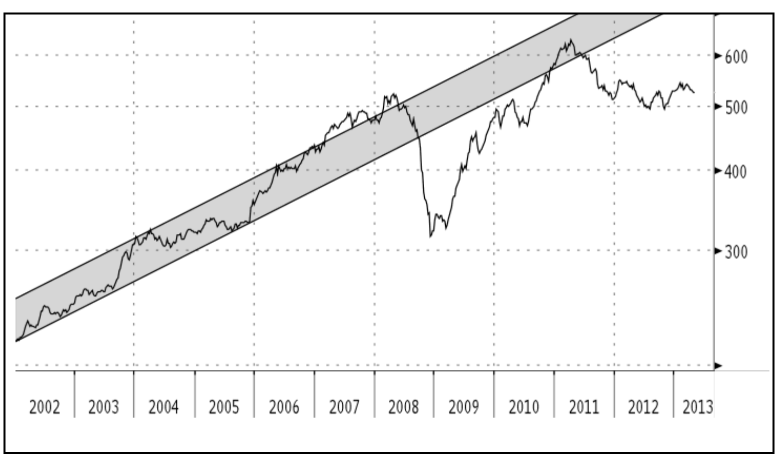
<u>CRB Index</u> – 12/31/01 – 4/30/13

- Commodity prices, as measured by the ThompsonReuters / Jeffries CRB Index, continue the downward sloping price trend.
- Inflation does not appear to be a 2013 concern.

<u>CRB Food Index</u> – 12/31/01 – 4/30/13

- CRB Food index has steadily increased since 2002.
- Food price increases do not appear to be a 2013 problem.

<u>CRB Raw Industrials Index</u> – 12/31/01 – 4/30/13



- 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

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
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%	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%	Best
	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%	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%	
	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%	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%	
	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%	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%	
	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%	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%	
	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%	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 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%	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	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%	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%	Worst

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%

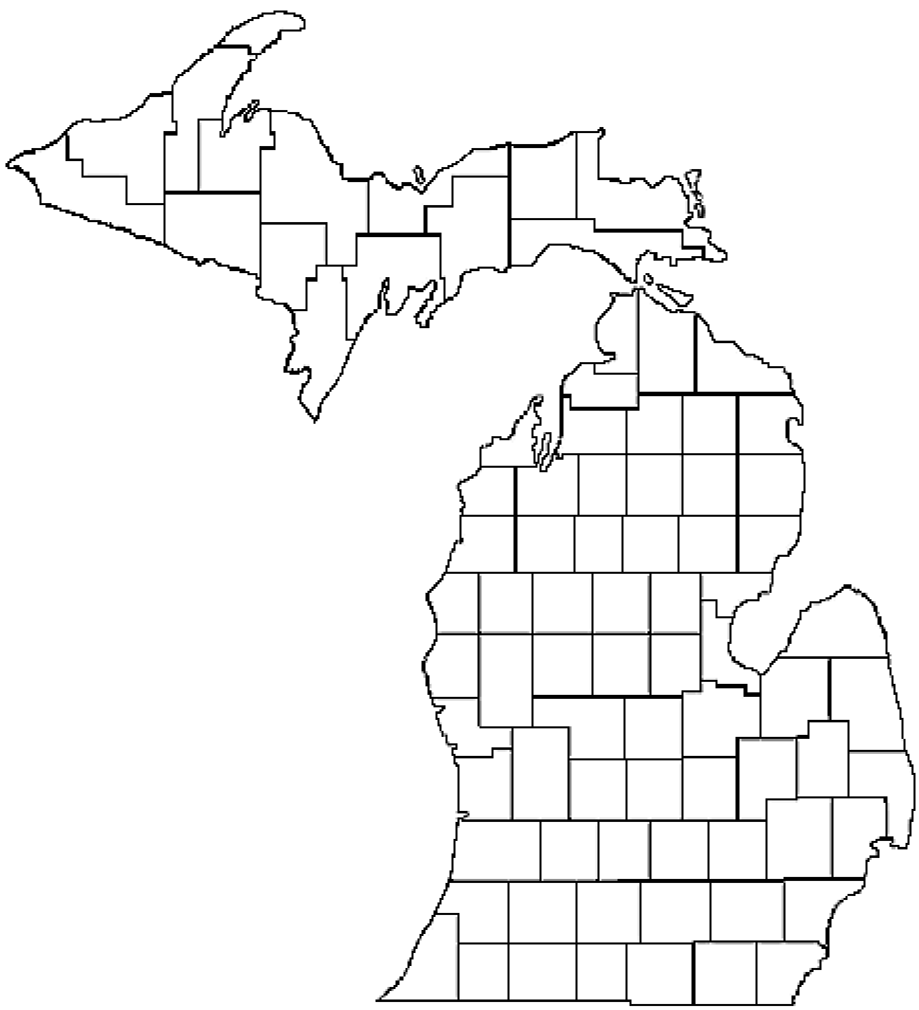
- Hedge Funds are represented by the HFRI FOF Conservative Index
- Inflation is represented by the U.S. Consumer Price Index
- International Equity is represented by the MSCI EAFE Index
2000 Forward - Int'l Equity is represented MSCI - AC World EX-USA Index
- Cash is represented by 30-day T-Bills
- U.S. 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

JUNE 18, 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

After some pause in 2012 growth resumes.

Real GDP Growth Actual/Forecasts	2011	2012	2013	2014	2015
World	2.9%	2.2%	2.3%	3.0%	3.3%
U.S.	1.8%	2.2%	2.0%	2.7%	3.0%
Developed (G10)	1.4%	1.2%	1.1%	1.9%	2.2%
Asia	7.6%	6.3%	6.6%	6.9%	6.9%
EMEA	4.8%	2.7%	2.8%	3.5%	3.6%
Europe	1.5%	-0.3%	0.1%	1.3%	1.5%
Latin America	4.2%	2.7%	3.4%	3.9%	3.8%
China	9.3%	7.8%	8.0%	8.0%	7.8%

*Source: Bloomberg

U.S. Economic Overview

Slow, steady improvement.

- The most recent reading of the annualized U.S. GDP growth was 2.5%, though below consensus estimates of 3.0%. Coincidental economic indicators such as the Institute for Supply Management's Manufacturing and Non-Manufacturing PMI Indexes are both above 50, indicating that there is some, if modest expansion in the U.S. economy; however, these indicators are registering below expectations as well. Most recent economic data is confirming the PMI data; positive, but below expectations.

- The U.S. jobs picture continues to look better and better. The unemployment rate continues to steadily grind lower. At the end of April the rate was 7.5%, down from 8.1% one year prior. Skeptics point to the labor participation rate of 63.3%, which is the lowest rate since 1978. According to the April reports, the economy is adding 165,000 jobs per month against expectations of 140,000. Jobs growth is actually one of the few economic data points surprising to the upside. Given that there are still approximately 2.6 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.

- The U.S. housing market continues to show strength as well. New housing starts are now the highest since June 2008. Starts have increased 46% over the year and existing home sales are up 10%. For context, housing starts need to increase another 40% in order to get back to the historic average of 1.5 million per year. House values (as measured by the S&P / Case-Shiller Index) increased by 9.3% over the last year. Due to very low mortgage interest rates, housing is as affordable as it has ever been.

- After an all-time high in the fourth quarter of 2011, corporate profits are a percent lower now and the margins those profits represent are 0.5% lower. A key driver to the increase in margins is globalization of trade. Not unrelated to globalization, wages growth has not kept pace with profit growth. Today the disparity between corporate profits and wages is the largest on record going back to the 1940s.

- The policies adopted by the Federal Reserve Board are having a desirable effect on the economy and the financial markets, and there is no reason to believe that the current easing policy will change anytime soon. However, when considering GDP, the jobs recovery, the housing recovery, corporate profits, etc., there is a sense that conditions are getting back to normal, thus requiring normal Fed policy. Today, it is not clear how the Fed will go about unwinding the various easing of monetary policies.

International Economic Overview

Japanese economic policies in focus.

- In contrast to the U.S., the economies of the Eurozone and Japan are in poor shape. Both are smaller today than they were in 2007 measured by real GDP. The Eurozone is in a second “double-dip” recession.

- In December 2012, Shinzo Abe was elected prime minister of Japan. His economic policies, known as “Abenomics” are controversial and are impacting markets globally. Proponents will point to the soaring stock market, up 50% for the year ending April 30, and the weakening Yen, down 20% over the same period. Abenomics “three arrows” target a massive fiscal stimulus, aggressive monetary easing, and structural reforms to boost Japan’s competitiveness.

    - 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 April 2013, the 10-year Japanese government bond rate was 0.6%, down 30 basis points from a year earlier.

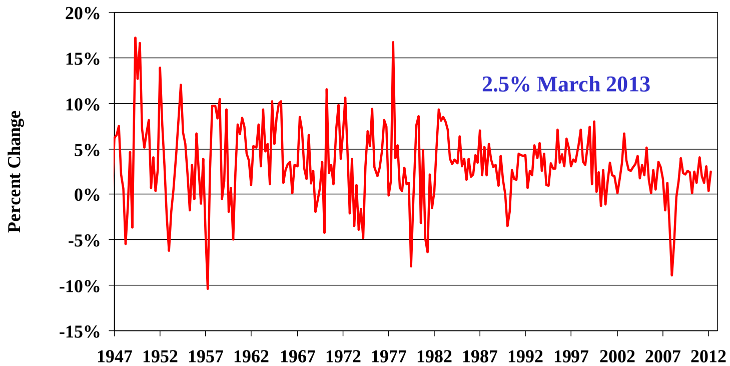
    - A number of policy reforms are also part of Abe’s plan. The main areas of focus are health/medical care, energy/environment, employment and the creation of companies/industries.

- In March 2013, the Eurozone member country Cyprus received a €10 billion Euro bank bailout. A condition of the bailout required an extended bank holiday and that uninsured deposits greater than 100,000 Euros take a 40% “haircut”, meaning loss of principal. At one point during negotiations, it was feared that insured deposits would be at risk as well. With the 2008 financial crisis still fresh in the minds of investors, it was feared that Cyprus could be another “Lehman moment”. By April, the markets appeared sufficiently satisfied with the management of the bailout, though the economy of Cyprus is likely to be devastated.

1

GDP

Annualized Quarter over Quarter Growth



Source: Bureau of Economic Analysis

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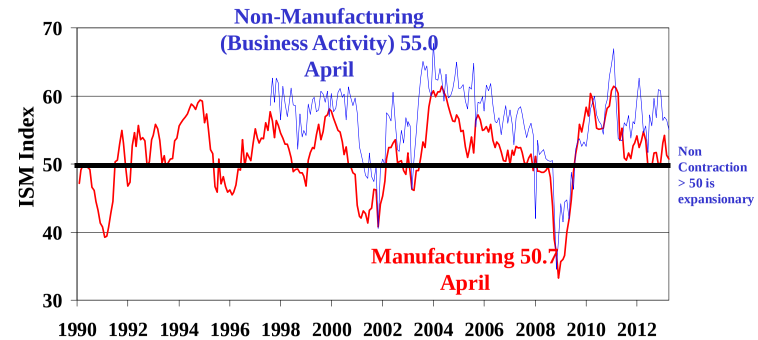
2

Manufacturing/Non-Manufacturing



Source: Institute for Supply Management

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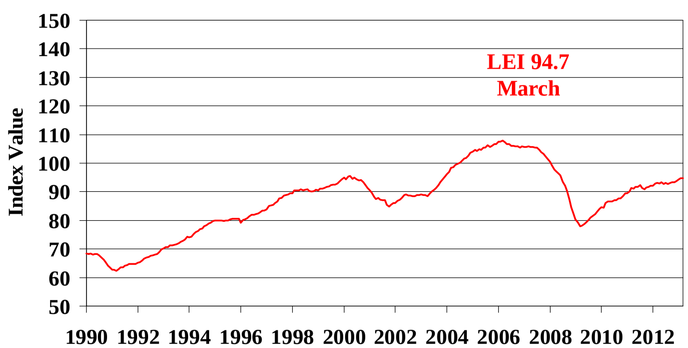
3

U.S. Leading Economic Indicators



Source: Bloomberg

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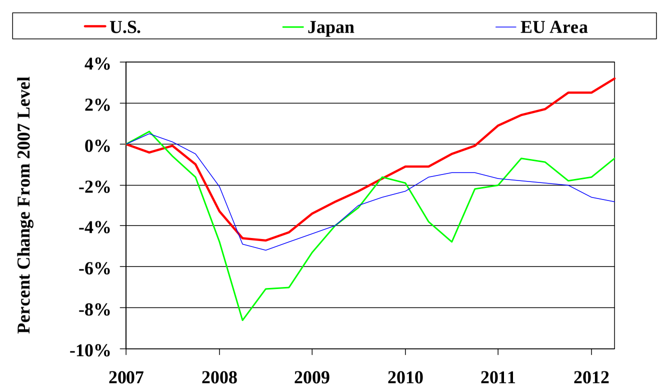
4

GDP of Select Developed Economies



Source: Bureau of Economic Analysis

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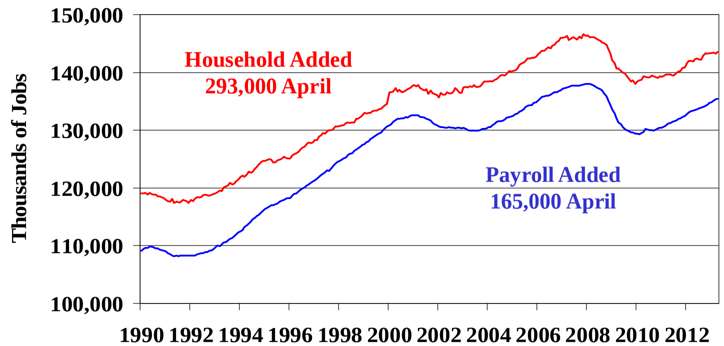
5

Job Market Growth



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

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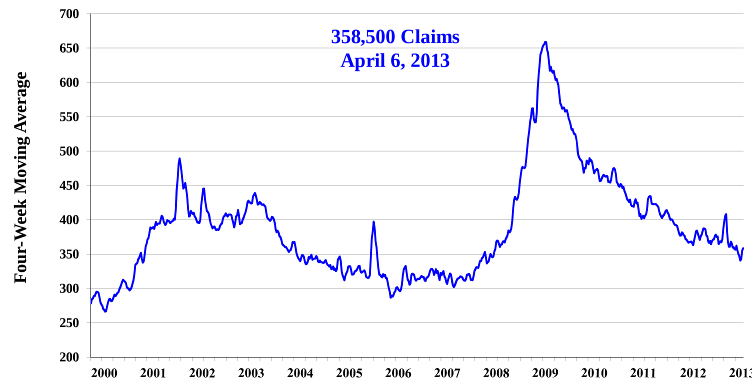
6

Initial Unemployment Claims



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

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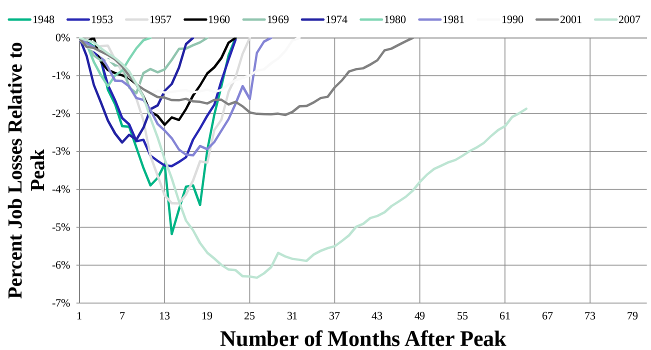
7

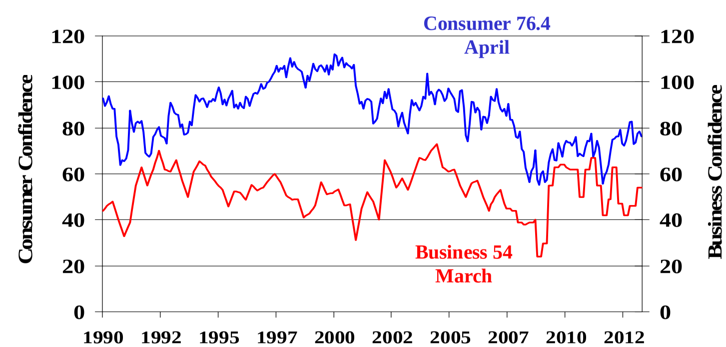
Percent Job Losses in Post WWII Recessions



Source: Federal Reserve Bank of St. Louis

8

CEO & Consumer Confidence



Sources: University of Michigan, Survey Research Center and The Conference Board

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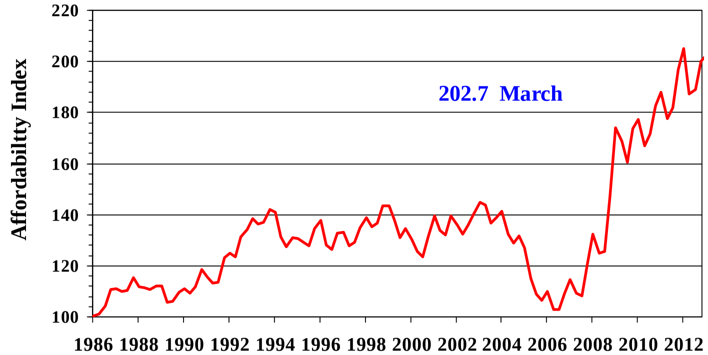
9

Housing Affordability Composite Index

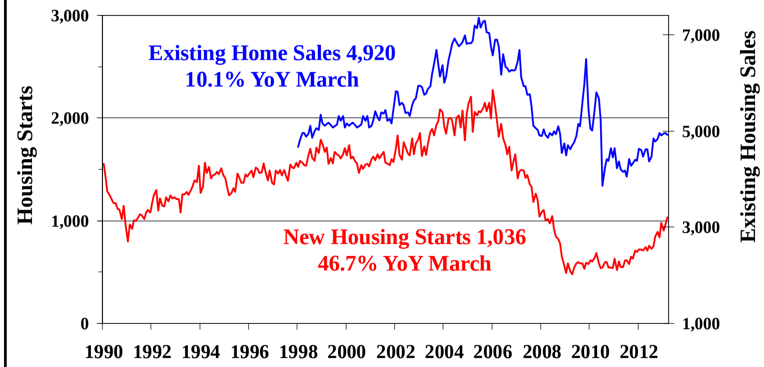


Source: National Association of Realtors

IAC 3-7-13

10

Existing Home Sales and Housing Starts



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

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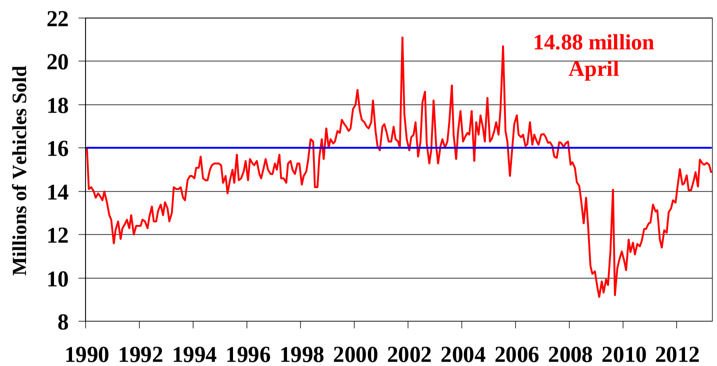
11

U.S. Light Vehicle Sales



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

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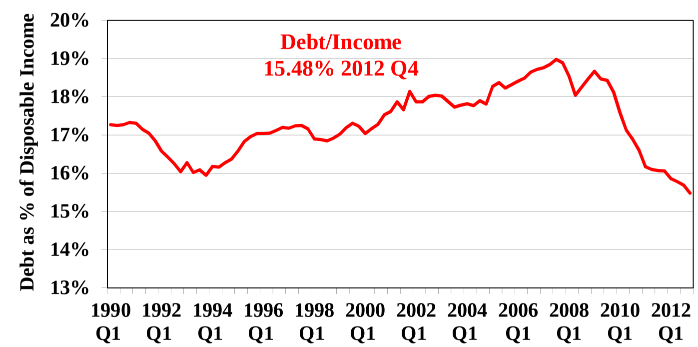
12

Financial Obligations as Percent of Disposable Income



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

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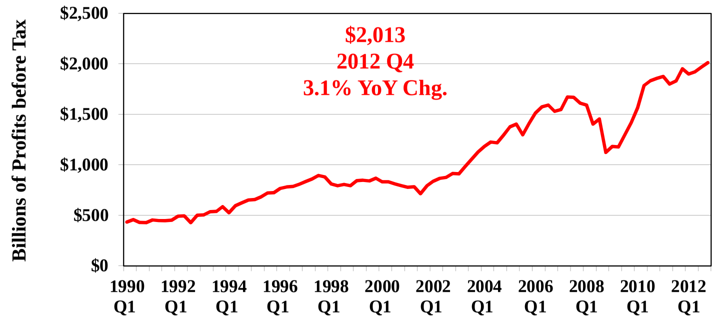
Corporate Profits



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

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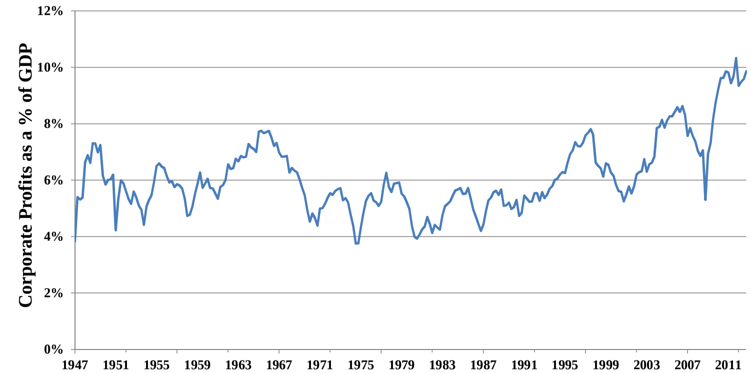
U.S. Corporate Profits as a Percent of GDP



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

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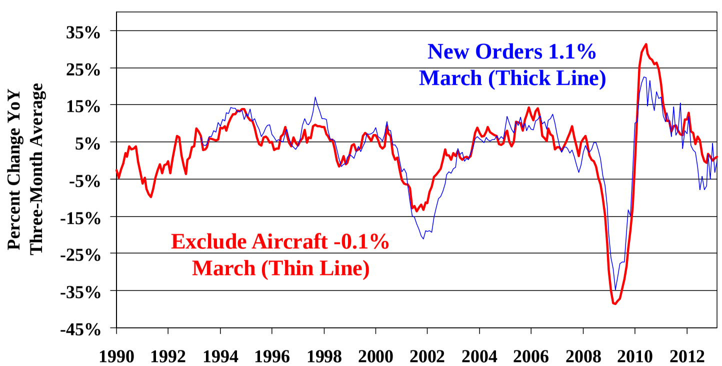
Capital Spending

New Orders for Durable Goods (Excluding Aircraft and Defense)



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

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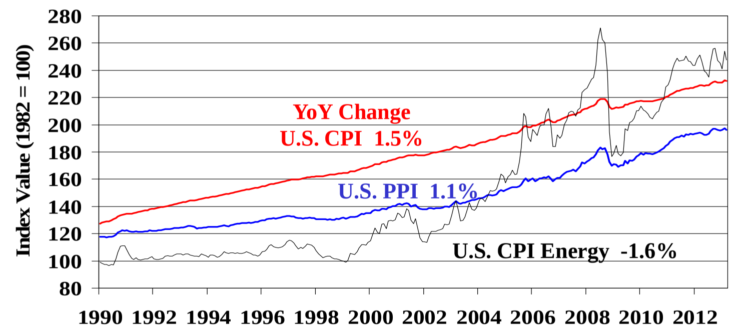
Consumer and Producer Prices



Note: Rates are year over year for latest month, seasonally adjusted.

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

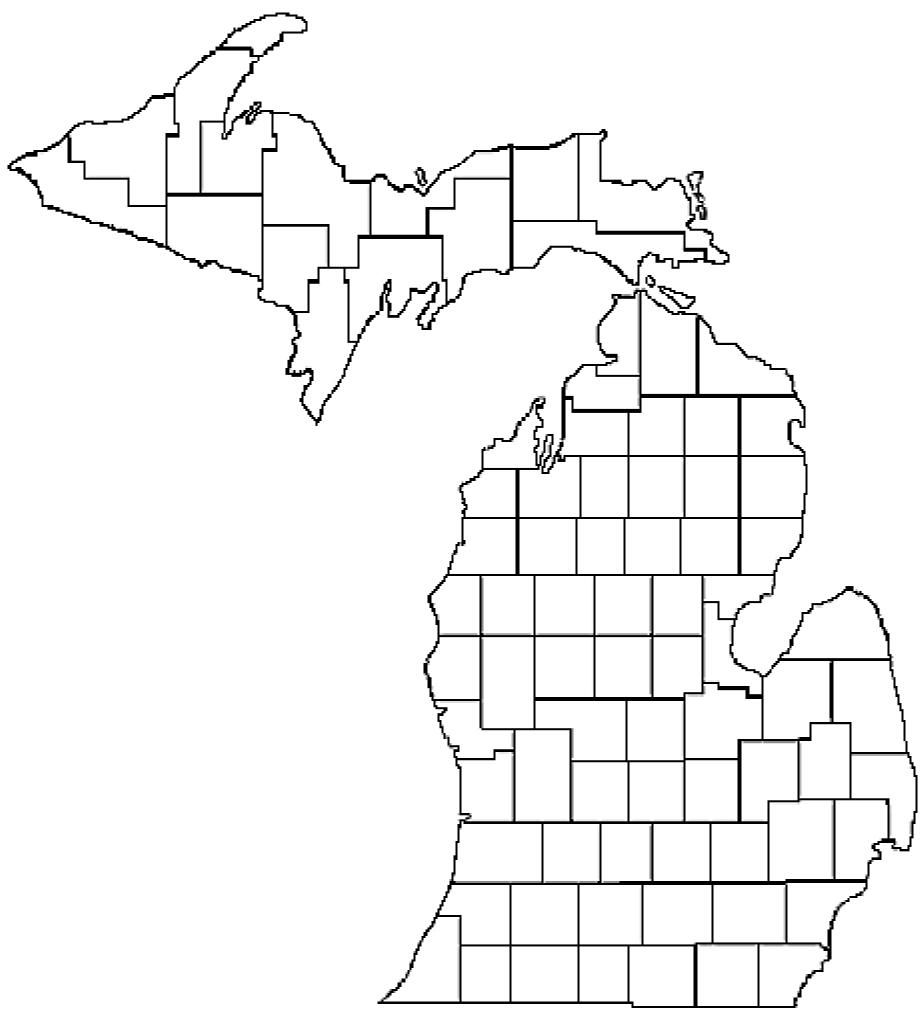
IAC 6-18-13

STATE OF MICHIGAN
RETIREMENT SYSTEMS

FIXED INCOME REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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	5.0%	6.4%	6.6%	6.8%	5.7%
Barclays Gov't/Credit	3.8%	5.5%	5.5%	5.9%	5.0%
Peer Median Return	6.5%	7.8%	6.6%	6.6%	6.0%
Rank vs. Peers	77	82	55	41	64

- Long-Term Fixed Income returns exceeded Barclays Government/Credit Index by holding government agencies and excluding Treasuries.

- Long-Term Fixed Income rank is influenced by holding fewer Treasuries and shorter duration.

Strategy Update

- Allocation remained relatively stable for the last twelve months with only $54 million transferred to other funds.

- Long-Term Fixed Income is looking to increase the overall rate of return by adding below investment grade investments even though some degree of risk is added.

- Assets will be redeployed from internal strategy to external managers.

Market Environment and Outlook

- Treasury rates are the lowest in sixty years, and are close to a floor but an increase in Treasuries may be lethargic.

- Ninety-day T-bills yield a negative 1.5% rate of return with 10-year Treasuries yielding only a slight real return.

- With 30-year Treasuries trading within a range between 2.8% and 3.3% there is little reason to focus on long bonds. Accordingly, our duration remains short to intermediate term and below Treasury quality.

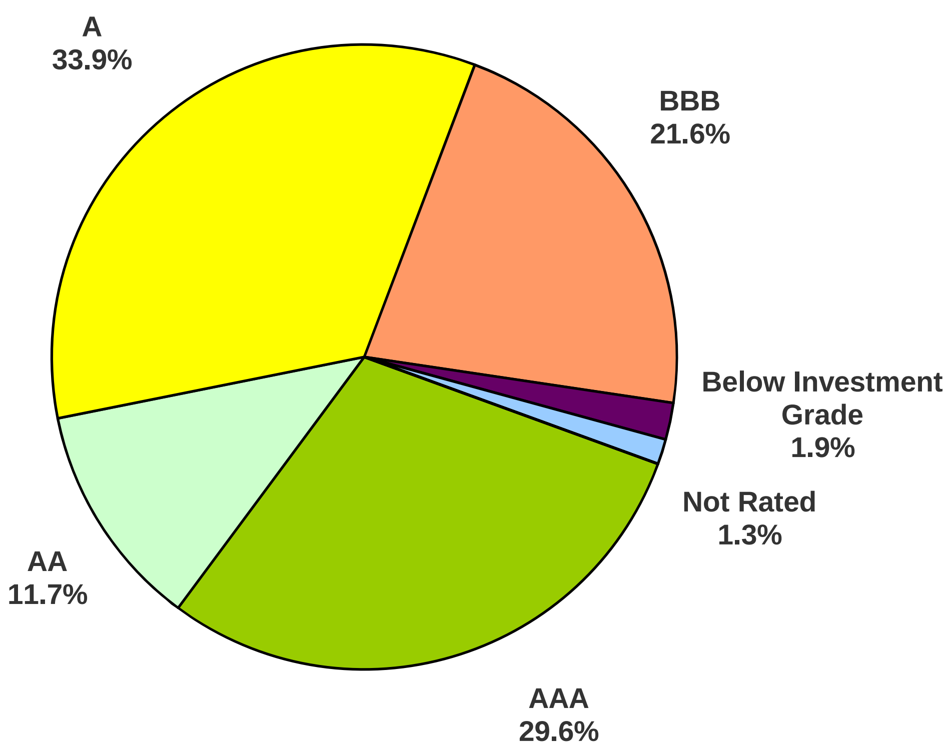
Conclusion

- Given the current level and shape of the yield curve, it seems appropriate to focus on short to intermediate duration issues. In an attempt to increase return, it appears appropriate to employ external professionals to manage below investment grade portfolios given their existing experience.

SMRS
LONG-TERM FIXED INCOME
3/31/13

	Amount	% of Total
Core		
Ambassador Capital Management	$55,320	0.8%
Dodge & Cox	231,505	3.4%
LTFID Internal	5,138,313	75.5%
Metropolitan West	275,190	4.0%
Pyramis	253,212	3.7%
Sub Total	**$5,953,540**	87.5%
Credit		
Alliance Bernstein	$200,849	3.0%
Prudential	434,560	6.4%
Sub Total	**$635,409**	9.3%
Securitized Debt		
Principal Global	**$217,119**	3.2%
Sub Total	**$217,119**	3.2%
TOTAL	**$6,806,068**	100.0%

SMRS
Fixed Income By Rating
Total U.S. Long-Term Fixed Income
3/31/13



Market Value in Millions

	3/31/13			12/31/12	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
AAA	$2,017	29.6%	45.3%	$2,161	31.9%
AA	795	11.7%	4.6%	778	11.5%
A	2,305	33.9%	11.7%	2,237	33.0%
BBB	1,468	21.6%	8.9%	1,426	21.1%
Not Rated	92	1.3%	0.0%	43	0.6%
Below Investment Grade	129	1.9%	29.5%	126	1.9%
Total Investments	**$6,806**	**100.0%**	**100.0%**	**$6,771**	**100.0%**

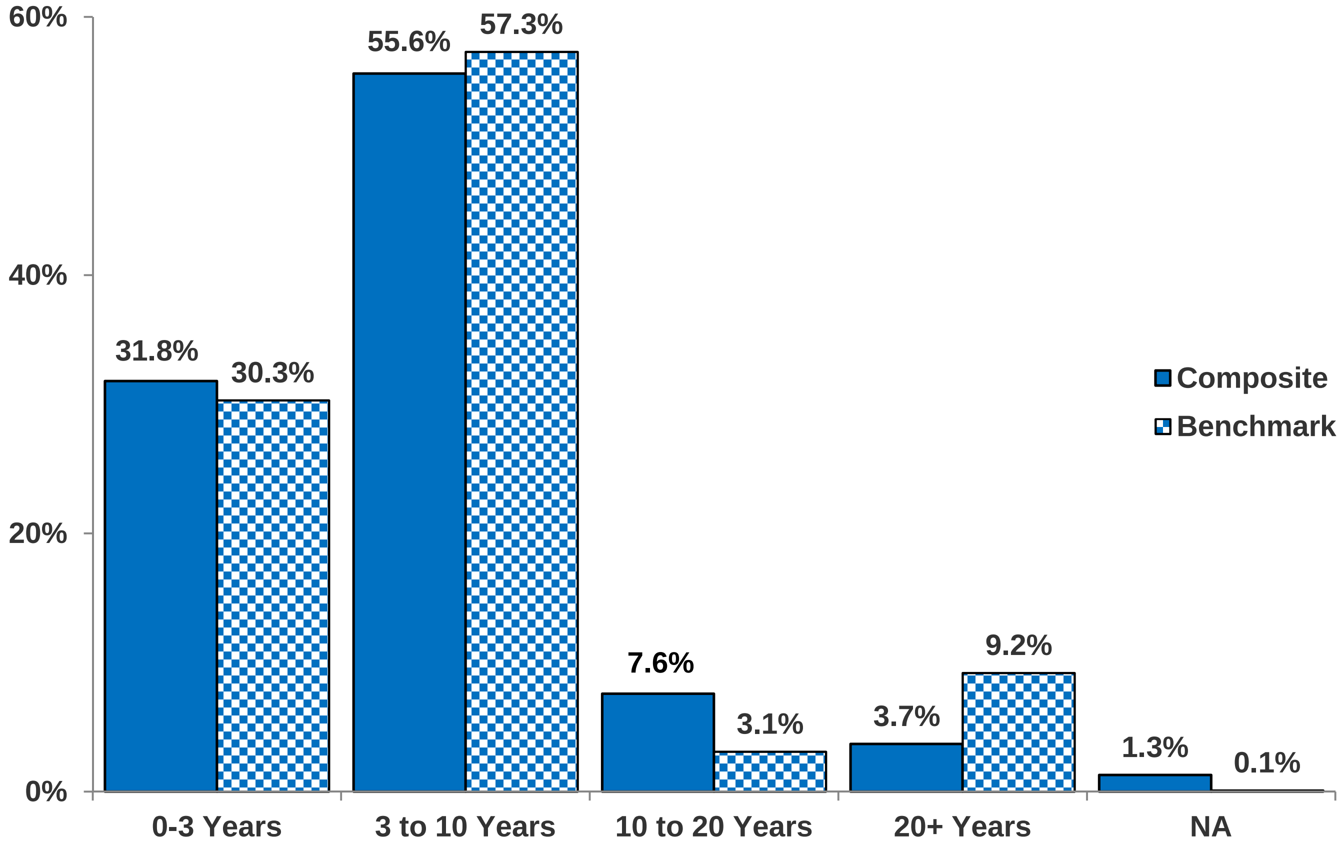
Michigan Department of Treasury, Bureau of Investments

SMRS

Average Life Distribution

Fixed Income Composite Versus Benchmark

3/31/13

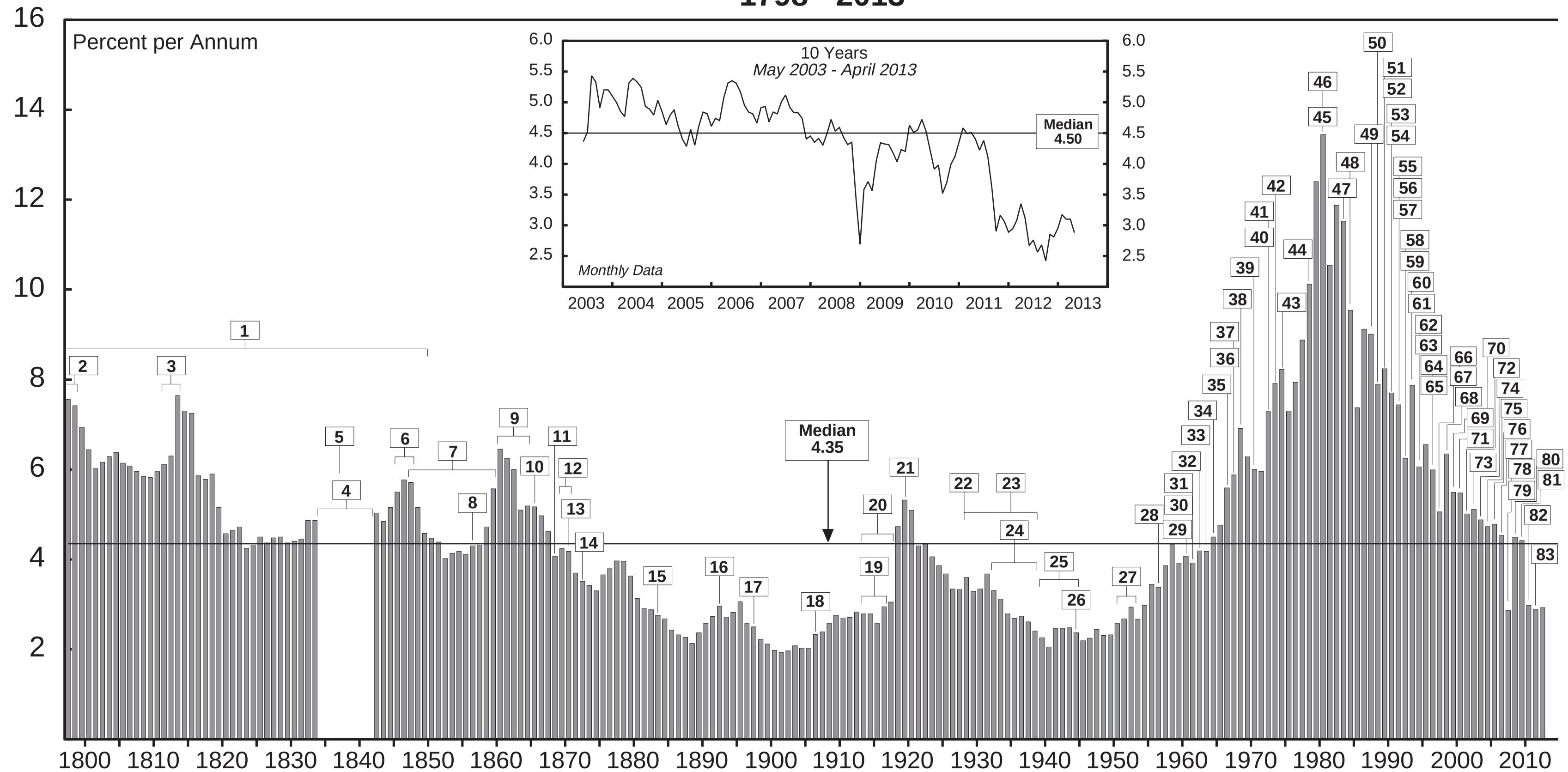


Source: Factset

Market Value in Millions

	Assets	Percent	Benchmark Weight
0-3 Years	$2,166	31.8%	30.3%
3 to 10 Years	3,786	55.6%	57.3%
10 to 20 Years	515	7.6%	3.1%
20+ Years	249	3.7%	9.2%
NA	91	1.3%	0.1%
Total	**$6,807**	**100.0%**	**100.0%**

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

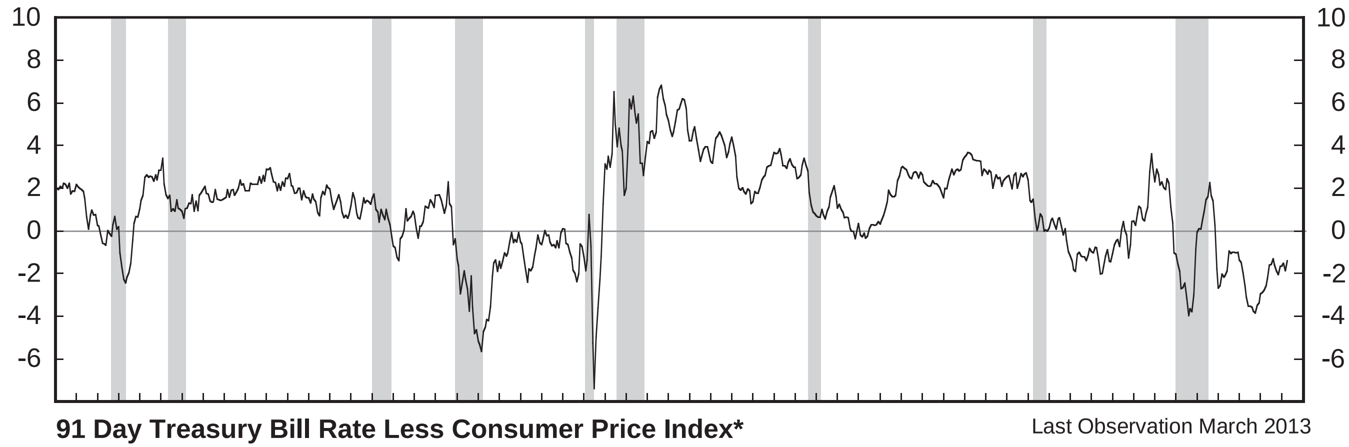


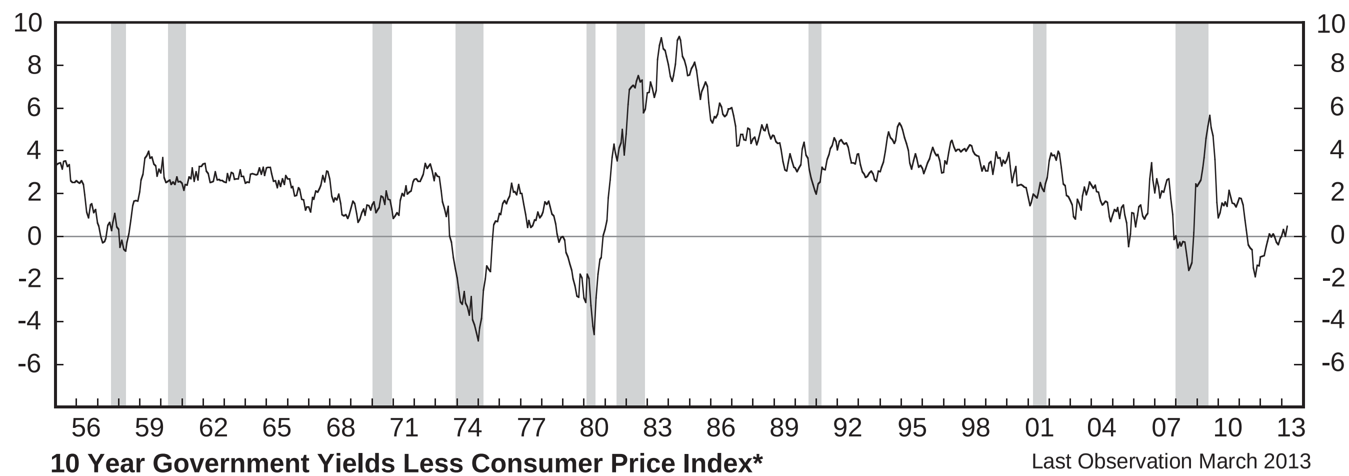
		Begin	End
1	The Industrial Revolution	1700's	Mid 1800's
2	The French Revolution	1789	1799
3	The War of 1812	1812	1814
4	Period Without Federal Debt	1835	1842
5	Depression	1837	
6	The Mexican War	1846	1848
7	The California Gold Rush	1848	1860
8	Financial Panic	1857	
9	The Civil War	1861	1865
10	The Prussian-Austrian 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	
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 April 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

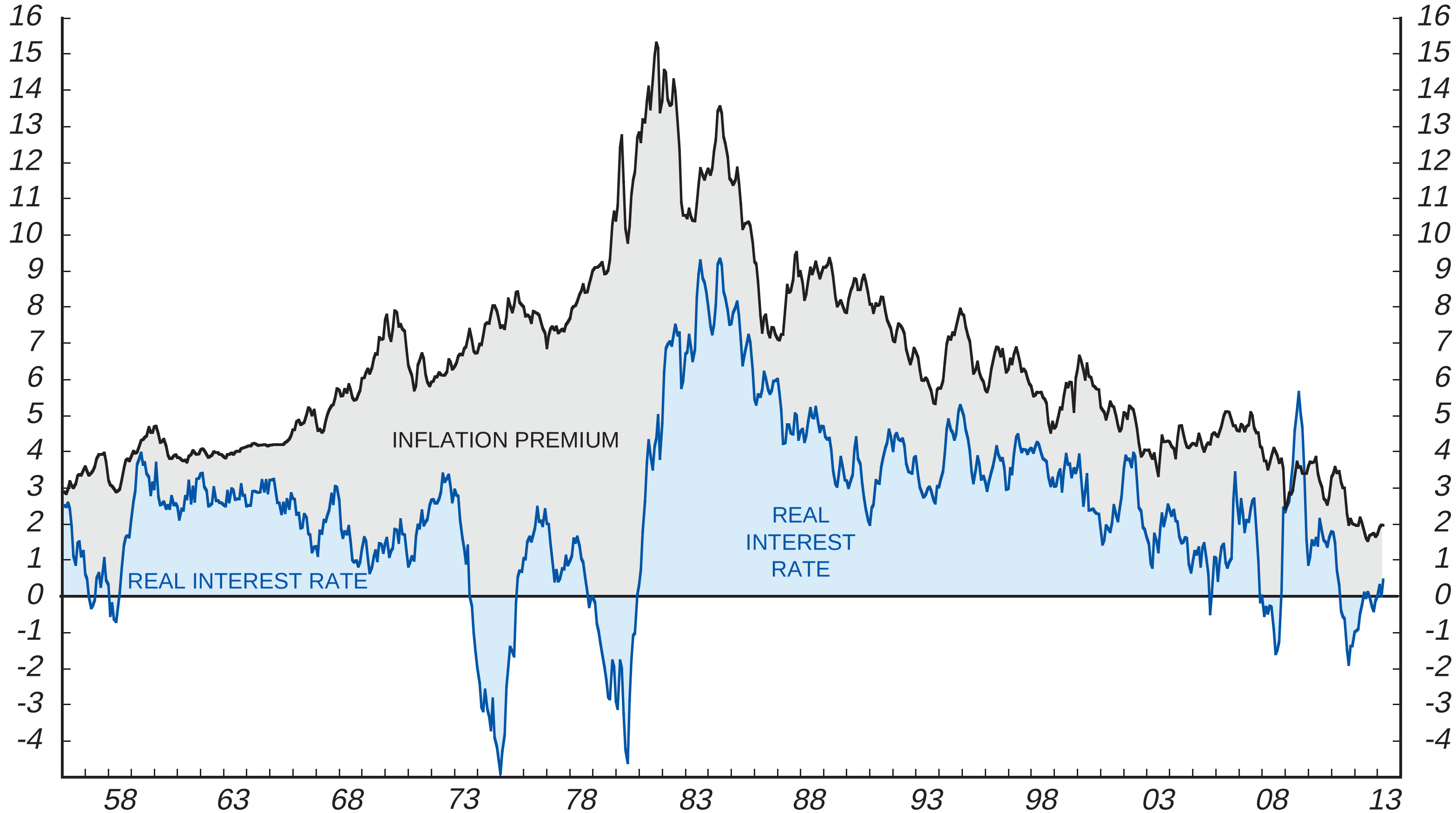




*CPI data for March is preliminary.
Consumer Price Index = CPI Annual Growth Rate
Shaded areas represent recessionary periods.

Sources: Federal Reserve Board; Bureau of Labor Statistics •

Bond Inflation Premium



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

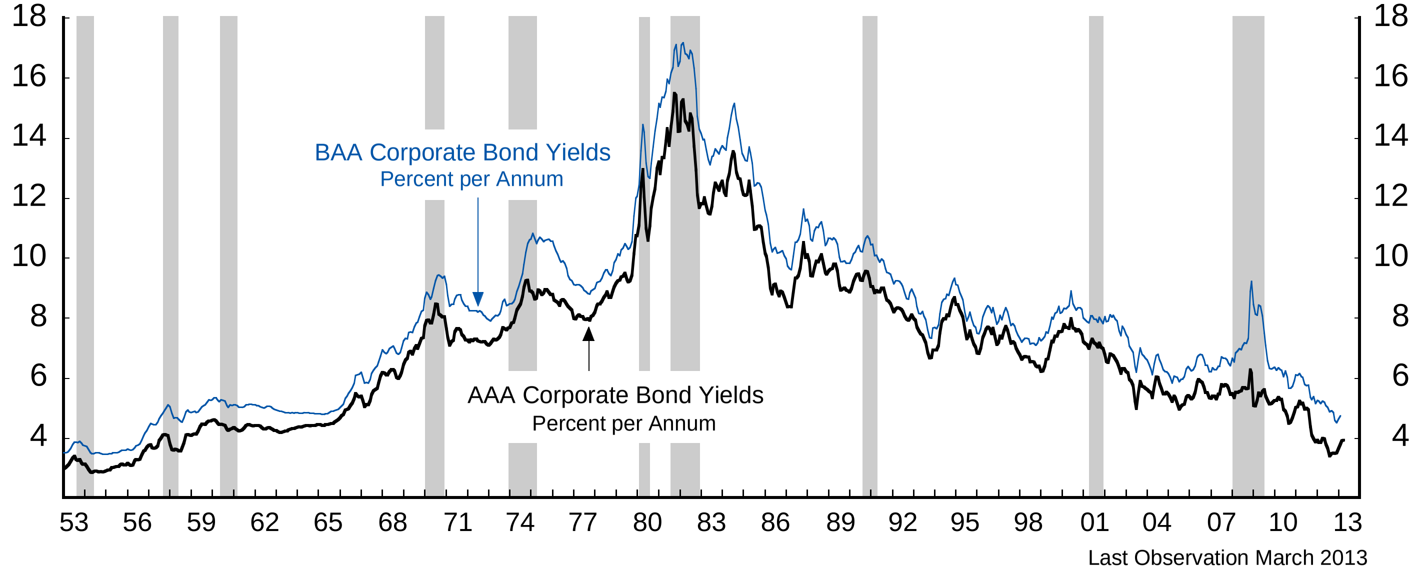
Real Interest Rates 10 Year Government Yields - C.P.I. (Annual Growth Rate) ——— Last Observation March 2013*

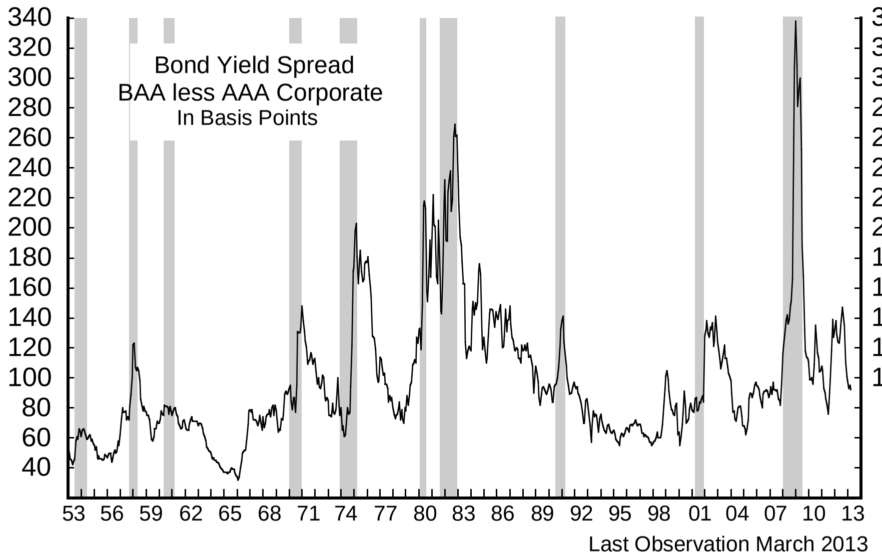
***CPI data for March 2013 is preliminary.**

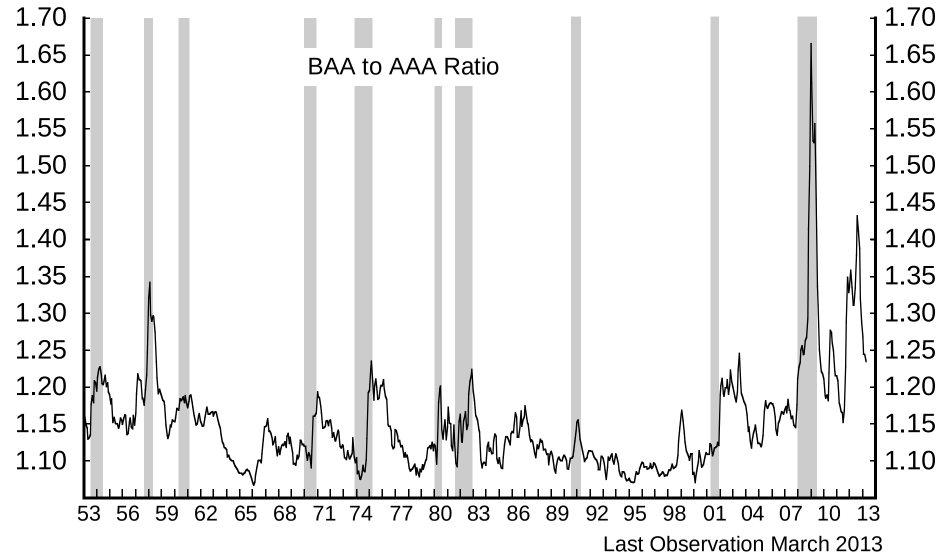
Sources: Federal Reserve Board; Bureau of Labor Statistics •

Bond Risk Premium

BAA Corporates vs AAA Corporates







Shaded areas represent recessionary periods. Sources: Moody's Investors Service •

SMRS

Fixed Income Portfolio

Top Ten Holdings

3/31/13

Name	Market Value	Rating*	% of Total Portfolio
U.S. Government	$210,279,482	Aaa/AA+	3.09%
General Electric Co.	$202,183,363	A1/AA+	2.97%
Toyota Motor Corp.	$122,601,750	A2/A	1.80%
Federal Home Loan Banks	$118,686,487	Aaa/AA+	1.74%
Emerson Electric Co.	$117,615,587	A2/A	1.73%
Royal Dutch Shelll PLC	$114,614,876	Aa1/AA	1.68%
Eaton Corporation PLC	$97,207,977	Baa1/A-	1.43%
Eli Lilly & Co.	$91,043,178	A2/AA-	1.34%
Wal-Mart Stores Inc.	$90,031,194	Aa2/AA	1.32%
Private Export Funding Corp.	$87,118,723	Aaa/AA+	1.28%
TOTAL	$1,251,382,615		18.39%

*Moodys/Standard & Poor's

SMRS

Domestic Fixed Income Internal Holdings

Portfolio Characteristics

Benchmark: Barclays Aggregate

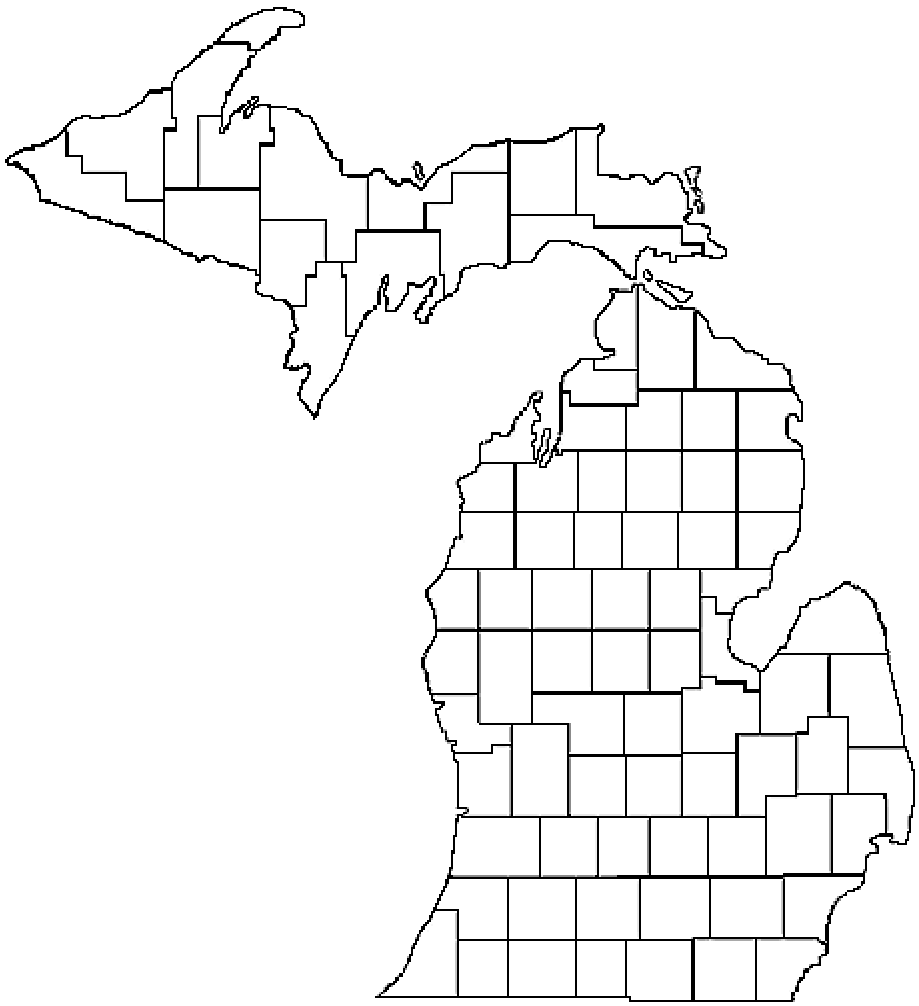
	3/31/13			12/31/12		
Characteristic	***Portfolio***	***Benchmark***	***Relative (%)***	***Portfolio***	***Benchmark***	***Relative (%)***
Maturity (Yrs)	4.5	7.5	60.0	4.6	7.8	59.0
Maturity (Yrs) w/Cash Equiv.	4.3	7.5	57.3	4.3	7.8	55.1
Duration (Yrs)	3.6	5.5	65.5	3.8	5.7	66.7
Duration (Yrs) w/Cash Equiv.	3.5	5.5	63.6	3.5	5.7	61.4
Coupon (%)	4.4	3.4	129.4	4.1	3.4	120.6
Yield to Maturity (%)	1.7	1.6	106.3	2.1	1.5	140.0
Moody's Quality	A-1	AA-3		AAA	AA-2	
S&P Quality	A+	AA-		AA+	AA-	

STATE OF MICHIGAN
RETIREMENT SYSTEMS

DOMESTIC EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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	14.1%	12.0%	6.3%	5.1%	8.7%
S&P 1500	14.4%	13.0%	6.3%	5.2%	8.7%
Peer Return	13.7%	12.0%	5.6%	4.6%	8.7%
Rank vs. Peers	44	51	34	29	50

Total Domestic Equity, Net	1-Year	3 Years	5 Years
Annualized Returns	13.9%	11.8%	6.2%
S&P 1500	14.4%	13.0%	6.3%
Morningstar Cap-Weighted Average	13.3%	11.0%	5.1%

Total Active Equity, Net	1-Year	3 Years	5 Years
Annualized Returns	13.1%	11.1%	6.0%
S&P 1500	14.4%	13.0%	6.3%
Morningstar Cap-Weighted Average	13.3%	11.0%	5.1%

- Total Domestic Equities delivered a 6.3% annualized gross return during the past five years, matching the S&P 1500 and outperforming its peer group. Active Equities underperformed the S&P 1500 net of fees by 30 basis points (bps) during this same time period, but outperformed a cap-weighted blend of Morningstar large-cap, mid-cap and small-cap average peer returns by 90 bps.

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

    - Passive equity outperformed the S&P 900 by roughly 30 bps, as a result of fees earned through securities lending, opportunistic trading, and cost management.

    - The internal large-cap active fund composite underperformed the S&P 500 by 20 bps while outperforming its Morningstar peer group by 60 bps. Performance was driven by strong stock selection in the healthcare sector, offset by consumer discretionary, materials, and cash exposures.

    - The external large-cap manager composite underperformed the S&P 500 by 220 bps since its inception in 2009. Positive results in the consumer discretionary sector were offset by stock selection in the industrials, information technology, and materials sectors. On a three-year basis the portfolio trailed the S&P 500 by 60 bps, but outperformed its Morningstar peer group by 125 bps.

    - The external mid-cap manager portfolio underperformed the S&P 400 by 255 bps, while outperforming its Morningstar peer group by 50 bps.

- The external small-cap value composite underperformed the S&P 600 by 50 bps while outperforming its Morningstar peer group by 105 bps.

- During the past year Active Equities underperformed the S&P 1500 by 130 bps, as well as its Morningstar Cap-Weighted peer group average by 20 bps.

  - Performance was negatively impacted by SMRS' internal value and growth strategies, as well as its external mid-cap, small-cap and, to a lesser degree, large-cap portfolios.

  - Results were partly offset by portfolios with significant leverage to the financial sector, such as Seizert Capital Partners, LSV Large-Cap Value, and SMRS Internal Large-Cap Core.

  - Internal strategies leverage to bond-substitute holdings, such as SMRS' Internal All-Cap GARP and SMRS' Internal Absolute Return Income Fund also continued to perform well.

Strategy Update

- Domestic equity outflows totaled $105 million and $760 million during the past quarter and fiscal year to date respectively.

- Post the quarter SMRS reduced its investment in its internal large-cap value strategy, reallocating the funds to LSV Large-Cap Value. The decision was made based on a fundamental assessment of expected future returns, based on existing manager holdings and positioning.

- Post the quarter, two new internal concentrated fund strategies were seeded with small amounts of capital, giving two of SMRS' talented, younger analysts a chance to broaden their skill set by managing a portfolio. As these analysts gain experience and/or position their portfolios attractively, more capital may be allocated to their funds over time.

- SMRS has been renegotiating fee agreements wherever possible, typically in conjunction with additional capital allocations. Six agreements have been modified within the past two years, resulting in a lower average portfolio cost and, hopefully, improved returns going forward.

- 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 the best ideas of the manager without being exposed to undue concentration risk at the broader pension fund level.

- On a total domestic equity basis large-caps make up nearly 90% of portfolio exposure, with mid-caps totaling 10% of the portfolio. Active equity also remains tilted towards large-caps, with 89% of funds under management large-cap versus 11% mid-cap. SMRS has ~$400 million invested with small-cap managers, but has hedged away the resulting small-cap risk exposure in exchange for large-cap exposure.

- Domestic equity remains overweight 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, as well as significant earnings leverage to a higher interest rate environment.

- The internal active equity portfolio is trading at 12.5X normalized earnings versus the S&P 500 at 15.8X normalized earnings, with similar exposure to systemic risk, modestly more attractive growth prospects and better capital return characteristics. If the internal portfolio's normalized PE trades in line with the S&P 500 over time, this would imply cumulative outperformance of roughly 25% versus the benchmark.

Market Environment and Outlook

- Despite significant risks to the economic environment, equity markets continue to look reasonably priced. Assuming a 4.1% normalized dividend yield and 5.0% long-term expected earnings growth, the S&P 500 is poised to return approximately 9.1% over the long-term. This compares to 30-year U.S. Treasuries at 3.3% and a historical average return of 9.2%.

- Within equities, large-cap stocks continue to look attractive relative to small-caps, particularly on a risk adjusted basis. The trailing twelve-month PE for the S&P 500 is ~16X versus the S&P 600 at ~21X, while the trailing twelve-month dividend yield for S&P 500 (including buybacks) is 3.6% versus the S&P 600 at 1.3%. Over the long term we believe that small-caps will return roughly 8.1% based on a ~1.6% dividend yield and 6.5% long-term earnings growth. This makes the asset class both a lower return and a higher risk proposition than large-caps.

- Certain defensive sectors such as healthcare and consumer staples remain valuable in today's low bond yield environment, offering healthy dividend yields and market-like growth potential. These sectors have a similar risk profile as high-yield bonds, but higher expected returns. At the same time they have nearly the same long-term expected return as the S&P 500, with less downside risk in the event of a significant market correction.

- During the past five years small and mid-cap growth strategies have outperformed large-cap value by nearly 40% on a cumulative basis (~5-6%% annualized). This has opened up the valuation gap in which SMRS active equity has positioned itself, with its large-cap overweight and modest value-stock tilt.

Five-Year Performance by Style and Market Cap	**Value**	**Core**	**Growth**
S&P 500 Large-Cap	4.1%	5.8%	7.5%
S&P 400 Mid-Cap	9.2%	9.9%	10.6%
S&P 600 Small-Cap	8.5%	9.2%	9.9%

Philosophy

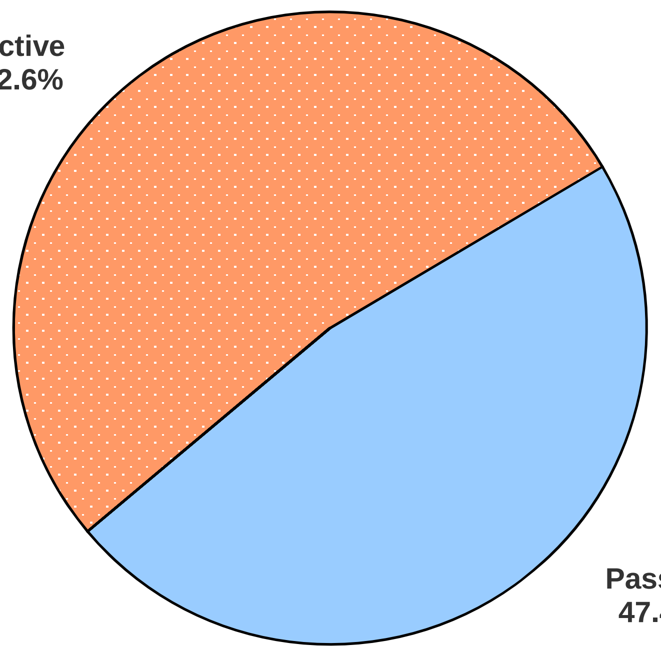
- We emphasize long-term investing, because it's significantly less speculative than trying to predict short-term market moves. As with bonds, calculating the yield on current and expected cash flows is a good predictor of long-term returns. In particular, earnings/price and EBITDA/EV ratios have been demonstrated to be effective, which is why the composite portfolio tends to have a value tilt.

- Market participants tend to make investment decisions based on "what's working" or what they expect to perform well over the next six months. This creates inefficiencies across the market cap spectrum for investors that are willing to have a longer time horizon, as companies that are perceived as having muted near-term prospects are often undervalued as a result.

- Considerations for hiring and firing managers are based primarily on organizational structure and incentives, qualitative analysis of manager thought processes, bottom up analysis of holdings and fees. We do not typically use historical three and five-year performance to make hiring, firing, or allocation decisions. According to research by RV Kuhns, such performance is not only ineffective in predicting future performance, but it may even be inversely correlated to future performance. 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
3/31/13

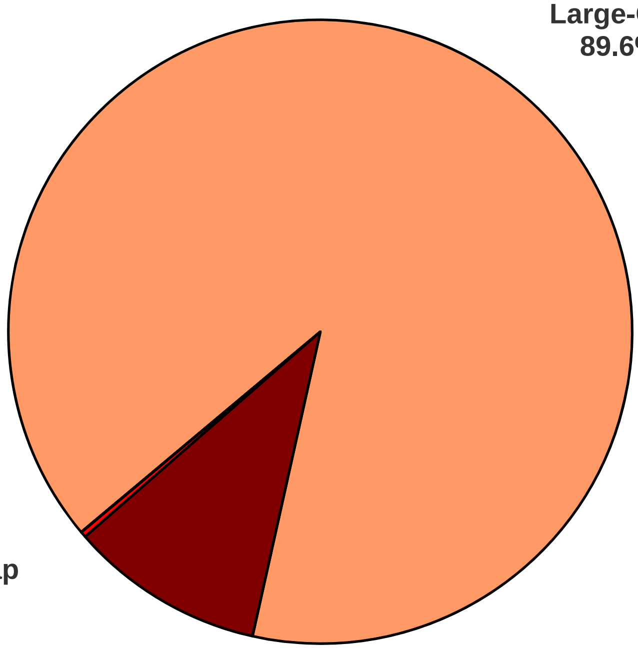


Market Value in Millions

	3/31/13		12/31/12	
	Assets	Percent	Assets	Percent
Active	$7,743	52.6%	$7,021	52.4%
Passive	6,979	47.4%	6,387	47.6%
Total Domestic Equity	**$14,722**	**100.0%**	**$13,408**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Domestic Equity Exposure By Market Cap
3/31/13

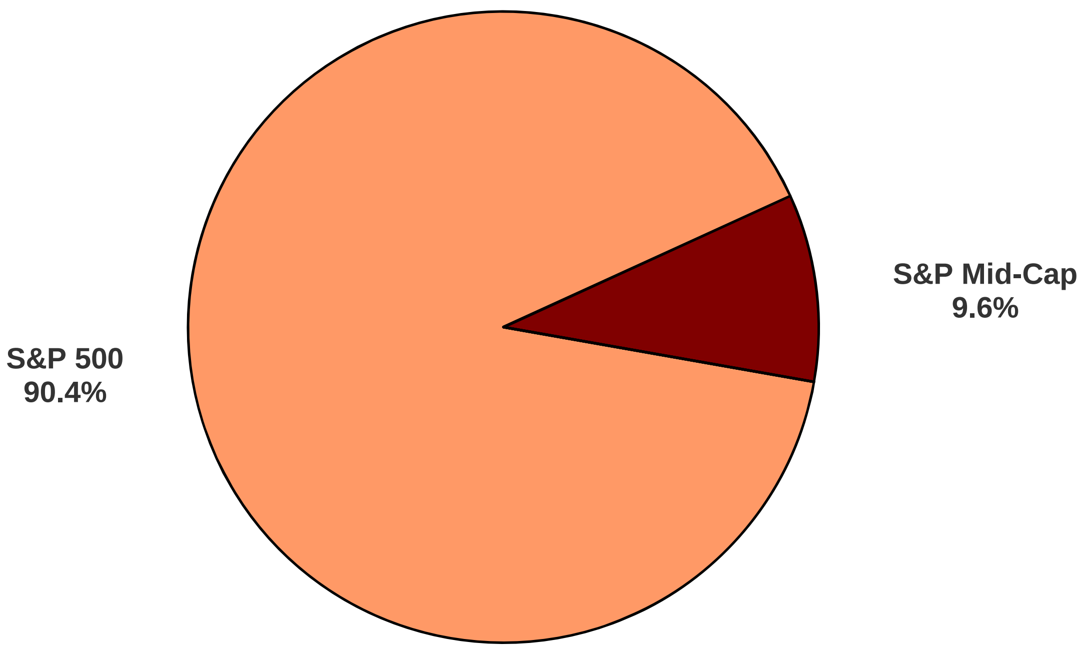


Market Value in Millions

	3/31/13		
	Assets	**Percent**	**S&P 1500**
Large-Cap (>$7B)	$13,191	89.6%	86.4%
Mid-Cap (>$2 <$7B)	1,487	10.1%	10.0%
Small-Cap (<$2B)	44	0.3%	3.6%
Total Domestic Equity	**$14,722**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Domestic Passive Equity Investments
3/31/13



Market Value in Millions

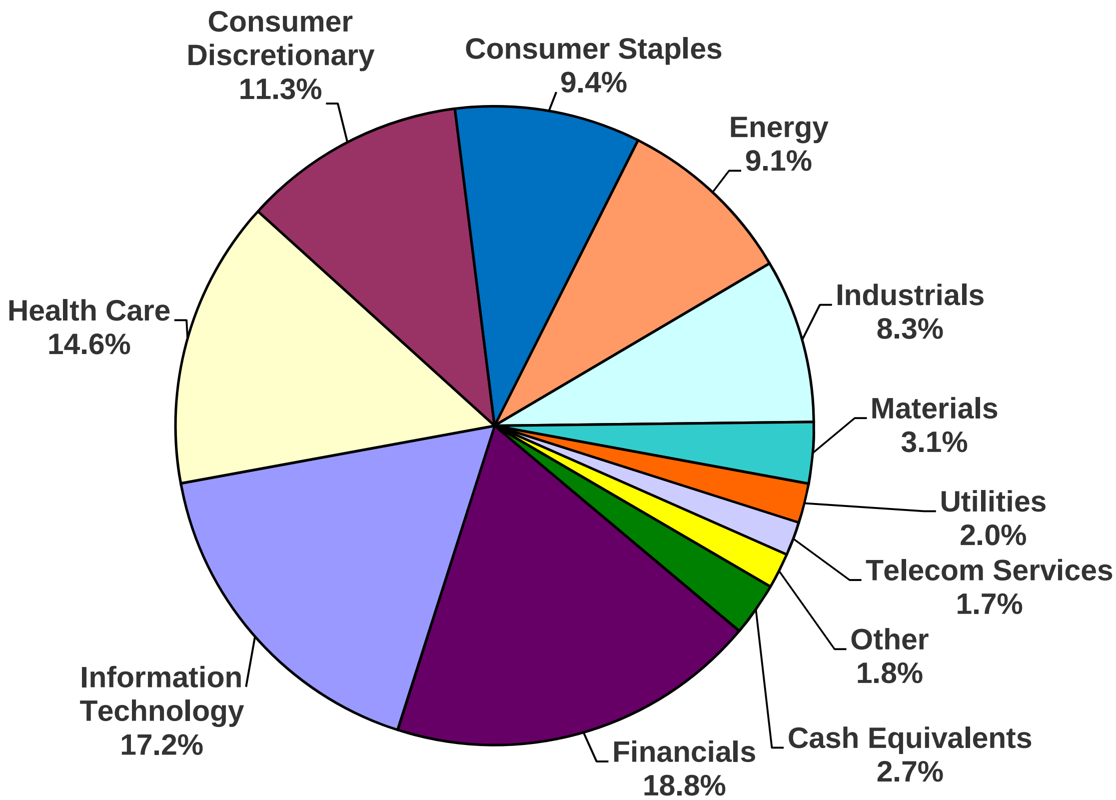
	3/31/13		
	Assets	**Percent**	**Benchmark**
S&P 500	$6,308	90.4%	91.3%
S&P Mid-Cap	671	9.6%	8.7%
Total	**$6,979**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

All Domestic Equity Holdings By Category

3/31/13



Market Value in Millions

	3/31/12			12/31/12	
	Assets	Percent	Benchmark	Assets	Percent
Financials	$2,777	18.8%	16.7%	$2,383	17.8%
Information Technology	2,527	17.2%	17.8%	2,543	19.0%
Health Care	2,152	14.6%	12.2%	1,712	12.8%
Consumer Discretionary	1,659	11.3%	11.8%	1,471	11.0%
Consumer Staples	1,382	9.4%	10.1%	1,311	9.8%
Energy	1,337	9.1%	10.3%	1,169	8.7%
Industrials	1,224	8.3%	10.9%	1,200	9.0%
Materials	455	3.1%	3.8%	449	3.3%
Utilities	299	2.0%	3.7%	272	2.0%
Telecom Services	250	1.7%	2.7%	243	1.8%
Other	261	1.8%	0.0%	167	1.2%
Total Investments	$14,323	97.3%	100.0%	$12,920	96.4%
Cash Equivalents	399	2.7%	0.0%	488	3.6%
Total	**$14,722**	**100.0%**	**100.0%**	**$13,408**	**100.0%**

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

SMRS

All Domestic Equities Composite

3/31/13

Date:	**3/31/13**	**12/31/12**	**9/30/12**	**6/30/12**
Assets ($million):	$14,722	$13,408	$13,959	$13,849
Number of Securities:	1,393	1,394	1,534	1,617

Benchmark: S&P 1500

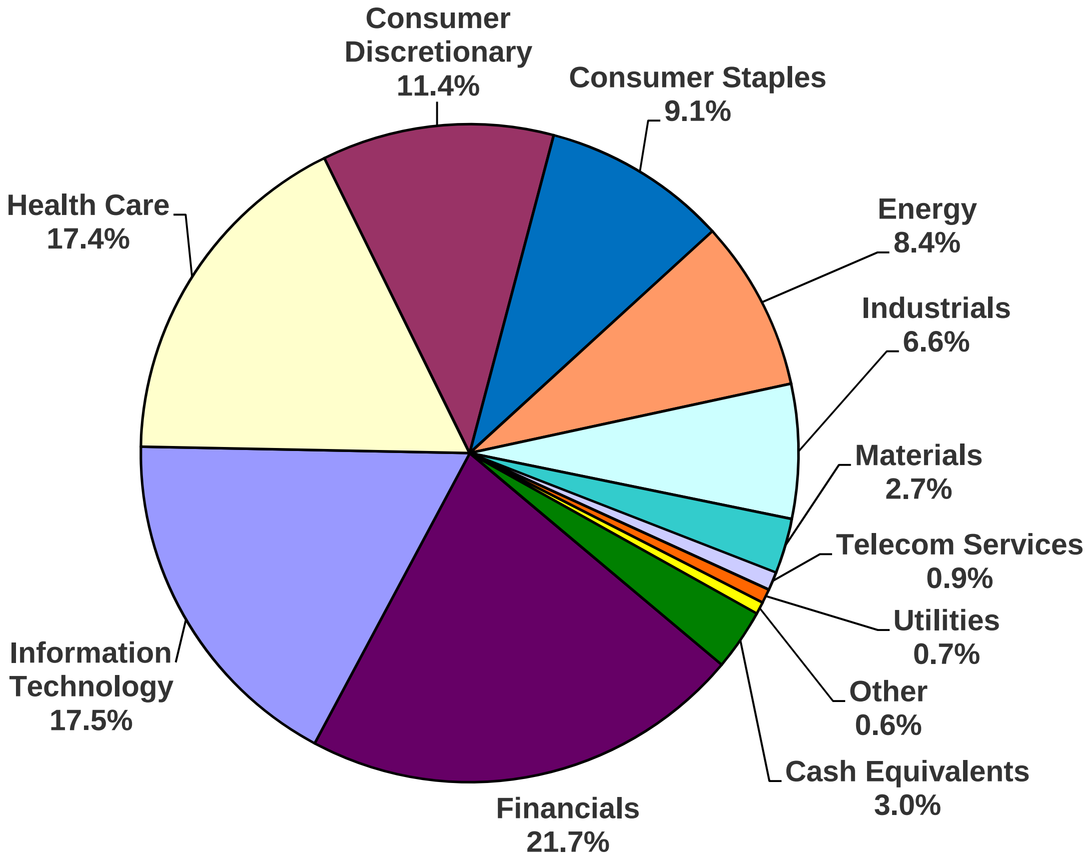
Description: The Domestic Equities Composite combines both the SMRS' All Actively Managed Composite and its index funds.

Characteristics:	**SMRS**	**S&P 1500**
Weighted Average Capitalization ($billion):	$94.5	$93.7
Trailing 12-month P/E:	16.0x	16.6x
Forecast P/E:	13.9x	14.5x
Price/Book:	2.1x	2.2x
Beta:	0.99	1.01
Dividend Yield:	1.9%	2.1%
3-5 Year EPS Growth Estimate:	11.1%	10.6%
Return on Equity:	17.7%	17.6%

TOP TEN HOLDINGS - All Domestic Equities
3/31/13

	Portfolio Weight	Total Shares	Price	YTD13 Total Return	Market Value
Apple Inc.	3.26%	1,085,049	$442.66	-16.35%	$480,307,790
Johnson & Johnson	2.61%	4,706,105	$81.53	17.24%	383,688,741
SPDR S&P 500 ETF	2.24%	2,108,401	$156.67	10.50%	330,323,185
Google Inc. Cl A	1.79%	332,234	$794.19	12.27%	263,856,256
Bank of America Corp.	1.46%	17,667,621	$12.18	5.00%	215,191,624
Exxon Mobil Corp.	1.46%	2,380,367	$90.11	4.79%	214,494,870
Merck & Co. Inc.	1.29%	4,284,361	$44.20	9.00%	189,368,756
Microsoft Corp.	1.25%	6,454,954	$28.61	7.97%	184,643,959
Chevron Corp.	1.20%	1,492,477	$118.82	10.73%	177,336,117
Wells Fargo & Co.	1.10%	4,372,385	$36.99	8.99%	161,734,521
TOTAL	17.67%				$2,600,945,819

SMRS
All Active Domestic Equity Holdings By Category
3/31/13



Market Value in Millions

	3/31/13			12/31/12	
	Assets	Percent	Benchmark	Assets	Percent
Financials	$1,678	21.7%	16.7%	$1,399	19.9%
Information Technology	1,356	17.5%	17.8%	1,409	20.1%
Health Care	1,344	17.4%	12.2%	999	14.2%
Consumer Discretionary	887	11.4%	11.8%	763	10.9%
Consumer Staples	706	9.1%	10.1%	706	10.1%
Energy	648	8.4%	10.3%	530	7.5%
Industrials	509	6.6%	10.9%	543	7.7%
Materials	207	2.7%	3.8%	208	3.0%
Telecom Services	70	0.9%	2.7%	72	1.0%
Utilities	56	0.7%	3.7%	54	0.8%
Other	47	0.6%	0.0%	19	0.3%
Total Investments	$7,508	97.0%	100.0%	$6,702	95.5%
Cash Equivalents	235	3.0%	0.0%	319	4.5%
Total	**$7,743**	**100.0%**	**100.0%**	**$7,021**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

Benchmark: S&P 1500

SMRS
All Actively Managed Composite
3/31/13

Date:	3/31/13	12/31/12	9/30/12	6/30/12
Assets ($million):	$7,743	$7,021	$7,562	$7,384
Number of Securities:	1,154	1,143	1,422	1,484

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):	$91.7	$93.7
Trailing 12-month P/E:	15.6x	16.6x
Forecast P/E:	13.5x	14.5x
Price/Book:	1.9x	2.2x
Beta:	0.98	1.01
Dividend Yield:	1.8%	2.1%
3-5 Year EPS Growth Estimate:	11.6%	10.6%
Return on Equity:	17.7%	17.6%

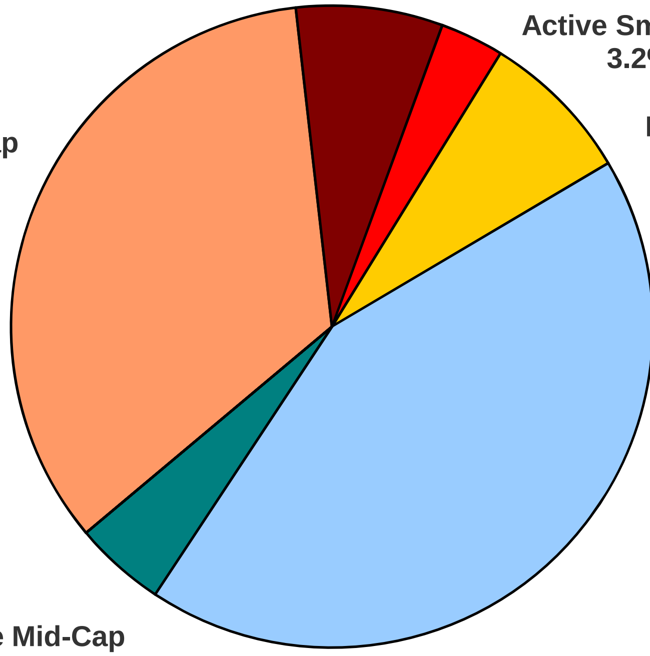
TOP TEN HOLDINGS - All Actively Managed
3/31/13

	Portfolio Weight	Total Shares	3/31/13 Price	YTD13 Total Return	Market Value
Apple Inc.	3.91%	684,616	$442.66	-16.43%	$303,052,119
Johnson & Johnson	3.70%	3,514,045	$81.53	17.24%	286,500,089
Google Inc. Cl A	2.24%	218,316	$794.19	12.27%	173,383,947
Bank of America Corp.	2.05%	13,053,226	$12.18	5.00%	158,988,293
Charles Schwab Corp.	1.83%	7,998,202	$17.69	23.63%	141,488,193
Merck & Co. Inc.	1.71%	2,995,408	$44.20	9.00%	132,397,034
Teva Pharmaceutical Ind. Ltd. ADS	1.58%	3,087,946	$39.68	7.01%	122,529,697
Kellogg Co.	1.40%	1,686,081	$64.43	16.20%	108,634,199
General Mills Inc.	1.33%	2,087,791	$49.31	22.97%	102,948,974
PepsiCo Inc.	1.33%	1,298,508	$79.11	16.43%	102,724,968
TOTAL	21.08%				$1,632,647,513

SMRS
DOMESTIC EQUITIES
3/31/13

	Amount	% of Total
Passive		
S&P 500	$6,307,641	
S&P 400	670,848	
Sub Total	**$6,978,489**	47.4%
Internal Active		
Large-Cap Core	1,717,696	
Large-Cap Growth	1,132,787	
Large-Cap Value	764,983	
Absolute Return Income Fund	373,417	
All-Cap GARP	313,981	
Tactical Asset Allocation	94,365	
Sub Total	**$4,397,229**	29.9%
External Active		
Artisan All-Cap Value	$620,542	
Epoch Large-Cap Value	385,345	
Donald Smith Small-Cap Value	348,553	
Fisher All-Cap Value	338,564	
LSV Large-Cap Value	255,409	
Cramer Rosenthal McGlynn Mid-Cap Value	235,379	
JP Morgan Large-Cap Growth	201,190	
Attucks Asset Management	183,348	
Bivium	165,534	
Seizert Capital Partners All-Cap Core	133,937	
Edgewood Large-Cap Growth	121,869	
Champlain Mid-Cap Core	90,918	
Los Angeles Capital Mid-Cap Plus Core	81,971	
Northpointe Small-Cap Value	64,213	
Champlain Mid-Cap Core	63,435	
Munder Mid-Cap Core	56,418	
Sub Total	**$3,346,625**	22.7%
TOTAL	**$14,722,343**	100.0%

SMRS
Domestic Equity Holdings By Category
3/31/13



Market Value in Millions

	3/31/13		12/31/12	
Active				
Large-Cap	$5,047	34.3%	$4,631	34.6%
Mid-Cap	1,085	7.4%	968	7.2%
Small-Cap	476	3.2%	748	5.6%
Multi-Cap	1,135	7.7%	674	5.0%
Total Active Equity	$7,743	52.6%	$7,021	52.4%
Passive				
Large-Cap	$6,308	42.8%	$5,792	43.2%
Mid-Cap	671	4.6%	595	4.4%
Total Passive Equity	$6,979	47.4%	$6,387	47.6%
Total Domestic Equity	**$14,722**	**100.0%**	**$13,408**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

Internal Active Portfolio, Equity Return Expectations
3/31/13

Return Assumption Estimates

	Yield to Maturity ****	Normal Dividend Yield ***	LT Growth Rate ***
SAD Internal Active Equity	***10.4%***	***5.4%***	***5.0%***
S&P 500 Large-Cap	9.2%	4.2%	***5.0%***
S&P 400 Mid-Cap	8.5%	3.0%	***5.5%***
S&P 600 Small-Cap	8.2%	1.7%	***6.5%***
US 30 Year Treasury	3.3%	3.3%	0.0%

Trailing 12 Month and Normalized Earnings Characteristics

	TTM Price/Earnings	TTM Dividend Yield **	Normal Price/Earnings
SAD Internal Active Equity	***14.0***	***4.2%***	***12.5***
S&P 500 Large-Cap	15.5	3.6%	15.8
S&P 400 Mid-Cap	19.3	2.2%	18.2
S&P 600 Small-Cap	21.3	1.3%	20.1

Normalized Earnings & Dividend Characteristics

	Normal Earnings Yield *	Normal Payout Ratio	Normal Dividend Yield **
SAD Internal Active Equity	***8.0%***	***67%***	***5.4%***
S&P 500 Large-Cap	6.3%	66%	4.2%
S&P 400 Mid-Cap	5.5%	54%	3.0%
S&P 600 Small-Cap	5.0%	33%	1.7%

Portfolio and Benchmark Risk Estimates

	Yield to Maturity ****	Standard Deviation	Yield/Volatility
SAD Internal Active Equity	**10.4%**	**13.3%**	**0.78**
S&P 500	9.2%	12.9%	0.71
S&P 400	8.5%	15.2%	0.56
S&P 600	8.2%	16.0%	0.51
US 30 Year Treasury	3.3%	13.1%	0.25

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

Large-Cap Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Active Equity Large-Cap Composite	***$4,579,790***	***12.4%***	***10.5%***	***5.4%***	***N/A***	
S&P 500		14.0%	12.7%	5.8%	N/A	
Morningstar Large Blend		13.0%	10.8%	4.8%		
Internal Large-Cap Active	*$3,615,958*	*12.3%*	*10.2%*	*5.6%*	*N/A*	
S&P 500		14.0%	12.7%	5.8%	N/A	
Morningstar Large Blend		13.0%	10.8%	4.8%		
External Large-Cap Active	*$963,816*	*12.9%*	*12.1%*	*N/A*	*18.3%*	*4/1/09*
S&P 500		14.0%	*12.7%*	*N/A*	20.5%	
Morningstar Large Blend		13.0%	10.8%	N/A		
SMRS Large Cap Core Funds						
SMRS Large Cap Core	$1,717,760	*16.6%*	*10.2%*	*6.5%*	*3.7%*	*7/31/07*
S&P 500		14.0%	12.7%	5.8%	3.6%	
Morningstar Large Blend		13.0%	10.8%	4.8%		
SMRS Large Cap Value Funds						
SMRS Large Cap Value	$765,277	*10.9%*	*9.4%*	*3.4%*	*0.1%*	*7/31/07*
S&P 500 Value Index		16.6%	12.1%	4.1%	1.7%	
Morningstar Large Value		14.9%	11.0%	4.5%		
External Large Cap Value Composite	*$640,755*	*15.1%*	*11.0%*	*N/A*	*12.1%*	*12/31/09*
S&P 500 Value Index		16.6%	12.1%	N/A	13.5%	
Morningstar Large Value		14.9%	11.0%	N/A		
LSV Large Cap Value	$255,410	*18.2%*	*12.4%*	*N/A*	*14.0%*	12/31/09
S&P 500 Value Index		16.6%	12.1%	N/A	13.5%	
Morningstar Large Value		14.9%	11.0%	N/A		
Epoch Large Cap Value	$385,345	*10.1%*	*10.3%*	*N/A*	*11.4%*	12/31/09
S&P 500 Value Index		16.6%	12.1%	N/A	13.5%	
Morningstar Large Value		14.9%	11.0%	N/A		
SMRS Large Cap Growth Funds						
SMRS Large Cap Growth	$1,132,921	*7.6%*	*10.9%*	*6.6%*	*5.9%*	*5/1/05*
S&P 500 Growth Index		11.6%	13.3%	7.5%	5.8%	
Morningstar Large Growth		8.4%	10.8%	5.4%		
External Large Cap Growth Composite	*$323,061*	*9.1%*	*13.1%*	*N/A*	*18.3%*	*4/1/09*
S&P 500 Growth Index		11.6%	13.3%	N/A	20.6%	
Morningstar Large Growth		8.4%	10.8%	N/A		
Edgewood Large Cap Growth	$121,870	10.3%	14.0%	N/A	17.8%	4/1/09
S&P 500 Growth Index		11.6%	13.3%	N/A	20.6%	
Morningstar Large Growth		8.4%	10.8%	N/A		
JP Morgan Large Cap Growth	$201,191	N/A	N/A	N/A	9.9%	8/1/12
S&P 500 Growth Index		N/A	N/A	N/A	11.9%	
Morningstar Large Growth		N/A	N/A	N/A		

Mid-Cap Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
External Mid-Cap Composite	***$464,687***	***12.2%***	***13.3%***	***7.3%***	***7.8%***	5/1/05
S&P 400 Mid-Cap Index		17.8%	15.1%	9.9%	9.4%	
Morningstar Mid-Cap Blend		15.8%	12.2%	6.8%		
SMRS Mid-Cap Core Funds						
Champlain Investment Partners, Mid Cap	$90,918	*15.4%*	*14.7%*	*N/A*	*21.3%*	1/31/09
S&P 400 Mid Cap Index		17.8%	15.1%	N/A	24.2%	
Morningstar Mid-Cap Blend		15.8%	12.2%	N/A		
Munder Mid-Cap Core Growth	$56,419	*15.7%*	*15.0%*	*N/A*	*23.4%*	3/31/09
S&P 400 Mid Cap Index		17.8%	15.1%	N/A	25.8%	
Morningstar Mid-Cap Blend		15.8%	12.2%	N/A		
SMRS Mid-Cap Value Funds						
Cramer Rosenthal Mid-Cap Value	$235,379	*16.4%*	*13.5%*	*8.6%*	*9.4%*	5/1/05
S&P 400 Value Index		20.6%	14.5%	9.2%	8.7%	
Morningstar Mid-Cap Value		17.2%	12.2%	7.5%		
SMRS Mid-Cap Growth Funds						
LA Capital Mid-Cap Core	$81,971	*13.9%*	*12.7%*	*8.4%*	*9.5%*	5/1/05
S&P 400 Mid Cap Index		17.8%	15.1%	9.9%	9.4%	
Morningstar Mid-Cap Blend		15.8%	12.2%	6.8%		

Small-Cap Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
External Small-Cap Composite	***$476,201***	***12.4%***	***10.8%***	***8.7%***	***8.5%***	***10/1/01***
S&P 600 Small-Cap Index		16.1%	15.2%	9.2%	10.4%	
Morningstar Small Blend		15.7%	13.3%	7.7%		
SMRS Small Cap Core Managers						
Champlain Small-Cap Core	$63,435	*15.0%*	*16.4%*	*10.6%*	*9.0%*	1/31/07
S&P 600 Index		16.1%	15.2%	9.2%	5.6%	
Morningstar Small Blend		15.7%	13.3%	7.7%		
Northpointe Small Cap	$64,213	*10.7%*	*7.6%*	*6.3%*	*5.5%*	10/1/04
S&P 600 Value/Core Index Blend		16.1%	13.0%	8.0%	7.7%	
Morningstar Small Value		16.3%	11.9%	8.3%		
SMRS Small Cap Value Managers						
Donald Smith & Co.	$348,553	*11.3%*	*7.7%*	*11.7%*	*7.9%*	1/31/07
S&P 600 Value Index		17.0%	13.9%	8.5%	4.4%	
Morningstar Small Value		16.3%	11.9%	8.3%		

All-Cap Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Attucks Asset Management	$183,348	*11.4%*	*11.9%*	*5.9%*	*3.0%*	11/1/07
S&P 1500 Super Composite		14.4%	13.0%	6.3%	2.9%	
Morningstar S&P 1500 Cap-Weighted Average		*13.3%*	*11.0%*	*N/A*		
Bivium Capital Partners	$165,534	11.5%	12.6%	6.0%	2.7%	11/1/07
S&P 1500 Super Composite		14.4%	13.0%	6.3%	2.9%	
Morningstar S&P 1500 Cap-Weighted Average		*13.3%*	*11.0%*	*N/A*		
*SMRS All Cap GARP **	*$314,132*	15.2%	*N/A*	*N/A*	*15.3%*	*5/1/11*
S&P 1500 Super Composite		14.4%	N/A	N/A	9.9%	
Morningstar S&P 1500 Cap-Weighted Average		*13.3%*	*N/A*	*N/A*		
Artisan All-Cap Value	$620,542	*13.7%*	*14.1%*	*10.2%*	*9.9%*	5/1/05
S&P 1500 Value/S&P 400 Value Blend		18.0%	13.6%	8.8%	8.7%	
Morningstar Mid-Cap Value		17.2%	12.2%	7.5%		
Fisher All Cap	$338,565	*4.3%*	*9.9%*	*6.8%*	*8.9%*	9/30/04
S&P 1500/S&P 600 Value Blend		12.6%	12.4%	7.7%	8.0%	
Morningstar Small Value		16.3%	11.9%	8.3%		
Seizert Capital Partners	$133,938	19.0%	16.0%	N/A	18.4%	11/1/09
S&P 1500/S&P 400 Value Blend		14.4%	15.8%	N/A	20.2%	
Morningstar Mid-Cap Blend		15.8%	12.2%	N/A		

Balanced Fund Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
SMRS Absolute Return Income Fund	*$373,280*	*15.37%*	*14.6%*	*N/A*	*17.1%*	*1/1/09*
60% S&P 500/40% BARCLAYS AGG		9.95%	10.1%	N/A	12.4%	
Morningstar Moderate Allocation		9.2%	8.4%	N/A		

* Calculated internally rather than by State Street in order to exclude the impact of securities held by SMRS, but not selected by the portfolio manager.

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.

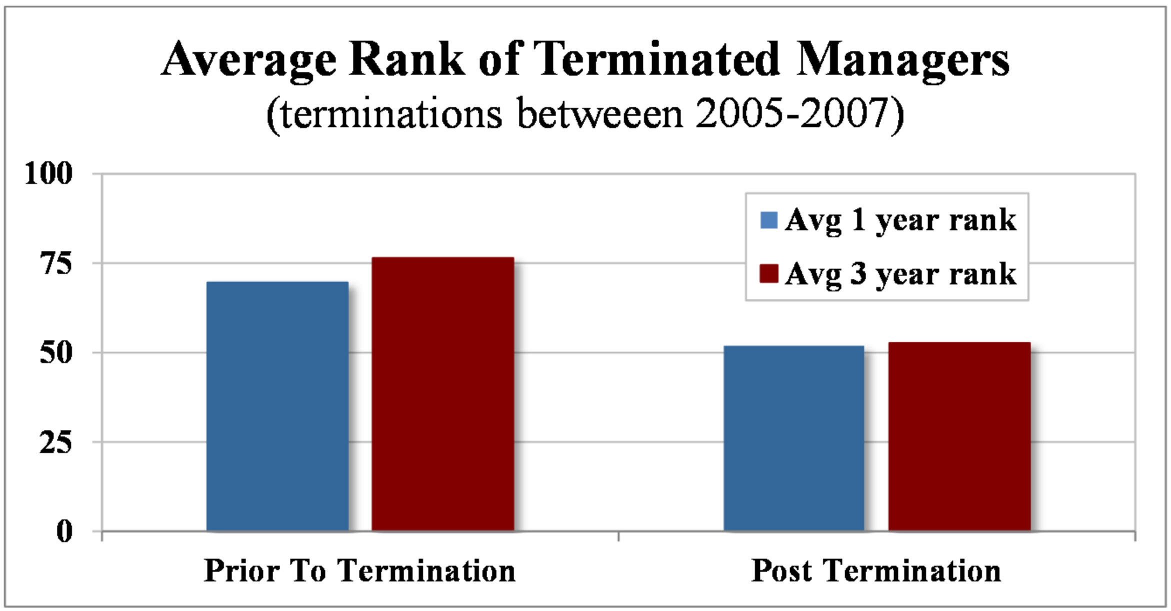
Data Source: eVestment Alliance. https://www.evestment.com.

RVKuhns & ASSOCIATES, INC.

"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.

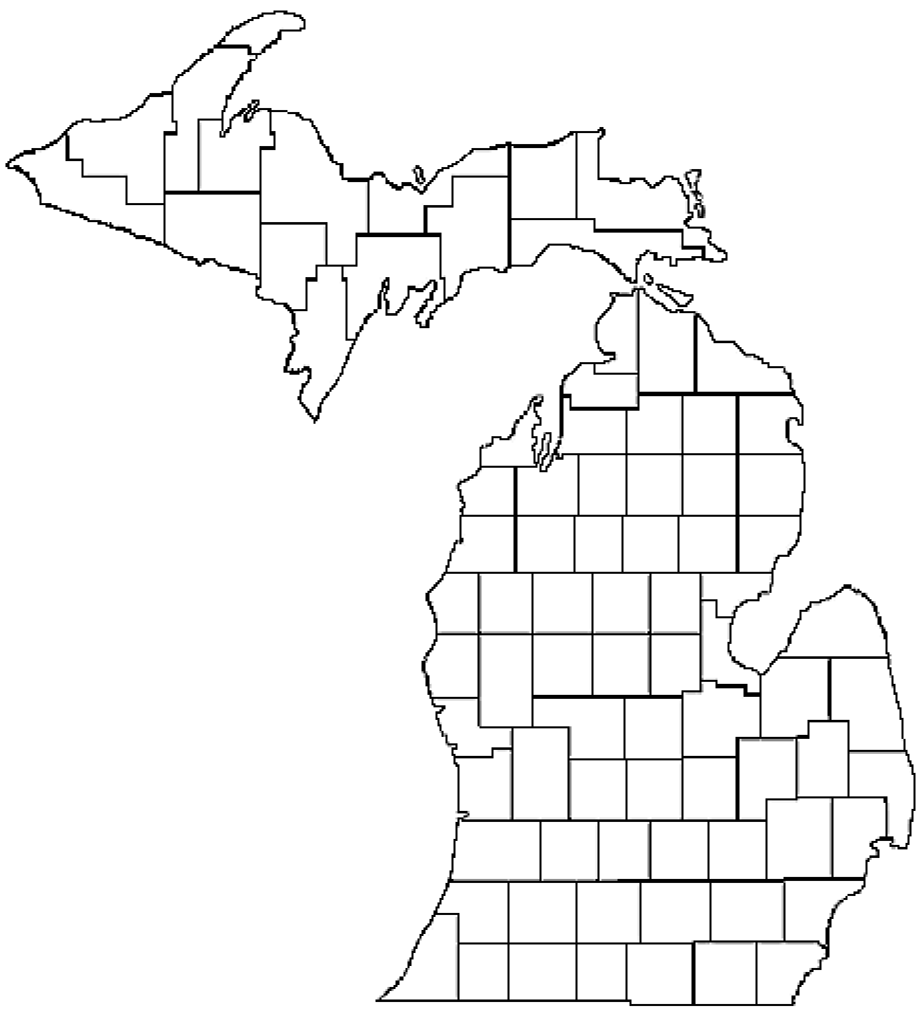
RVKuhns & ASSOCIATES, INC.

STATE OF MICHIGAN
RETIREMENT SYSTEMS

INTERNATIONAL EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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	10.4%	5.5%	0.5%	2.2%	8.2%
Benchmark Return	8.9%	4.1%	-0.2%	1.4%	7.8%
Peer Return	10.4%	5.7%	0.5%	3.2%	11.3%
Rank vs. Peers	42	49	37	75	70

- Earlier asset allocation and strategy decisions continue to add value. Performance of the total international equity positions in developed markets versus the MSCI ACWI ex USA benchmark was +3.5% versus +3.3% in the first quarter, resulting in a +16 basis points (bps) tracking error and a cumulative +151 bps for the trailing year. Both variance numbers are within the normal expected range that recognizes a 250 bps possible variance. The three and five-year numbers 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 +136 and +72 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 $111 million as of March 31, 2013. Recognized but unrealized gains from fixed income Libor notes, remarked at lower cost values, are now $7 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 +6.9% in the first quarter versus the benchmark's return of +6.4%.

- Externally managed, active strategy funds in all non-U.S. equity categories totaled $3.7 billion.

- External active international fund managers had a return of +4.8% for the quarter and +13.4% for the trailing year. Manager returns are diversified, and reflect both fundamental and fixed income enhancement strategies. Stock Plus strategies have been successful as short-term, opportunistic fixed income and dividend enhancements have added value. External active 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 considered individually and are normally constrained to no more than 20% of their portfolios.

- The Emerging Market Index returns were -2.0% for the quarter, and +4.1% for the trailing year. Passive and active exposure of $2.3 billion to emerging markets are playing a significant diversification role, although returns were less positive than developed markets. Fifty-three percent of exposure to Emerging Markets is passive. Emerging Markets exposure has been increased to a +5.0% overweight compared to the MSCI ACWI ex USA benchmark.

Outlook

- The outlook for international equities is more positive based on European Central Bank support of liquidity and market stimulus, attractive relative valuation with the U.S. market, increasing bank reserve levels and reductions in systemic leverage as write-downs of distressed assets continue. 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. European earnings growth is expected to continue to lag U.S. earnings growth, but is generally discounted in security prices. Growth expectations in emerging markets remain positive, although a lower levels. Political instability remains a visible issue.

- Additional allocations to international equities will be made slowly as opportunities are presented. Both internal and external managers can be used, and the choice will depend on the situation. Actively managed funds may be expected to grow gradually as an overall percentage. External managers are diversified by style, and fundamental managers are starting to benefit from a better environment. Stock Plus strategies have been extremely effective over the past year, and are expected to continue to enhance returns in this uncertain and volatile market.

- Emerging markets are expected to benefit from growing local demand and longer-term trends. Political instability, corruption, lack of tested legal systems, growing regulation, and changing tax regimes remain concerns. Individual company financing of receivables is underway and will reduce many company returns and metrics for the next few years. Critical infrastructure investments may also lead to additional taxes and fees.

Investment Plan

- The allocation to international equities has been reduced $285 million over the past twelve months.

- Move higher toward strategic asset allocation targets in a progressive series of investments with both passive and active managers. Take advantage of external manager capacity and established conduits as market corrections and tactical opportunities occur.

- Add new services and counterparties with unique capabilities. Gain additional useful information for decision-making. Identify external managers specializing in attractive niche investments.

- Be aware of opportunistic situations with non-benchmark and active products. FTSE global indices are now used by Vanguard, and these provide a closer fit with S&P indices to our longer term advantage. Accept reasonable tracking error risk for products in return for better liquidity and return enhancement.

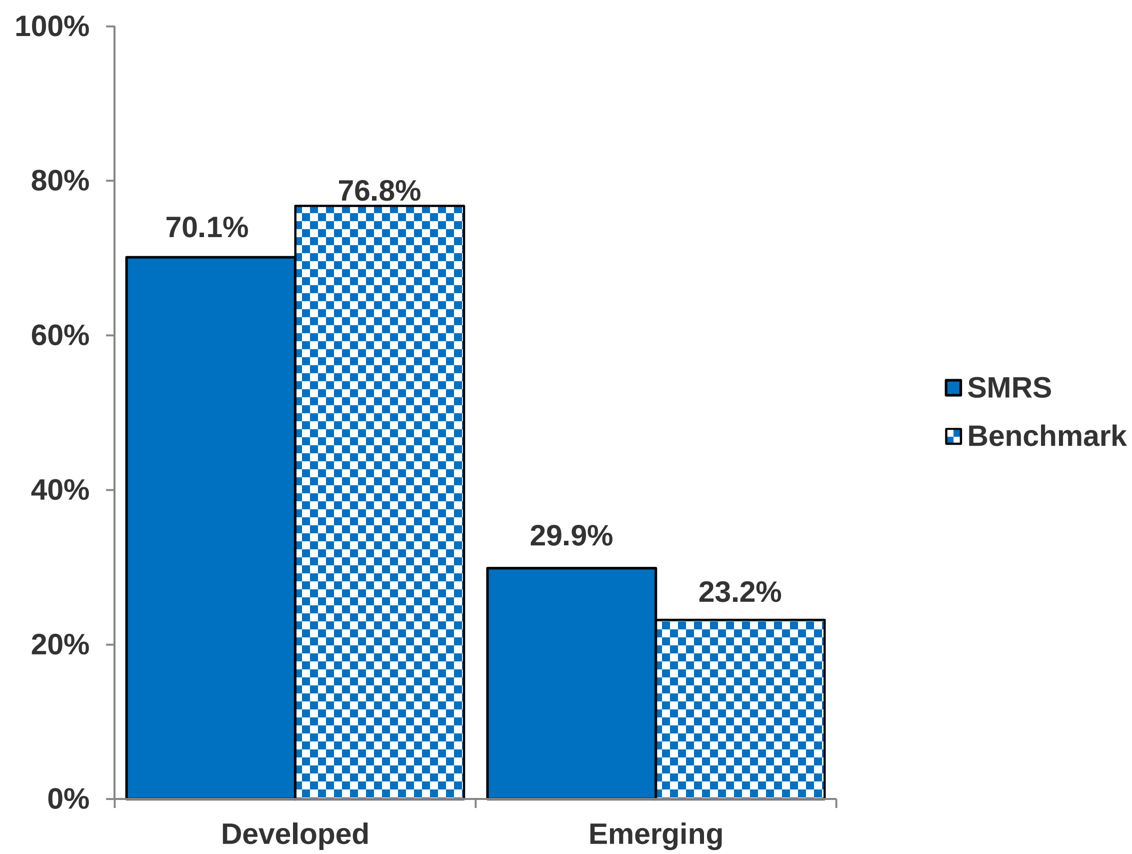
- Take advantage of attractive corporate spreads in Libor notes and trade to improve yields when possible. Prepare for derivative market changes by focusing on standardized structures and management of collateral balances and settlement requirements. Major regulatory clarification and Basel III compliance measures have been delayed, and many requirements may not take effect before 2014.

SMRS

International Equity Holding By Category

SMRS Versus Benchmark

3/31/13

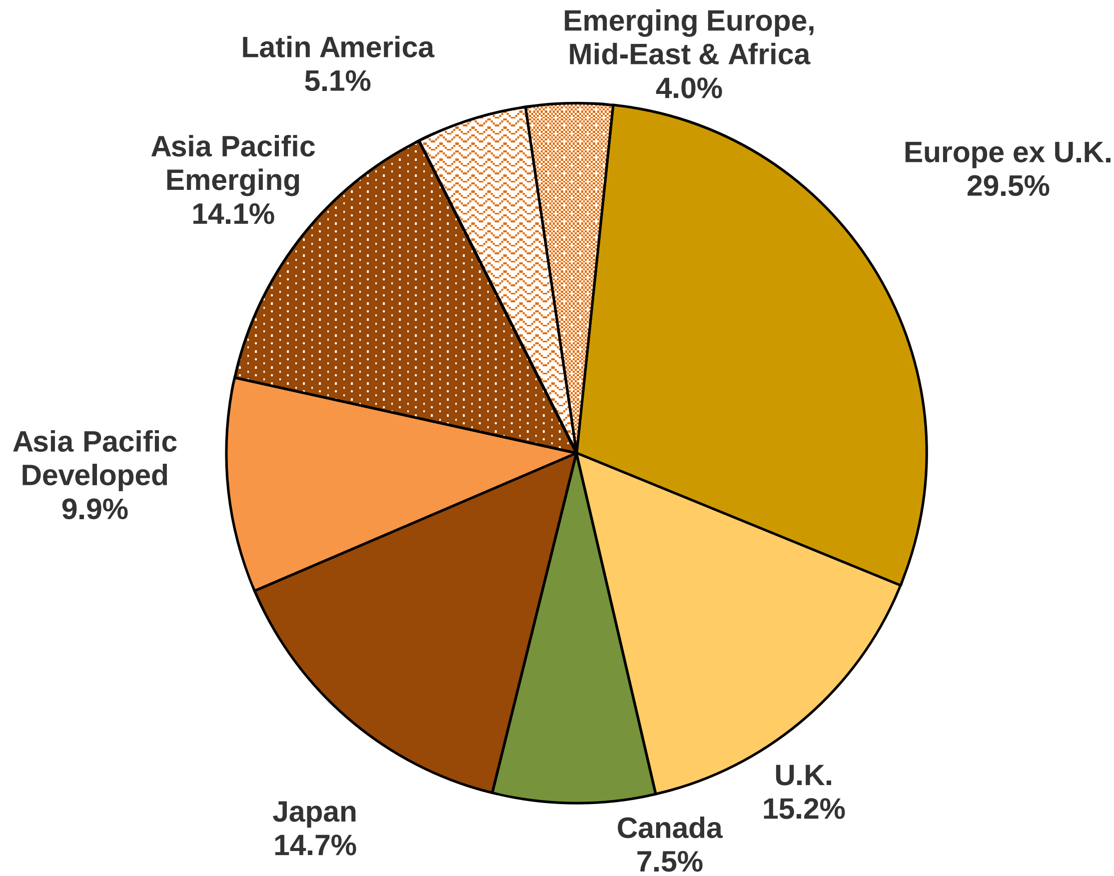


Investments by Region

	SMRS	MSCI ACWI ex USA
Developed	70.1%	76.8%
Emerging	29.9%	23.2%
Total	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
MSCI ACWI ex USA
3/31/13



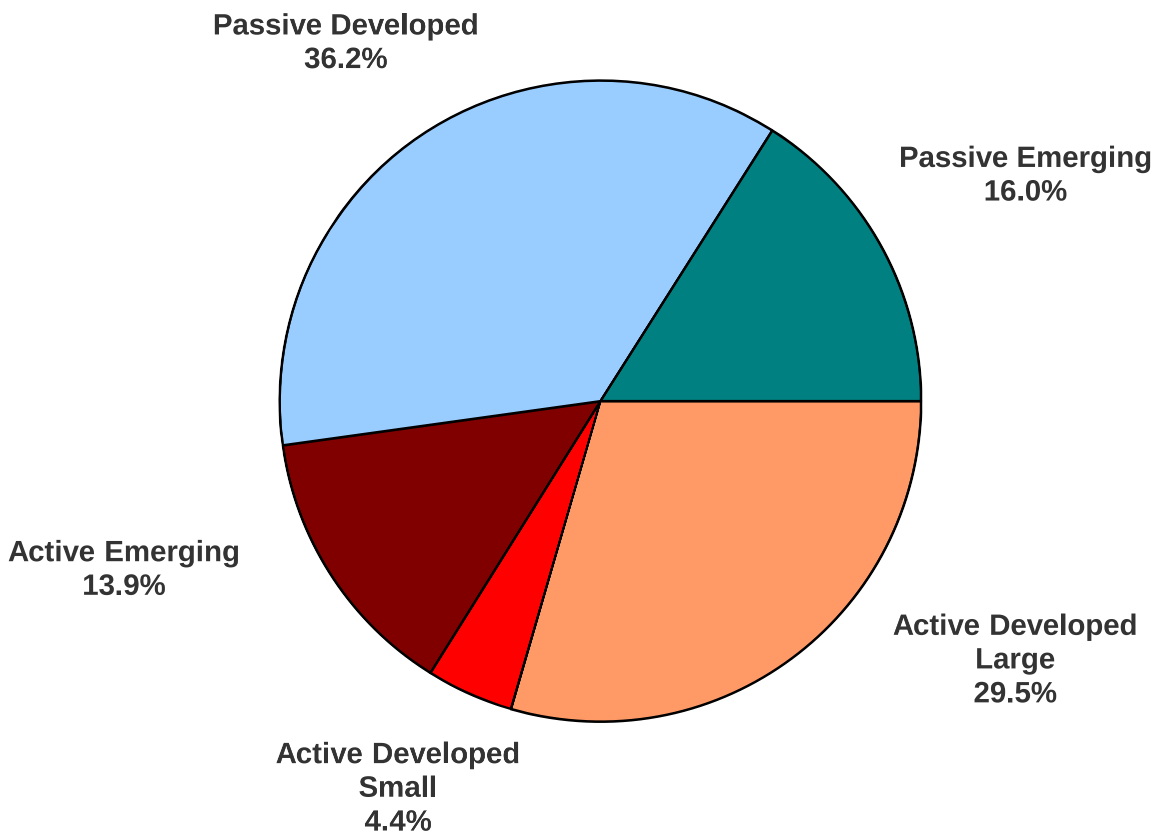
	Benchmark
Developed	
Europe ex U.K.	29.5%
U.K.	15.2%
Japan	14.7%
Asia Pacific Developed	9.9%
Canada	7.5%
Total Developed	76.8%
Emerging	
Asia Pacific Emerging	14.1%
Latin America	5.1%
Emerging Europe, Mid-East & Africa	4.0%
Total Emerging	23.2%
Total	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

International Equity Holdings By Category

3/31/13



Market Value in Millions

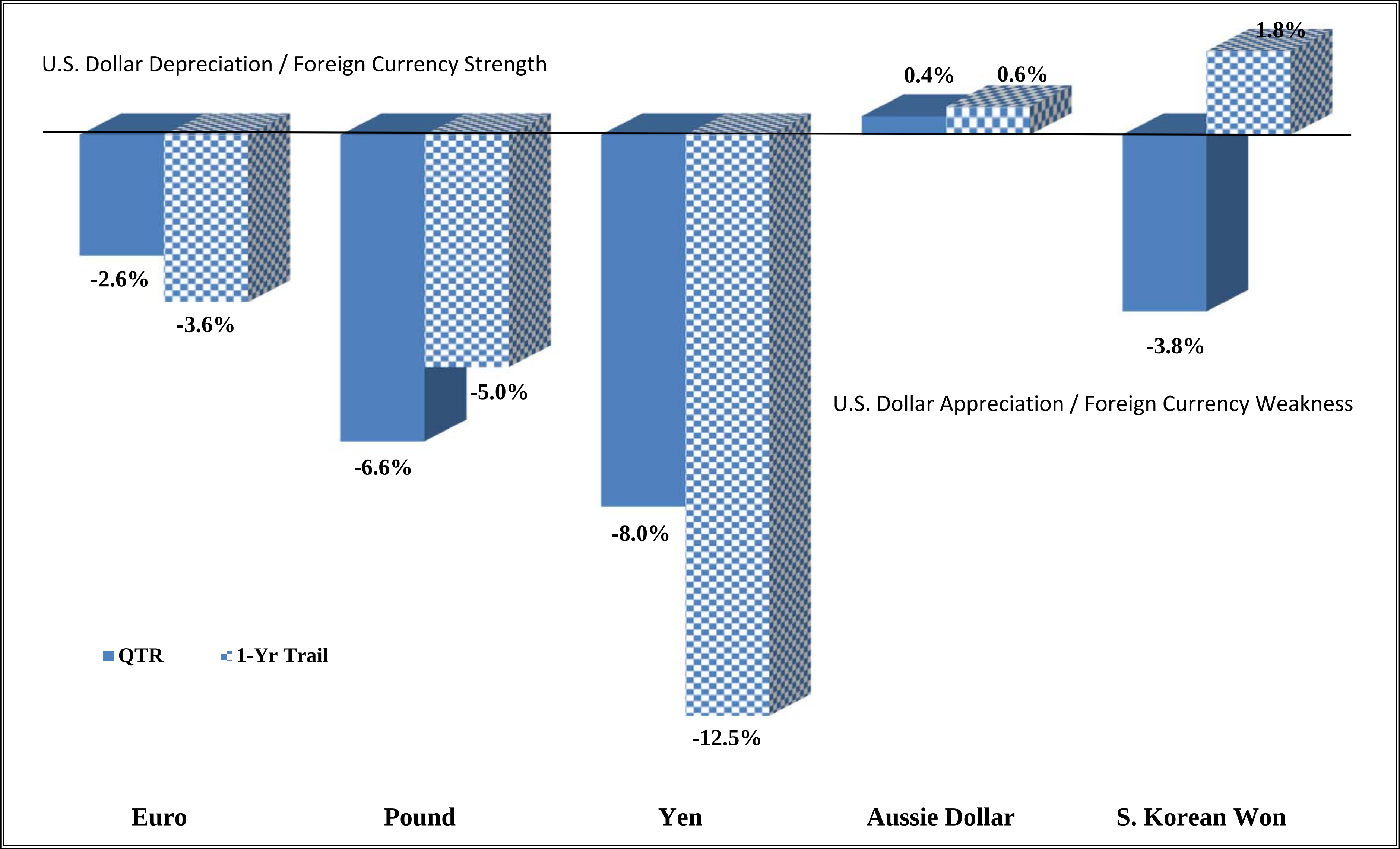
	3/31/13		12/31/12	
Active				
Developed Large	$2,284	29.5%	$2,189	29.6%
Developed Small	344	4.4%	319	4.3%
Emerging	1,080	13.9%	996	13.5%
Total Active Equity	3,708	47.8%	3,504	47.4%
Passive				
Developed	$2,801	36.2%	$2,668	36.1%
Emerging	1,236	16.0%	1,220	16.5%
Total Passive Equity	4,037	52.2%	3,888	52.6%
Total International Equity	**$7,745**	**100.0%**	**$7,392**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
International Equities
3/31/13

	INDEXED	ACTIVE	TOTAL	Percent
Developed Markets - Large/Mid Capitalization				
Internal Stock Plus Combination	$1,243,257		$1,243,257	
SSgA PMI Fund	540,383		540,383	
Vanguard Developed Markets Fund	493,287		493,287	
SSgA International Alpha Select BMI Fund		$460,832	460,832	
Wellington International Research Equity Fund		459,450	459,450	
PIMCO Stock Plus Fund		799,778	799,778	
Marathon-London EAFE Fund		286,492	286,492	
Baillie Gifford ACWI Ex US Alpha Fund		277,252	277,252	
Sub-Total Developed Large/Mid Cap	$2,276,926	$2,283,804	**$4,560,731**	58.9%
Developed Markets - Small Capitalization				
SSgA EMI Fund	$524,010		$524,010	
SSgA International Small Cap Alpha Fund		$101,262	101,262	
MFS International Small Cap Fund		116,350	116,350	
Franklin Templeton Int'l Small Cap Fund		125,999	125,999	
Sub-Total Developed Small Cap	$524,010	$343,611	867,621	11.2%
Total Developed Markets	$2,800,937	$2,627,415	**$5,428,352**	70.1%
Emerging Markets - All Capitalization				
Vanguard Emerging Mkt Stock Index Fund	$1,187,868		$1,187,868	
LACM Emerging Market Fund		$256,844	256,844	
PIMCO Emerging Market Fund		648,632	648,632	
Wellington Emerging Market Fund		175,351	175,351	
Equity Emerging Market Fund	47,738		47,738	
Total Emerging	$1,235,606	$1,080,828	**$2,316,434**	29.9%
TOTAL	$4,036,543	$3,708,243	**$7,744,785**	100%
Percent	52.1%	47.9%		

Currency Performance vs. the U.S. Dollar



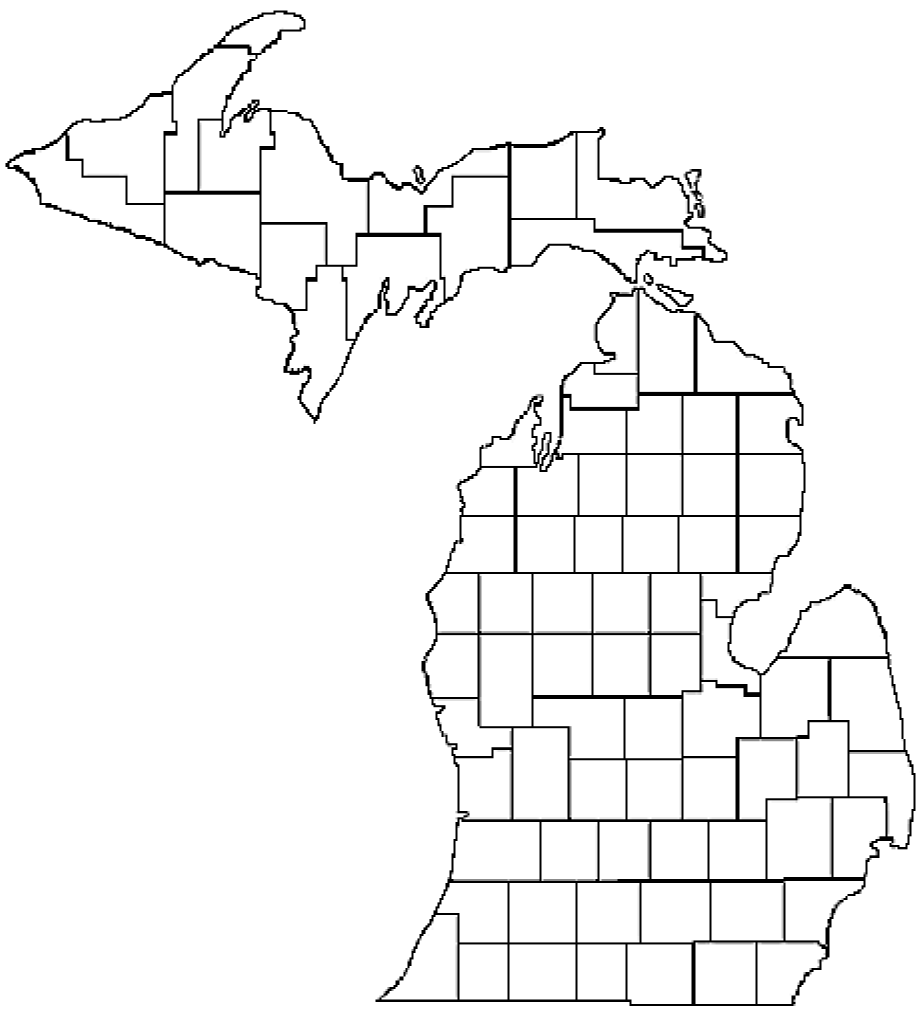
In percentage terms

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ABSOLUTE AND REAL RETURN REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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	8.43%	4.76%	NA	NA	NA
HFRI FOF Conservative*	4.13%	2.32%	-0.90	1.16%	2.86%

*One month lag on the index

Portfolio Performance

- The portfolio outperformed the HFRI Fund of Funds Conservative Index by 75 basis points (bps) for the first quarter and 430 bps for the year.

Strategy Overview

- Arbitrage - All event-driven managers generated gains during the quarter, driven primarily by event-oriented equities and distressed credit. Merger arbitrage was flat for the quarter as regulatory delays and rejections offset gains from completed deals. Fixed income arbitrage managers continued to register gains in the quarter, with arbitrage opportunities in structured credit providing the greatest contribution to returns. This is 36.0% of the Absolute Return Portfolio.

- Credit/Distressed - Distressed credit managers delivered gains during the quarter with contributions from the liquidation of Lehman Brothers, restructured positions in home builders and performing credit positions that continue to reduce leverage. RMBS and other structured credit performed well throughout the quarter, as housing data continues to be supportive and traditional fixed income buyers enter the market again. This is 33.4% of the Absolute Return Portfolio.

- Long/Short Equity - Fundamental equity managers performed well during the quarter, with gains from long and short positions in technology, healthcare, emerging markets, and media companies. Short positions, as a whole detracted during the quarter; however, mangers continue to maintain an active short portfolio that is expected to benefit from future stock specific developments. This is 26.0% 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.	5.40%	6.98%	NA	NA	NA
Custom Benchmark	7.27%	7.69%			

- Senior Secured Credit - Performing non-investment grade credit managers delivered gains for the quarter, driven by strong market technicals and announced refinancings on catalyst-driven opportunities. For the first quarter, the S&P/LSTA Leveraged Loan and Merrill Lynch U.S. High Yield Master II returned 2.18% and 2.89%, respectively. Demand in the leveraged loan market remains strong, with $10.7 billion of new CLO vehicles, the highest monthly print since May 2007, and $6 billion of inflows to retail loan funds. Assets under management at retail loan funds now stand at around $110 billion, approximately 20% of the outstanding S&P/LSTA loan index. For the first quarter, inflows from new CLOs and loan mutual funds totaled nearly $39 billion, the largest quarterly inflow in six years. This is 13% of Real Return & Opportunistic Portfolio.

- Direct Lending - Direct lending managers generally had a slowdown in transactions for first quarter of 2013 compared with fourth quarter of 2012, as uncertainty around the U.S. fiscal situation and the associated implications for tax policy caused businesses to pull forward transactions into the fourth quarter of 2012. Managers continue of have a healthy pipeline of opportunities and expect transactions to pick up as we move through the year. Middle market lending spreads continued to tighten somewhat through the quarter; however, returns are still attractive compared with similar risk assets. This is 17% of Real Return & Opportunistic Portfolio.

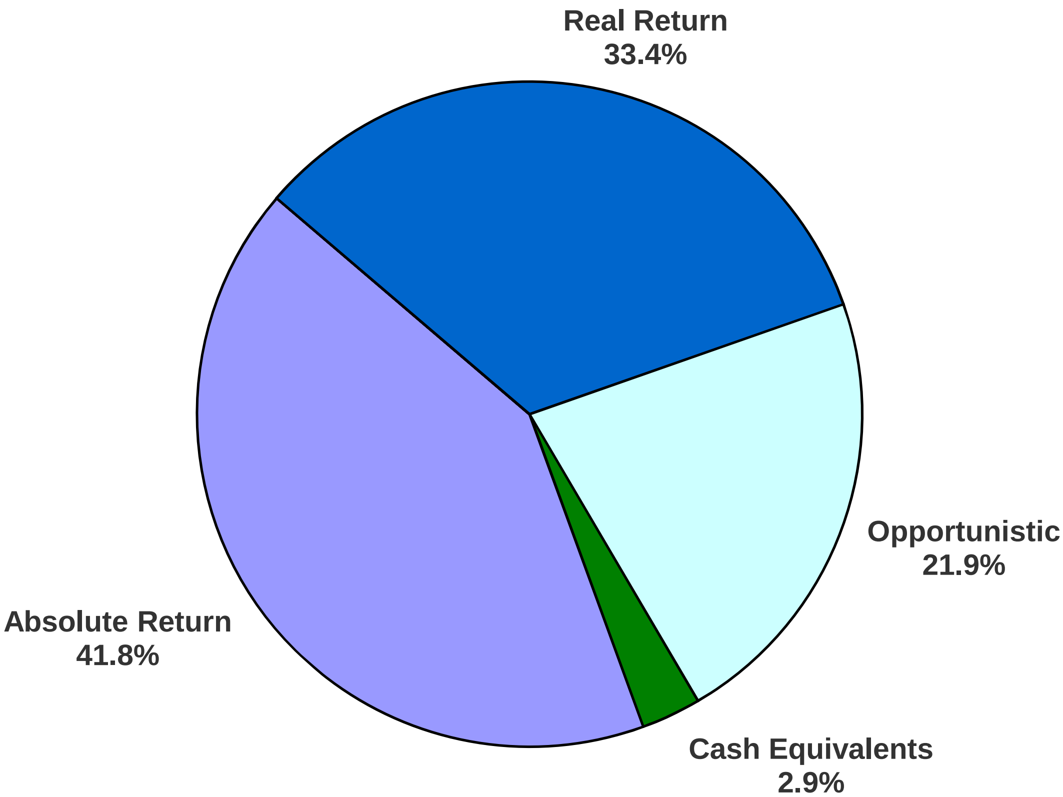
Commodities

MPSERS Plan	**1-Year**	**3-Years**	**5-Years**	**7-Years**	**10-Years**
Commodities	-2.28%	1.81%	NA	NA	NA
DJUBS Commodity TR	-1.13%	1.42%	-7.11%	-1.16%	3.67%

- Liquid Commodities - The commodity portfolio underperformed the Dow Jones UBS Commodity Total Return Index by 100 bps for the first quarter. The portfolio underperformance was driven mainly by an underweight position in natural gas, which was the top performing commodity for the quarter, and overweight positions in copper and the precious metals, which were among the weakest performing commodities during the quarter. (14% of Real Return & Opportunistic Portfolio)

- During the quarter, no new investments were made in the Real Return and Opportunistic Portfolio.

SMRS
Absolute, Real Return and Opportunistic
3/31/13



Market Value in Millions

	3/31/13		12/31/12	
Absolute Return	$2,099	41.8%	$1,981	42.3%
Real Return	1,677	33.4%	1,562	33.4%
Opportunistic	1,099	21.9%	1,112	23.7%
Cash Equivalents	143	2.9%	30	0.6%
Total Investments	**$5,018**	**100.0%**	**$4,685**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Absolute Return
3/31/13

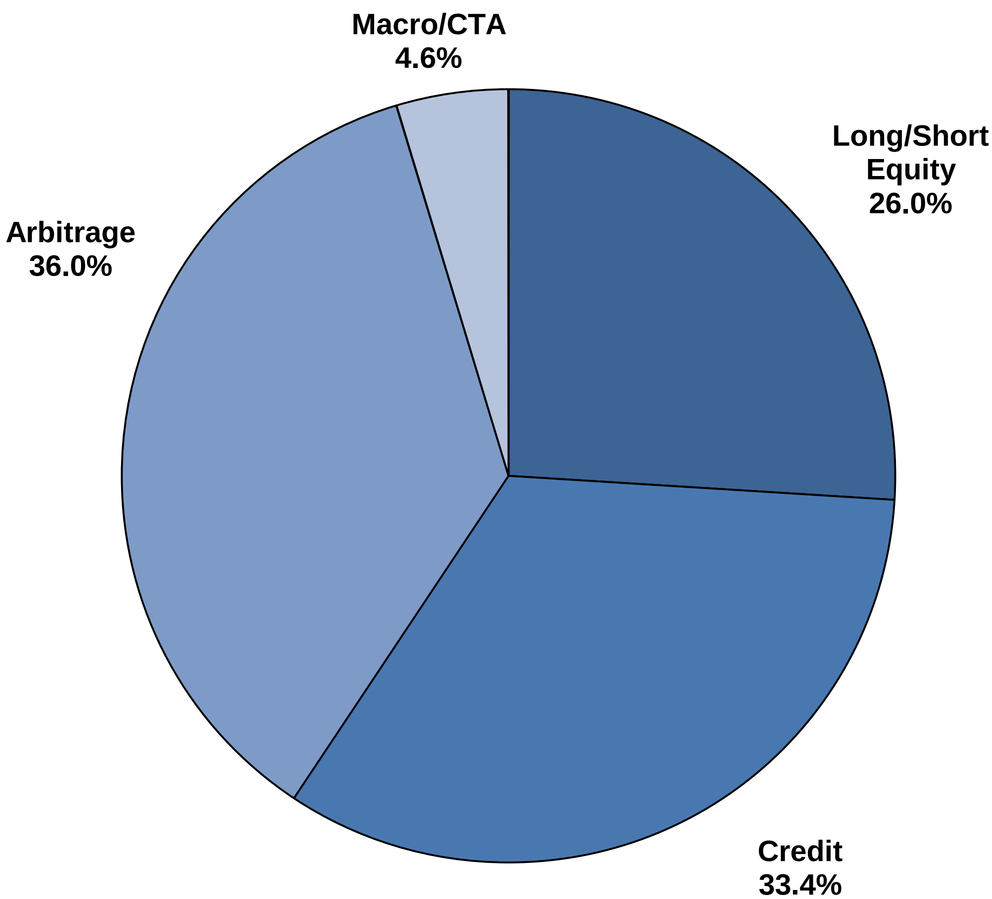
Net Market Values by Entity

	Net Market Value
Absolute Return Capital Partners, L.P.	$50,771,626
Apollo Offshore Credit Strategies Fund Ltd.	125,101,509
Brevan Howard Multi-Strategy Fund, L.P.	107,128,542
Elliott International Limited	10,604,183
* EnTrust White Pine Partners L.P.	283,863,999
FrontPoint Multi-Strategy Fund Series A, L.P.	4,139,316
MP Securitized Credit Master Fund, L.P.	51,838,939
* Sand Hill, LLC	1,110,871,697
Spartan Partners L.P.	32,241,893
* Tahquamenon Fund L.P.	322,304,403
Total Market Value	**$2,098,866,108**

* Fund of Funds.

SMRS
Absolute Return
3/31/13

Investments By Strategy



Strategy Breakdown

Underlying Funds:	110	Median Position Size:	0.4%
Strategies:	4	Average Position Size:	0.9%
Relationships:	10	Largest Position Size:	6.2%

SMRS
Real Return and Opportunistic
3/31/13

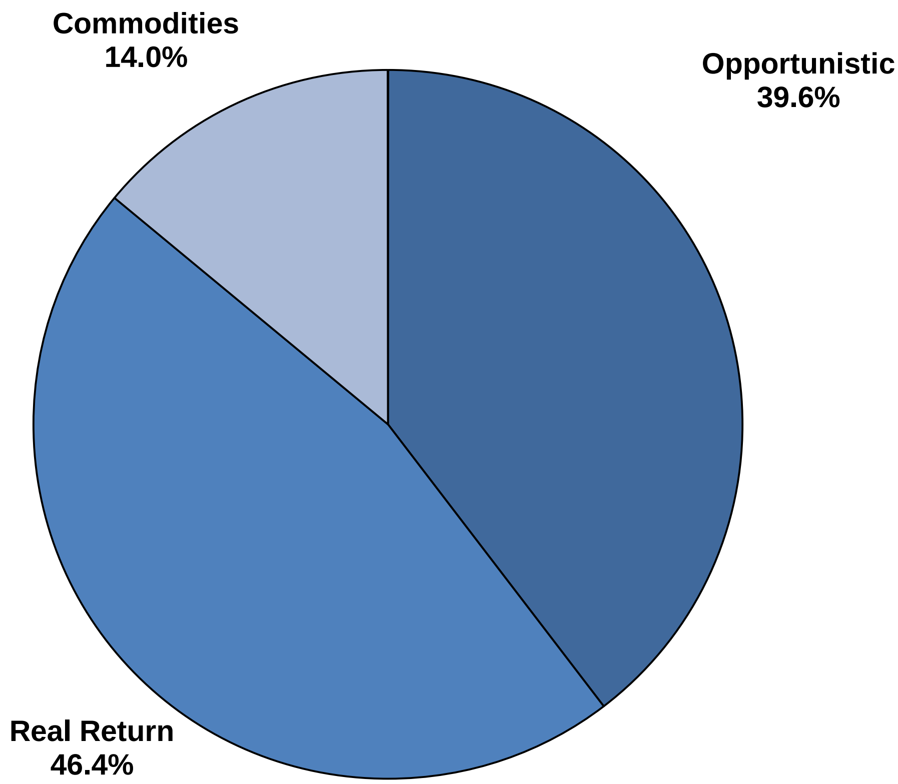
Net Market Value by Entity

		Net Market Value	Unfunded Commitment
*	Abernathy Fund I, LLC	$296,349,392	$69,347,177
	Apollo European Principal Finance Fund II	12,906,892	38,132,985
	Apollo Offshore Credit Fund Ltd	359,157,482	
	Apollo Offshore Structured Credit Recovery Fund II	56,310,887	
	Commodity Holdings	388,503,115	
	Emerald	30,777,752	
	Energy Recapitalization and Restructuring Fund LP	15,821,795	106,771,191
*	Fairfield Settlement Partners, LLC	79,518,274	52,547,108
	Fortress MSR Opportunities Fund I A LP	41,929,146	157,565,789
	Galaxie Ave. Partners, LLC	100,197,779	
	Highbridge Principal Strategies - Senior Loan Fund II	127,269,946	
	Highbridge Principal Strategies - Specialty Loan Fund III	63,189,252	87,995,902
	Hopen Life Sciences Fund II	2,365,076	7,300,000
	JP Morgan Global Maritime Investment Fund LP	6,891,579	105,503,200
	KKR Lending Partners LP	52,065,404	55,643,996
	Lakewater LLC, Series 1	172,924,709	16,139,926
	Lakewater LLC, Series 2	111,124,276	145,033,915
	Lakewater LLC, Series 3	68,512,855	
	Renaissance Venture Cap Fund II LP	669,682	24,250,000
	RK Mine Finance (Master) Fund II LP	33,140,019	90,301,178
	SJC Direct Lending Fund I, LP	54,078,479	
	SJC Direct Lending Fund II, LP	137,044,472	196,714,032
*	Social Network Holdings, LLC	563,349,199	
	Total Market Value	**$2,774,097,461**	**$1,153,246,399**

* Fund of Funds.

SMRS
Real Return and Opportunistic
3/31/13

Investments By Strategy



Investment Strategy	
Commodities:	$388,503,115
Opportunistic:	$1,099,877,217
Real Return:	$1,288,308,907

STATE OF MICHIGAN
RETIREMENT SYSTEMS

REAL ESTATE AND INFRASTRUCTURE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 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 Returns	8.84%	11.49%	-3.27%	2.01%	5.00%
NCREIF ODCE Index	9.67%	14.02%	-1.75%	2.43%	5.81%
Peer Median Return	8.72%	11.37%	-1.88%	1.77%	6.45%
Rank vs. Peers	49	50	72	41	58

- Total real estate market value ended the first quarter at $5.1 billion with a total return of 2.45%; its twelfth straight positive quarterly return. High quality cash flowing real property assets are favored by investors as they seek current yield in a low interest rate environment.

- Valuations increased this quarter for the majority of REID's U.S. property types. Strong rental growth in apartments and increases in hotel and industrial occupancies continued.

- The gross market value of the portfolio is estimated at $9.8 billion and the loan-to-value ratio is 48%.

- The REID is executing sales of non-strategic properties in secondary markets with limited upside potential at attractive values and capitalizing on the sale of core assets at low capitalization rates. REID's general partners are reviewing portfolios of assets for disposition.

- In the commercial mortgage-backed securities (CMBS) market, spreads over the swap rate for AAA-rated securities decreased 26 bps and now stand at 46 bps. CMBS delinquencies declined to 7.6% (60-day delinquent). New issuance for CMBS in 2013 is projected by Commercial Mortgage Alert to be $85 billion.

- Unfunded capital commitments for real estate totaled $197 million. It is expected that market transaction activity will increase as the void between buyers and sellers diminish and the availability of 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.

- Opportunities for investors include the ability to develop apartments in major urban markets, recapitalize troubled portfolios, consistently communicate with lenders for distressed assets, sell properties to REITs flush with capital, and exhibit patience in order to find properties in markets that have strong fundamentals.

EXECUTIVE SUMMARY
Infrastructure

- Total market value of infrastructure investments ended the first quarter at $271 million (not including short-term cash investments) with a total return of 2.71% for the quarter.

- 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 a 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.

- REID 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.

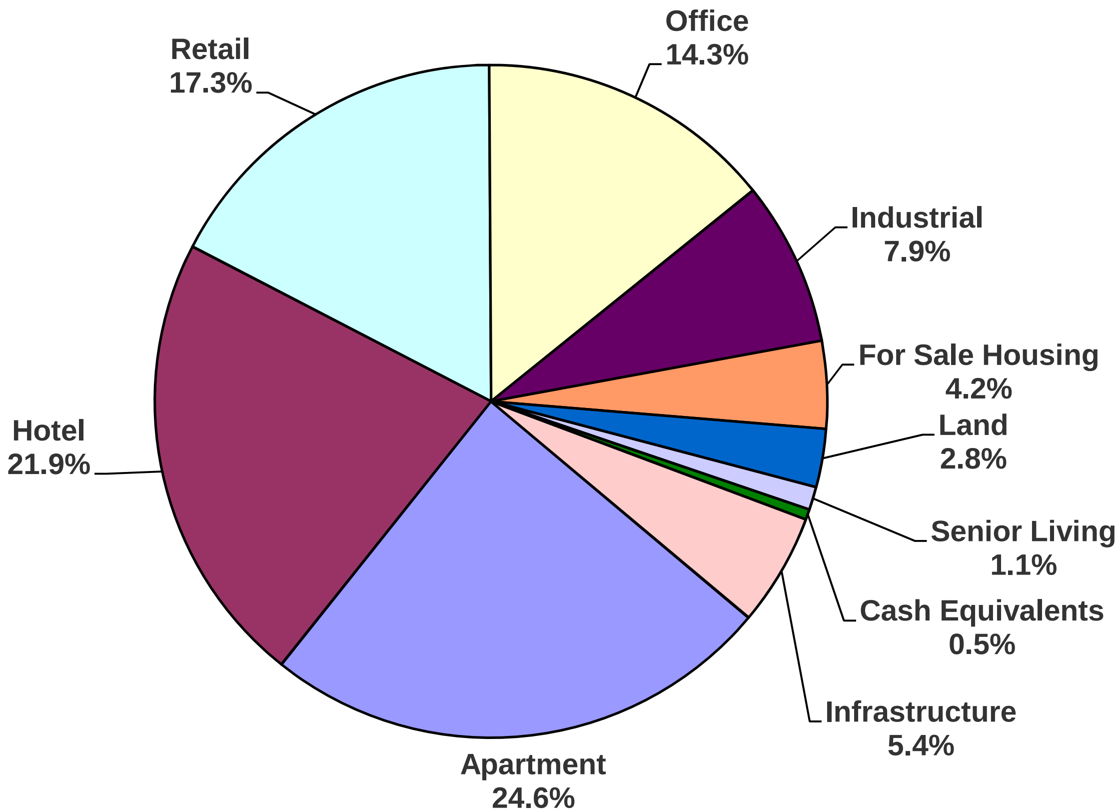
- Fund flows to the infrastructure sector continue to remain robust, as investor sentiment toward the asset class continues to improve from the depths of the global financial crises.

- Europe continues to dominate the deal landscape, accounting for 48% of global infrastructure in 2012. North America stands at 27% and Asia at 15% of global infrastructure deal volume.

- New commitments for this quarter include $50 million in Balfour Beatty Infrastructure Partners, LP which is a North American and European focused fund; $65 million in Dalmore Capital Fund, a U.K. focused fund investing in the U.K. governments PFI program; and $100 million in JP Morgan AIRRO Fund II US, LLC, which is focused on Asia infrastructure.

- 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
3/31/13



Market Value in Millions

	3/31/13		12/31/12	
Apartment	$1,324	24.6%	$1,252	23.9%
Hotel	1,174	21.9%	1,171	22.4%
Retail	929	17.3%	920	17.5%
Office	769	14.3%	801	15.3%
Industrial	425	7.9%	412	7.9%
For Sale Housing	228	4.2%	230	4.4%
Land	148	2.8%	128	2.4%
Senior Living	61	1.1%	64	1.2%
Total Investments	$5,058	94.1%	$4,978	95.0%
Infrastructure	288	5.4%	235	4.5%
Cash Equivalents	26	0.5%	25	0.5%
Total	**$5,372**	**100.0%**	**$5,238**	**100.0%**

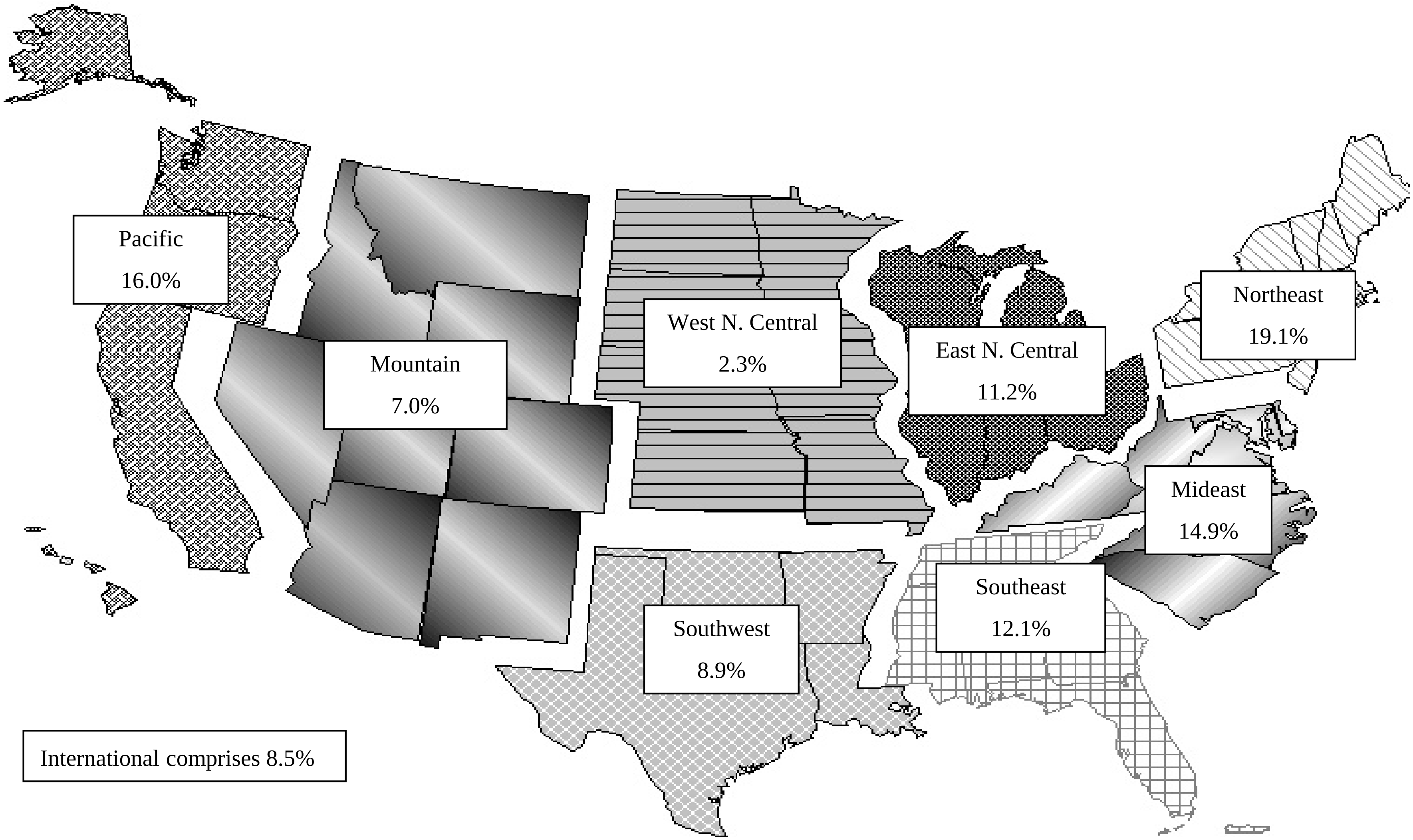
Michigan Department of Treasury, Bureau of Investments

Real Estate by Region

Based on Net Market Value

(excludes cash & cash equivalents)

3/31/13



Geographic regions defined by NCREIF, whose property index composition is: Pacific 28.9%, Mountain 5.8%, West N. Central 1.8%, Southwest 11.2%, East N. Central 7.7%, Southeast 10.9%, Northeast 19.5%, Mideast 14.2%

SMRS
Real Estate
3/31/13

Top Ten
Advisors or Companies

Advisor or Company		Net Market Value
Clarion Partners (formerly ING Clarion)	$	954,228,734
MWT Holdings, LLC		826,856,020
Edens & Avant Investments, LP		648,233,077
Kensington Realty Advisors, Inc.		293,533,834
Principal Real Estate Investors		265,822,540
Five Star Realty Partners, LLC		228,192,066
Bentall Kennedy LP		193,725,865
CIM Group, Inc.		167,142,713
Blackstone Real Estate Advisors		146,880,263
KBS Realty Advisors, Inc.		128,329,016
	$	3,852,944,128

Occupancy
by Property Type

	Apartment	Office	Industrial	Retail	Hotel
SMRS Portfolio	95.62%	89.36%	86.97%	93.66%	62.40%
National Average	91.30%	84.60%	87.30%	92.80%	56.60%

Real Estate

Net Market Values by Ownership Entity

3/31/13

	Net Market Value	**Unfunded Commitment**
801 Grand Avenue Capital, LLC	$ 107,745,806	$ 0
AGL Annuity Contract GVA 0016	323,403,109	0
Avanath Affordable Housing I, LLC	13,255,026	11,392,416
Beacon Capital Strategic Partners IV, LP	17,561,155	0
Beacon Capital Strategic Partners V, LP	16,869,894	6,500,000
BlackRock Retail Opportunity Fund, LLC	11,352,440	6,000,000
Blackstone Real Estate Partners V, LP	57,645,011	2,208,906
Blackstone Real Estate Partners VI, LP	89,235,252	5,162,087
Capri Select Income II	5,063,924	0
Capri Urban Investors, LLC	19,671,554	0
CIM Fund III, LP	79,720,373	11,991,736
CIM Urban REIT, LLC	83,464,090	0
CIM VI (Urban REIT), LLC	3,958,250	20,919,073
City Lights Investments, LLC	114,830,172	6,500,000
Cobalt Industrial REIT	53,112,775	0
Cobalt Industrial REIT II	72,220,990	0
CPI Capital Partners N.A., LP	7,441,866	0
CPI Capital Partners N.A., Secondary, LP	21,897,175	0
Devon Real Estate Conversion Fund, LP	6,020,079	0
Domain Hotel Properties, LLC	799,678,491	0
Dynamic Retail Trust	52,775,445	0
Edens & Avant Investments, LP	595,457,632	5,000,000
Federal Street, LLC	3,425,876	0
Gateway Capital R/E Fund II, LP	95,810,221	1,276,875
Great Lakes Property Group Trust	277,563,937	0
Invesco Mortgage Recovery Feeder Fund	18,554,322	11,700,000
JBC Opportunity Fund III, LP	17,306,696	0
KBS/SM Fund III, LP	60,880,125	0
L & B Medical Properties Partners, LP	2,511,810	4,000,000
Landmark Real Estate Partners V, LP	34,987,916	3,900,000
LaSalle Asia Opportunity Fund II, LP	5,959,745	0
LaSalle Asia Opportunity Fund III, LP	42,120,525	7,500,000
Lion Industrial Trust	114,993,783	0
Lion Mexico Fund, LP	39,556,462	0
Lowe Hospitality Investment Partners	1,261,572	0
MERS Acquisitions, Ltd.	123,456,697	0
MG Alliance, LLC	4,220,602	15,932,112
Morgan Stanley R/E Fund V - International	12,989,669	0
Morgan Stanley R/E Fund VI - International	41,629,157	0
Morgan Stanley R/E Fund V - U.S.	8,104,125	0
MSRE Mezzanine Partners LP	50,934	0
Morgan Stanley R/E Special Situations Fund III	63,409,598	0
MWT Holdings, LLC	826,856,021	35,175,000
Northpark-Land Associates, LLLP	25,793,646	0
Paladin Realty Brazil Investors III (USA), LP	26,883,263	9,924,317
Principal Separate Account	158,076,733	0
Rialto Real Estate Fund, LP	59,536,060	0
SM Brell II, LP	67,448,891	0
Stockbridge Real Estate Fund II-C, LP	28,087,485	0
Strategic LP	180,771,829	13,418,370
SWA Acquisitions, Ltd.	789,287	0
Trophy Property Development LP	62,357,484	11,250,000
True North High Yield Investment Fund II	43,368,698	7,213,251
Venture Center, LLC	33,878,822	0
Western National Realty Fund II, LP	23,338,992	455,264
	$ 5,058,361,492	-
Short-Term Investments and Other	25,762,329	-
Total Real Estate Investments	**$ 5,084,123,821**	**$ 197,419,407**

Infrastructure Investments
Net Market Values by Ownership Entity
3/31/13

	Net Market Value	Unfunded Commitment
* **Balfour Beatty Infrastructure Partners, LP**	$ 6,445,676	$ 35,227,441
Blackstone Energy Partners, LP	16,236,957	39,296,293
CSG Infrastructure Investment Program, LP	47,109,151	0
Customized Infrastructure Strategies, LP	61,011,533	45,326,623
* **Dalmore Capital Fund**	46,338,579	18,661,421
JP Morgan AIRRO India Sidecar Fund US, LLC	71,493,346	6,560,421
* **JP Morgan AIRRO Fund II US, LLC**	0	100,000,000
KKR Global Infrastructure Investors, LP	22,050,462	53,669,000
	$ 270,685,704	-
Short-Term Investments and Other	17,032,802	-
Total Infrastructure Investments	$ **287,718,506**	$ **298,741,199**

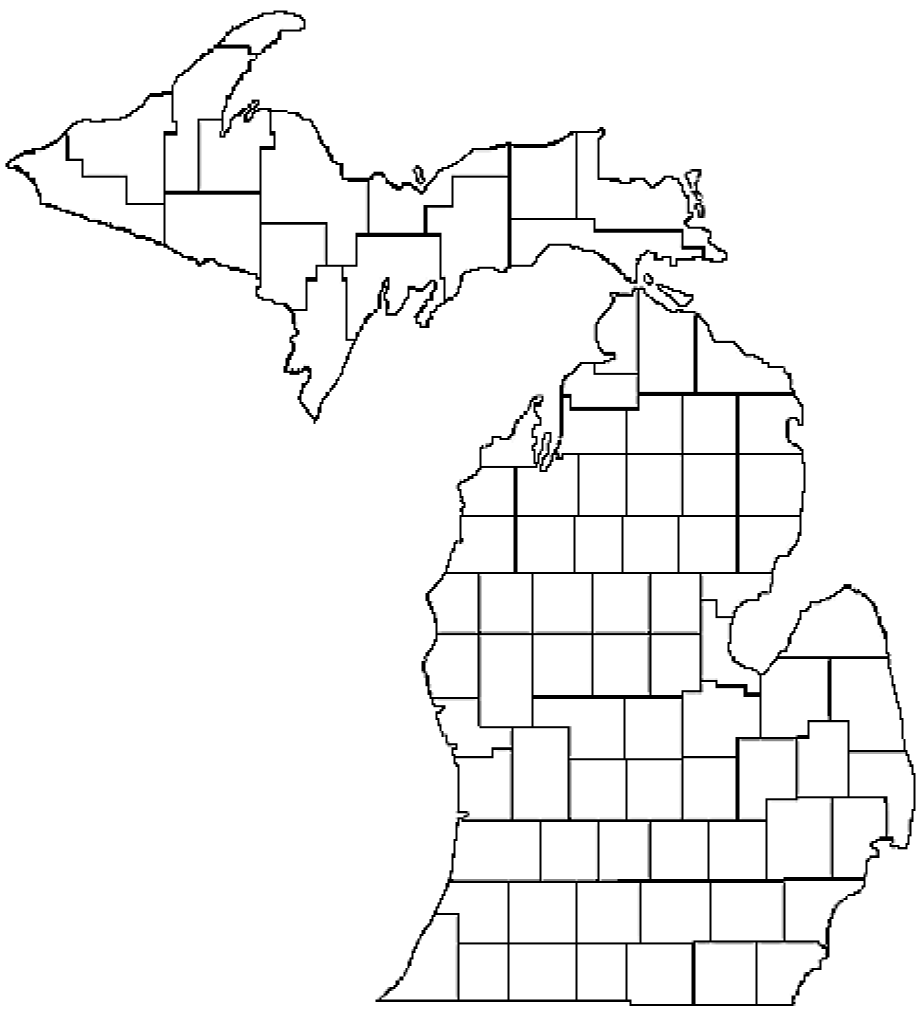
* New commitment made during the quarter reported.

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ALTERNATIVE INVESTMENTS REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 2013



Peter A. Woodford, Administrator
Alternative Investments Division

EXECUTIVE SUMMARY

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	14.5%	15.3%	6.1%	11.3%	14.0%
Benchmark Return	18.9%	15.9%	9.1%	8.3%	11.8%
Peer Median Return	12.2%	12.2%	4.0%	8.9%	11.3%
Rank vs. Peers	18	12	26	12	20

General Overview

- U.S. leveraged buyout activity slowed in the first quarter, but deal-makers remain modestly bullish for the balance of the year, assuming the cost of credit remains low and U.S. GDP continues its slow, but steady rise. Industrial LBOs remained the most popular deal type, as such companies offered hope for better profit growth in an otherwise sluggish economy.

- Investors continued search for yield in an environment of historically low interest rates is fueling robust high-yield bond and leveraged loan markets, which in turn is driving private equity deal activity.

- A dovish Fed monetary policy has also fueled an increase in leveraged loan activity. Average debt multiples for leveraged loans increased to 4.9x EBITDA in the first quarter, up from 4.5x EBITDA (year-over-year), for companies with EBITDA greater than $50 million.

- Exits by mergers and acquisitions and initial public offerings were slow in the first quarter, but sponsor activity is likely to pick up through the remainder of the year based on a large backlog of public filings and interest in the public markets for new offerings.

- The fundraising market remains highly competitive. According to Preqin, over 1,900 funds are currently in the market, roughly 100 more than 2012. For LPs, the good news is that the big supply of funds in the market continues to work in our favor when it comes to terms and fees. The bad news is the large amount of money flowing into private equity, along with the availability of inexpensive debt, may drive deal prices higher and net returns lower. A large portion of this resurgence is driven by a small handful of mega-funds back in the market.

- 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 $227 million across 39 deals through 3/31/2013.
    - MGCP I - $135 million invested, 29 deals, net IRR 12%, MOIC 1.2x
    - GCMOF - $81 million invested, 8 deals, net IRR 6.9%, MOIC 1.1x
    - MGCP II - $11 million invested, 2 deals, (fund in J-curve)

  Although the program is still actively investing, there have been five realizations and one dividend recap.

- During the quarter, four new commitments were closed: Affinity Asia Pacific Fund IV, $125 million; Oaktree Opportunities Fund IX, $75 million; The Huron Fund IV, $35 million; and the CM Liquidity Fund, $25 million; Affinity is focused on pan-Asian LBO opportunities, Oaktree is focused on U.S. distressed debt, the Huron Fund seeks lower middle market buyout opportunities in North America, and the CM Liquidity Fund will focus exclusively on secondary opportunities within Carlyle Partners VI.

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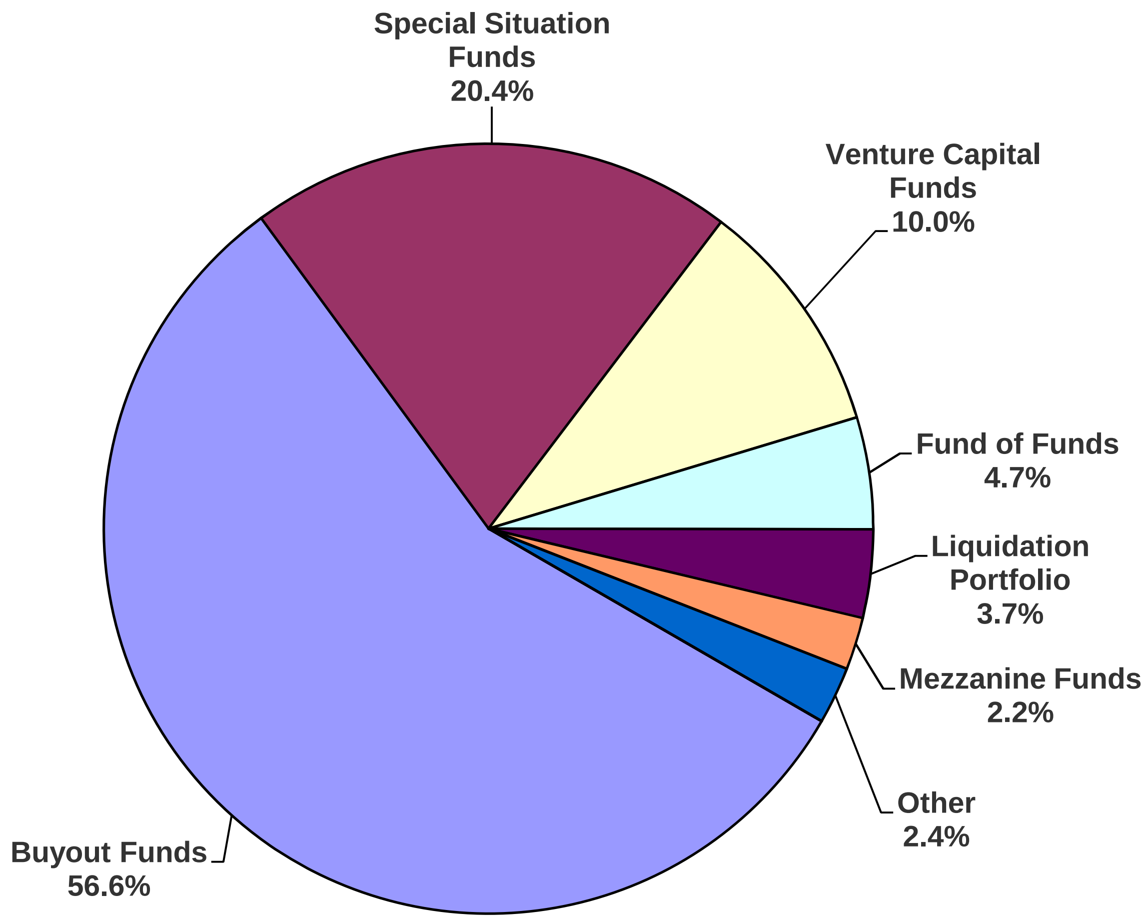
3/31/13



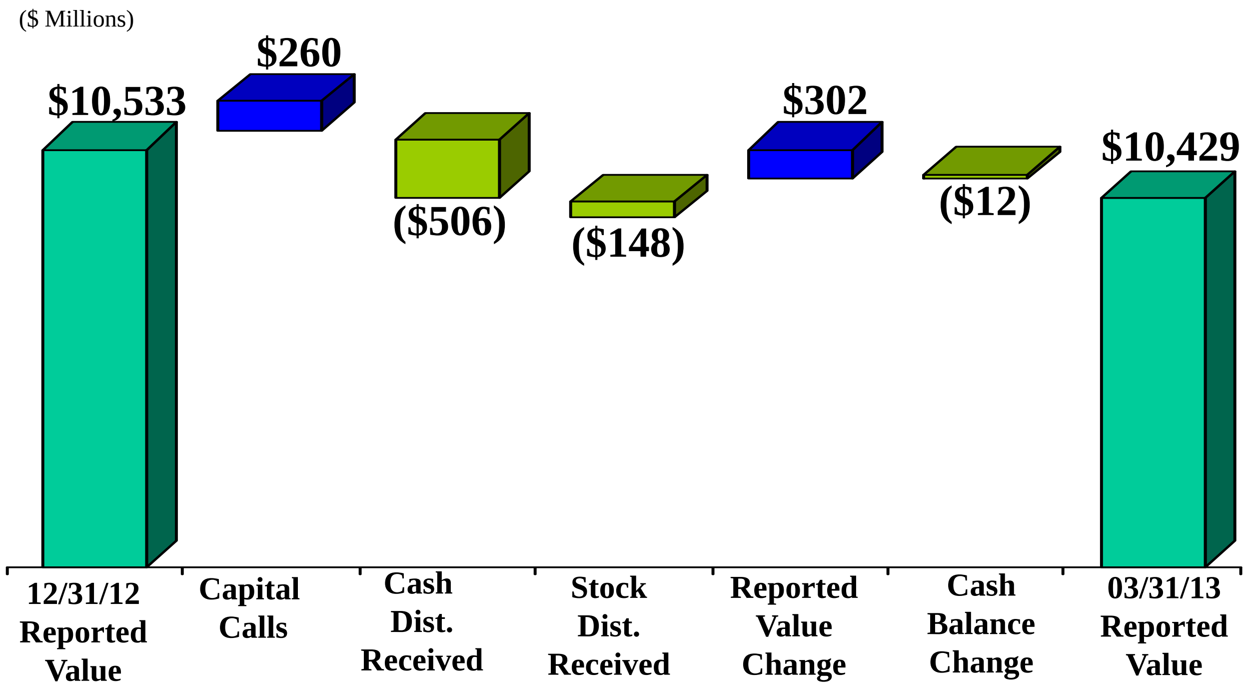
Market Value in Millions

	3/31/13		12/31/12	
Buyout Funds	$5,908	56.6%	$5,815	55.2%
Special Situation Funds	2,124	20.4%	2,208	21.0%
Venture Capital Funds	1,042	10.0%	1,029	9.8%
Fund of Funds	486	4.7%	502	4.7%
Liquidation Portfolio	390	3.7%	387	3.7%
Mezzanine Funds	236	2.2%	250	2.4%
Other	243	2.4%	342	3.2%
Total	**$10,429**	**100.0%**	**$10,533**	**100.0%**

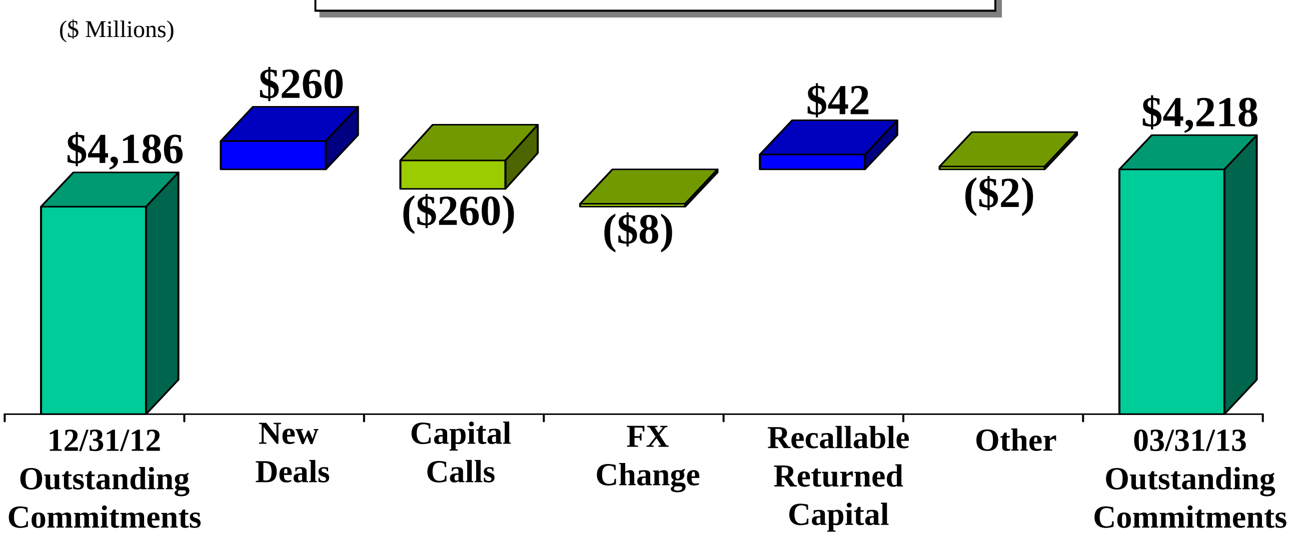
Michigan Department of Treasury, Bureau of Investments

SMRS
Alternative Investments
3/31/13

Invested Commitments



Outstanding Commitments



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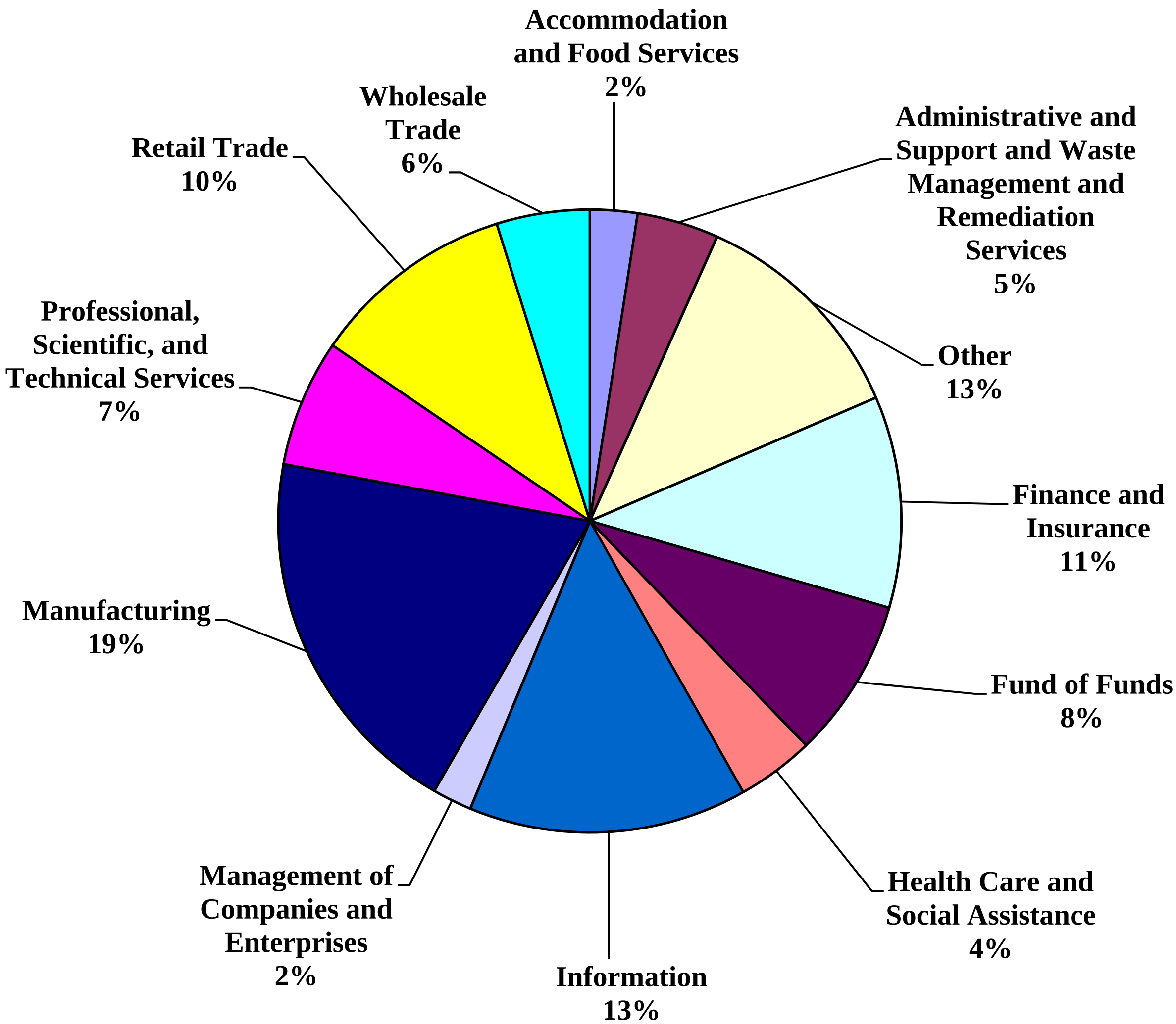
Investments by Industry



These numbers are based on the most recent available General Partner Data; primarily 12/31/12 and are subject to change.

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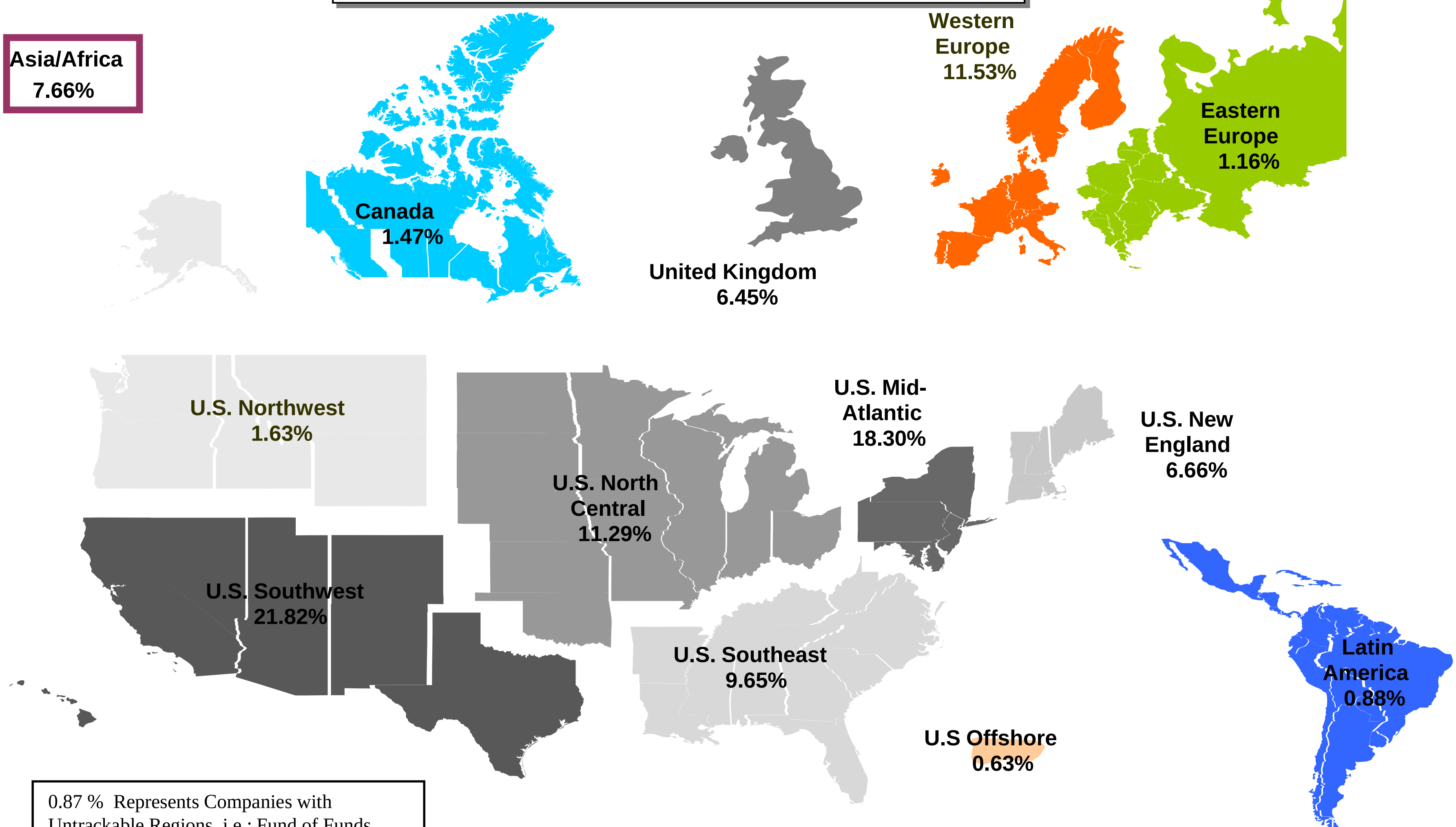
3/31/13

Investments by Region



0.87 % Represents Companies with Untrackable Regions, i.e.; Fund of Funds

Geographic Report: North America 72%, Europe 19%, Asia 7%, Other 2%

SMRS
Alternative Investments
3/31/13

Portfolio by Asset Strategy

($ Millions) Investment Fund Types	Reported Value	Outstanding Commitment	Total	Percent
Large Buyout	$ 3,562	$ 1,531	$ 5,093	35%
Small Middle Market Buyout	2,346	983	3,329	23%
Buyout Total	**$ 5,908**	**$ 2,514**	**$ 8,422**	**58%**
Early Stage Venture Capital	$ 438	$ 103	$ 541	4%
Late-Stage Venture Capital	161	68	229	1%
Multi-Stage Venture Capital	443	65	508	3%
Venture Capital Total	**$ 1,042**	**$ 236**	**$ 1,278**	**8%**
Co-Investment Funds	$ 440	$ 6	$ 446	3%
Global Opportunity Funds	646	30	676	5%
Secondary Funds	175	157	332	2%
Distressed	324	189	513	3%
Special Situations	444	550	994	7%
Natural Resources	-	-	-	0%
Special Situations Total	**$ 2,029**	**$ 932**	**$ 2,961**	**20%**
Fund of Funds	**$ 486**	**$ 197**	**$ 683**	**5%**
Hedge Funds – Equity	**$ 1**	**$ -**	**$ 1**	**0%**
Liquidation Portfolio	**$ 389**	**$ 35**	**$ 424**	**3%**
Active Small Cap - Stock Dist.	**$ 4**	**$ -**	**$ 4**	**0%**
Total Alternative Equities	**$ 9,859**	**$ 3,914**	**$ 13,773**	**94%**
Mezzanine Debt	**$ 236**	**$ 212**	**$ 448**	**3%**
Special Situations	**96**	**92**	**188**	**1%**
Hedge Funds – Fixed Income	**110**	**-**	**110**	**1%**
Cash	**128**	**-**	**128**	**1%**
Total Alternative Fixed Income	**$ 570**	**$ 304**	**$ 874**	**6%**
Total Alternative Investments	**$ 10,429**	**$ 4,218**	**$ 14,647**	**100%**

SMRS
Alternative Investments
3/31/13

Top 10 Sponsors

($ Millions) **Asset Type**	**Reported Value**	**Outstanding Commitment**	**Total**
Kohlberg Kravis & Roberts	$ 726	$ 296	$ 1,022
Credit Suisse Group	801	187	988
Carlyle Group	504	285	789
Warburg Pincus Capital	563	163	726
Blackstone Capital Partners	418	285	703
Glencoe Capital	560	71	631
TPG Group	445	128	573
Advent International	370	178	548
Green Equity Investors	361	149	510
Apax Partners, Inc.	300	109	409
Top 10 Total Value	**$ 5,048**	**$ 1,851**	**$ 6,899**

Cash Weighted Rates of Return*

(Net IRR)	**Current Qtr.**	**1 Year**	**3 Year**	**5 Year**	**10 Year**
Buyout	3.64%	14.58%	14.86%	5.44%	17.82%
Venture Capital	0.61%	7.66%	16.92%	6.71%	8.81%
Special Situations	1.89%	12.68%	13.64%	5.13%	10.17%
Fund of Funds	-0.16%	6.03%	10.49%	4.25%	9.81%
Hedge Funds	-2.74%	6.26%	1.52%	0.26%	4.37%
Mezzanine Debt	2.91%	11.98%	25.95%	13.24%	13.37%

*These numbers are based on most recent available General Partner reported data; primarily 12/31/12 and are subject to change.

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Alternative Investments
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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	10	11	21
1998	75	18	93
1999	131	44	175
2000	215	45	260
2001	359	53	412
2002	686	27	713
2003	252	23	275
2004	508	59	567
2005	1,063	113	1,176
2006*	3,015	491	3,506
2007	1,695	294	1,989
2008	1,616	713	2,329
2009	161	52	213
2010	156	140	296
2011	163	535	698
2012	188	1,413	1,601
2013	-	184	184
Cash	128	-	128
Act. Small Cap - Stock Dist	4	-	4
Total	**$ 10,429**	**$ 4,218**	**$ 14,647**

** Liquidation portfolio is 2006 vintage*

FX Exposure

	Reported Value	Oustanding Commitment	Total Exposure	Total (USD)
Euro ($1.284099/ €)	€ 902	€ 219	€ 1,121	1,439
Pound ($1.518449/ £)	£9	£3	£12	18
Yen ($0.010636/ ¥)	¥0	¥0	¥0	0

SMRS
Alternative Investments
3/31/13

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Accel Europe I, L.P.	$ 17,334,494	$ 1
Accel Europe II	25,991,748	3,300,000
Accel Growth Fund II, L.P.	5,401,985	6,300,000
Accel IX, L.P.	13,833,770	3,000,000
Accel VI, L.P.	2,855,540	-
Accel VII, L.P.	2,498,398	5,000,000
Accel VIII, L.P.	3,686,045	4,782,499
Accel VI-S	4,079,024	652,611
Accel X, L.P.	15,592,836	2,050,000
Accel XI, L.P.	2,578,772	5,280,000
Advent Global Private Equity III	411,662	20
Advent Global Private Equity IV	1,838,535	-
Advent Global Private Equity V	105,452,504	10,500,000
Advent International GPE VI-A LP	220,959,015	10,199,980
Advent International GPE VII-B, L.P.	41,585,052	157,000,000
Affinity Asia Pacific Fund II, L.P.	249,155	5,288,237
Affinity Asia Pacific Fund III, L.P.	205,970,734	32,452,428
** **Affinity Asia Pacific Fund IV, L.P.**	**-**	**124,248,438**
APA Excelsior IV, L.P.	744,280	-
APA Excelsior V	539,774	545,625
Apax Europe Fund VI	85,618,069	416,226
Apax Europe V, L.P.	5,733,460	-
Apax Europe VII, L.P.	148,503,579	11,888,842
Apax Excelsior VI	9,281,913	1,614,434
Apax US VII	44,262,567	491,302
Apax VIII - A, L.P.	5,629,460	94,000,000
Arboretum Ventures II	3,227,431	1,315,096
Arboretum Ventures III, L.P.	4,547,322	9,495,000
Ares Corporate Opportunities Fund II	44,852,551	12,514,941
Ares Corporate Opportunities Fund III, LP	76,449,197	21,335,583
Ares Corporate Opportunities Fund IV, L.P.	3,487,601	96,217,963
ARGUS Capital Partners	142,743	2,813,672
Austin Ventures VIII, L.P.	13,531,174	-
Avenue International Ltd	109,960,342	-
Avenue Special Situations Fund IV, L.P.	2,564,605	-
Avenue Special Situations Fund V, L.P.	3,867,355	-
Avenue Special Situations Fund VI (B), L.P.	46,376,454	4,645,568
Axiom Asia Private Capital Fund III, L.P.	1,329,386	33,504,751
Banc Fund VI	18,193,691	-
Banc Fund VII	27,384,579	-
Banc Fund VIII	16,136,826	5,600,000
Battery Ventures V, L.P.	68,517	-
Battery Ventures VI, L.P.	6,084,749	-
Battery Ventures VII, L.P.	10,429,830	377,778
Battery Ventures VIII	24,806,260	701,800

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
BC European Capital IX	29,206,745	64,311,715
BC European Capital VII, L.P.	1,888,883	-
BC European Capital VIII, L.P.	153,672,328	15,062,481
Berkshire Fund IV, L.P.	55,091	1,898,016
Berkshire Fund V, L.P.	1,119,162	1,900,578
Berkshire Fund VI, L.P.	43,073,241	5,408,231
Berkshire Fund VII, L.P.	109,987,473	18,077,184
Berkshire Fund VIII, L.P.	17,759,589	105,658,919
Blackstone Capital Partners IV	99,337,118	5,902,857
Blackstone Capital Partners V	217,011,640	23,181,439
Blackstone Capital Partners VI, LP	77,600,583	232,749,686
Blackstone Capital Partners V-S	20,839,244	712,401
Blackstone Mezzanine Partners	2,585,059	14,141,621
Blackstone Partners III, L.P.	947,587	8,094,960
Bridgepoint Europe IV	60,424,287	17,598,191
Brockway Moran & Partners Fund III	10,658,965	4,615,655
Carlyle Asia Fund	4,509,800	1,067,064
Carlyle Europe Partners	200,349	435,810
Carlyle Europe Partners II	28,727,621	4,766,395
Carlyle Europe Partners III	102,865,503	27,004,391
Carlyle Partners II, L.P.	906,323	-
Carlyle Partners III, L.P.	613,383	3,031,427
Carlyle Partners IV, L.P.	129,326,334	16,009,296
Carlyle Partners V L.P.	236,745,134	58,052,441
Carlyle Partners VI, L.P.	-	175,000,000
Castle Harlan Partners IV	12,943,326	5,647,298
Castle Harlan Partners V	25,162,970	48,882,345
CCMP Capital Investors II	145,691,673	9,120,022
Clarus Life Sciences II, L.P.	23,975,493	17,290,000
Clarus Lifesciences I	24,263,370	4,079,460
Clearstone Venture Partners (idealab)	103,690	-
Clearstone Venture Partners II (idealab)	3,387,800	-
Clearstone Venture Partners III	23,703,717	1,612,000
** **CM Liquidity Fund, L.P.**	**-**	**25,000,000**
CMEA Ventures VI	12,805,148	1,950,000
CMEA Ventures VII, L.P.	20,277,401	9,600,000
Coller International Partners III, L.P.	644,037	-
Coller International Partners IV	23,519,780	14,000,000
Coller International Partners V, L.P.	119,715,896	43,600,000
Coller International Partners VI, L.P.	31,134,503	74,566,482
Crescent Mezzanine Partners VI, L.P.	11,881,699	58,604,241
CSFB Fund Co-Investment Program	113,889	-
CSG / DLJ Fund Program II	101,166,928	21,615,855
CSG Fund Investment Program III - 2004	108,427,189	9,738,227
CSG Fund Investment Program III - 2006	103,307,554	35,071,431
CSG Fund Investment Program V, L.P.	63,697,726	51,275,495
CSG Fund Investment Program VI, L.P.	1,931,120	33,000,000
CSG Seasoned Primary Fund Investment Program	389,454,413	35,033,680

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
DLJ Fund Investment Program I	33,037,505	1,689,659
DLJ Investment Partners II	1,098,568	0
DLJ Investment Partners III	24,021,565	79,829,034
DLJ Merchant Banking Partners III, L.P.	18,735,794	2,950,719
DLJ Merchant Banking Ptrs II, L.P.	1,686,133	1,856,746
Doughty Hanson & Co IV	122,247,423	3,078,834
Doughty Hanson & Co V	114,545,932	36,313,732
Doughty Hanson Co. III L.P.	16,501,655	3,102,822
EDF Ventures III	4,655,542	164,738
Energy Investors III	1	-
Essex Woodlands Health IV	2,746,018	-
Essex Woodlands Health V	9,542,579	-
Essex Woodlands Health Ventures Fund VIII	56,683,911	19,125,000
Essex Woodlands Health VI	13,543,872	1,312,500
Essex Woodlands Health VII	51,467,938	4,000,000
FirstMark Capital Fund II (fka: Pequot PEFII)	1,637,734	-
FirstMark Capital III (fka: Pequot PEFIII)	4,271,956	272,000
FirstMark Capital IV (fka: Pequot PEFIV)	38,892,938	3,961,386
Flagship Ventures Fund 2004	21,342,552	-
Flagship Ventures Fund 2007, L.P.	50,222,716	1,275,000
Flagship Ventures Fund IV, L.P.	7,524,103	9,150,000
Fox Paine Capital Fund II, LP	20,181,996	16,227,680
Frontenac VIII	5,793,575	1,800,000
Glencoe Capital Michigan Opportunities Fund, LP	100,350,750	57,906,428
Glencoe Capital Partners II	9,269,096	355,381
Glencoe Capital Partners III	10,512,159	6,170,138
Glencoe Stockwell Fund	306,990,045	-
Glencoe Stockwell Fund II, L.P.	132,413,017	6,327,117
Globespan Capital Partners IV (Jafco)	16,395,162	625,000
Globespan Capital Partners V, LP	76,802,418	9,375,000
Green Equity Investors III	9,299,409	9,112,215
Green Equity Investors IV	95,913,873	1,136,036
Green Equity Investors V	243,516,360	25,966,435
Green Equity Investors VI, L.P.	11,883,735	112,960,297
Grotech Partners V	406,935	-
Grotech Partners VI	11,577,769	-
GSO Capital Opportunities Fund II, L.P.	7,272,373	33,829,330
H.I.G. Bayside Debt & LBO Fund II, LP	10,343,225	9,993,557
H.I.G. Brightpoint Capital Partners II	593,216	-
H.I.G. Capital Partners IV, L.P.	23,030,021	4,874,167
H.I.G. Europe Capital Partners L.P.	28,384,731	6,298,495
HarbourVest Int'l III Direct	5,126,522	1,000,000
HarbourVest Int'l III Partnership	6,054,333	1,200,000
HarbourVest IV Partnership Fund LP	223,735	600,000
HarbourVest Partners V - Direct Fund LP	235,329	-
HarbourVest V Partnership	1,584,385	300,000
HarbourVest VI - Direct Fund LP	7,080,387	750,000
HarbourVest VI Partnership	32,872,772	2,500,000

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Healthcare Venture V	1,180,302	-
Healthcare Venture VI	917,054	-
Healthcare Venture VII	4,516,158	487,500
Healthcare Venture VIII	20,336,294	8,500,000
InterWest Partners IX	12,664,939	3,200,000
JAFCO America Technology Fund III	1,254,445	-
JP Morgan Chase 1998 Pool Participation Fund	3,327,115	1,604,605
JP Morgan Chase 1999/2000 Pool Participation Fund	3,281,797	4,017,243
JP Morgan Partners Global Investors	32,288,192	3,184,178
JPMorgan Global Investors Selldown	26,318,691	5,596,205
Kelso Investment Associates VII	64,880,144	4,970,176
Kelso Investment Associates VIII	92,870,253	44,387,713
Khosla Ventures III, L.P.	59,680,323	9,500,000
Khosla Ventures IV, L.P.	16,169,740	33,250,000
KKR 2006 Fund, L.P.	226,277,345	20,744,700
KKR Asia	114,002,077	11,065,764
KKR Asian Fund II, L.P.	-	50,000,000
KKR China Growth Fund	19,495,107	32,584,500
KKR E2 Investors (Annex) Fund	14,111,275	18,145,079
KKR European Fund II	120,788,688	-
KKR European Fund III	87,590,396	47,170,921
KKR European Fund LP 1	4,030,718	307,605
KKR Millennium Fund	132,880,617	-
KKR North America Fund XI, L.P.	6,493,749	115,764,369
Lightspeed Venture Partners VI	10,779,581	3,299,089
Lightspeed Venture Partners VII	36,616,094	1,385,436
Lion Capital Fund I (HME II)	1,887,806	13,007,478
Lion Capital Fund II	49,710,567	5,122,878
Lion Capital Fund III, L.P.	45,202,199	34,810,704
Long Point Capital Fund	1	41,415
Long Point Capital Fund II	14,361,131	1,246,076
Matlin Patterson Global Opportunities Partners	36,897	-
MatlinPatterson Global Opportunities Partners II	3,118,798	92,719
MatlinPatterson Global Opportunities Partners III	69,483,118	17,421,271
Menlo Ventures IX, L.P.	13,300,996	-
Menlo Ventures VIII	2,315,304	-
Menlo Ventures X, L.P.	22,583,283	6,000,000
Menlo Ventures XI, L.P.	7,278,581	12,000,000
MeriTech Capital Partners II, L.P.	4,895,030	1,850,000
Meritech Capital Partners III, L.P.	62,095,419	1,200,000
Meritech Capital Partners IV, L.P.	12,115,275	9,600,000
MeriTech Capital Partners, L.P.	411,263	6,187,500
Michigan Growth Capital Partners II, L.P.	12,444,713	167,555,287
Michigan Growth Capital Partners, LP	173,167,531	36,377,842
MPM BioVentures III	6,127,239	-
New Leaf Ventures II, L.P.	22,046,777	7,700,000
Nordic Capital VI, L.P.	44,651,346	-
Nordic Capital VII	64,410,252	13,582,403

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Nordic Capital VIII, L.P. (Alpha)	-	51,363,960
North Castle Partners III	2,964,459	473,486
NV Partners II	148,192	43,053
Oak Investment Partners X, L.P.	16,789,735	-
Oak Investments Partners IX, L.P.	2,720,177	-
** **OCM Opportunities Fund IX, L.P.**	**3,750,000**	**71,250,000**
OCM Opportunities Fund VII (B), L.P.	17,580,423	25,179,089
OCM Opportunities Fund VII, L.P.	15,636,519	-
OCM Opportunities Fund VIII B, L.P.	31,575,609	7,500,000
OCM Opportunities Fund VIII, L.P.	36,692,410	-
OCM Principal Opportunities Fund IV	40,979,780	5,002,377
One Liberty Fund III	1,045,999	-
One Liberty Fund IV	1,935,112	-
One Liberty Ventures 2000	13,300,790	-
Paine & Partners Capital Fund III, LP	109,855,022	17,286,604
Parthenon Investors II	15,097,181	3,417,779
Parthenon Investors III	62,479,334	8,527,123
Parthenon Investors IV, L.P.	3,014,589	36,121,683
Peninsula Capital Fund III	2,323,022	1,400,000
Peninsula Capital Fund IV	13,521,202	2,201,026
Permira Europe III LP	5,743,733	327,445
Permira Europe IV	109,691,945	10,914,842
Phoenix Equity Partners IV	12,933,239	4,391,857
Primus Capital Fund IV	5,285	500,000
Primus Capital Fund V	15,869,703	712,500
Providence Equity Partners V, L.P.	59,454,452	13,264,586
Providence Equity Partners VI, L.P.	263,892,733	34,043,996
Questor Partners Fund II	14,863,926	5,794,612
RFE Investment Partners VII, LP	24,210,734	1,473,332
RFE Investment Partners VIII, L.P.	5,842,981	23,328,059
RFE IV Venture	443,528	-
RFE V Ventures	45,672	397,091
Riverside Micro Cap Fund I, LP	63,305,102	4,021,695
Riverside Micro-Cap Fund II, L.P.	20,631,498	14,142,624
Silver Lake Partners II	15,651,330	3,531,586
Silver Lake Partners III	76,626,490	34,414,492
Silver Lake Partners IV, L.P.	-	50,000,000
Sprout Capital IX	2,403,467	-
Sprout Capital VIII, L.P.	128,616	-
TCW Shared Op Fund III	3,999,627	-
TCW Shared Op Fund IV	10,244,231	4,603,325
TCW Shared Op Fund V	28,945,718	11,993,475
TCW/Crescent Mezzanine	1	-
TCW/Crescent Mezzanine II	1	-
TCW/Crescent Mezzanine Partners III, L.P.	5,340,590	4,552,763
TCW/Crescent Mezzanine Partners IV, L.P.	39,095,036	6,316,808
TCW/Crescent Mezzanine Partners V, LLC	128,688,767	11,088,637
The Huron Fund III, L.P.	27,539,568	8,672,500

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
** **The Huron Fund IV, L.P.**	**-**	**35,000,000**
The Shansby Group 4	38,117,818	520,829
The Shansby Group 5 (TSG5)	114,961,046	14,121,005
TPG IV (Texas Pacific Group IV)	27,547,553	3,676,952
TPG Partners III, LP	38,775,905	2,087,002
TPG Partners VI, L.P.	194,742,304	82,354,401
TPG V (Texas Pacific Group V)	184,351,659	40,374,046
TSG6, L.P.	26,967,146	99,523,562
Tullis - Dickerson Capital II	6,461,249	-
Tullis - Dickerson Capital III	9,679,315	-
Unitas Asia Opportunity Fund	197,244	-
Unitas Asia Opportunity Fund II	76,068,625	26,604,144
Unitas Asia Opportunity Fund III	61,778,930	31,988,576
Warburg Pincus Equity Partners, L.P.	11,010,259	-
Warburg Pincus International Partners	29,301,090	-
Warburg Pincus Private Equity IX	139,008,818	-
Warburg Pincus Private Equity VIII, L.P	55,936,791	-
Warburg Pincus Private Equity X, L.P.	285,128,448	6,300,000
Warburg Pincus Private Equity XI, L.P.	41,626,056	156,500,000
Warburg Pincus Ventures Int'l	505,120	-
Weiss, Peck & Greer V (adm: Opus Capital)	4,592,857	386,240
WestAm COREplus Private Equity QP	11,302,040	2,110,761
WestAm Special Private Equity Partners	8,476,559	2,317,427
Wind Point Partners III	2,956,075	-
Wind Point Partners IV	495,700	1,541,518
Wind Point Partners V, L.P.	13,003,717	455,013
Wind Point Partners VI	41,725,524	7,086,737
Wind Point Partners VII	50,483,279	24,660,380
Total Alternative Investments *	**$ 10,296,560,790**	**$ 4,218,111,186**
Cash	108,045,358	-
Active Small Cap Cash	19,939,688	-
Active Small Cap	4,124,093	-
Grand Total	**$ 10,428,669,929**	**$ 4,218,111,186**

* Total Alternative Investment amounts do not include Cash and Active Small Cap

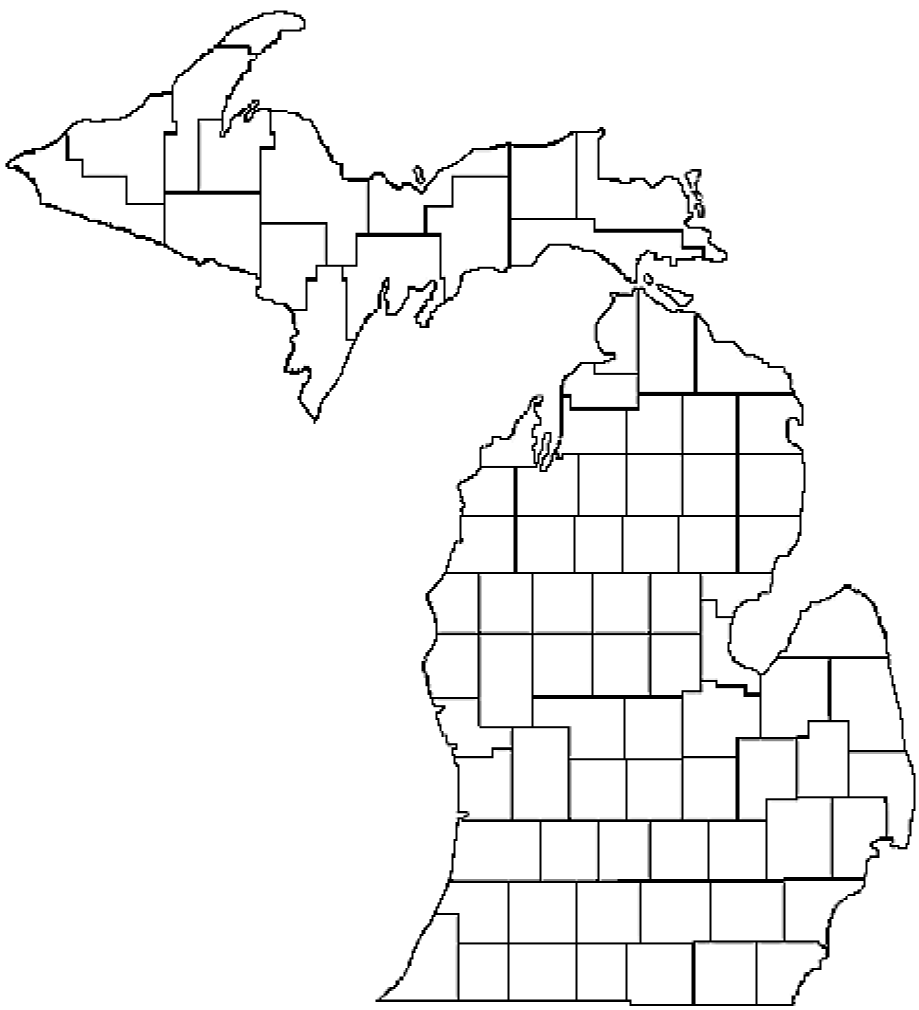
** New commitment made during quarter reported

STATE OF MICHIGAN
RETIREMENT SYSTEMS

BASKET CLAUSE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

JUNE 18, 2013



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

SMRS
Basket Clause Investments
3/31/13

The basket clause investments at March 31, 2013, were $4.17 billion fair market value ("FMV") or 7.9% of the total portfolio market value of $52.56 billion.

	FMV	
Total Absolute and Real Return	$3,918,076,383	7.4%
Total International Equity	256,844,087	0.5%
Total investments to date	**$4,174,920,470**	**7.9%**

SMRS

Section 20D Investment Holding

3/31/13

ABSOLUTE AND REAL RETURN	FAIR MARKET VALUE
Aetos - Sand Hill	$1,110,871,682.36
Apollo Credit fund	359,157,403.06
Apollo Credit Strategies Fund	125,101,509.00
Apollo European Principal Finance Fund II	12,906,891.74
Apollo Structured Credit Recovery Fund II	56,310,885.00
Bain Absolute Return Capital	50,771,625.00
Blackstone - Tahquamenon	322,304,410.37
Brevan Howard Multi-Strategy Fund	107,128,540.00
Domain - Abernathy Fund I, LLC	296,349,377.67
Domain - Fairfield Settlement Partners, LLC	79,518,277.74
Elliott International	10,604,183.00
Emerald Co-invest	30,777,752.14
Energy Recapitalization and Restructuring Fund	15,821,794.61
EnTrust - White Pine	283,863,998.50
Fortress MSR Opportunities	41,929,145.83
FrontPoint Multi-Strategy Fund	4,139,315.70
Galaxie Ave., LLC	100,197,779.00
Highbridge Principal Strategies - HPS III	127,269,942.49
HPS Senior Loan Fund II	63,189,252.78
JP Morgan Global Maritime Fund	6,891,578.42
KKR Lending Partners	52,065,404.23
Lakewater Fund I, LLC	172,924,703.58
Lakewater Fund II, LLC	111,124,276.71
Lakewater Fund III, LLC	68,512,853.22
MP Securitized Credit Fund	51,838,940.00
PSAM - Spartan Fund	32,241,892.80
Red Kite Mining Fund	33,140,018.50
SJC Direct Lending Fund I	137,044,469.68
SJC Direct Lending Fund II	54,078,479.58
TOTAL ABSOLUTE AND REAL RETURN	**$3,918,076,382.71**

INTERNATIONAL EQUITY	
LACM Emerging Markets Fund	**$256,844,087.01**

GRAND TOTAL 20D INVESTMENTS	**$4,174,920,469.72**
as % of TOTAL PORTFOLIO (MKT)	
$52,557 million	**7.9%**

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.