INVESTMENT ADVISORY COMMITTEE MEETING

September 5, 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

September 5, 2013

Agenda

9:30 a.m.	**Call to Order and Opening Remarks**
9:40 a.m.	**Approval of Minutes of 6/18/13, IAC Meeting** • **Meeting Dates for 2014** • **Meeting Topics**
9:45 a.m.	**Executive Summary & Performance for Periods Ending 6/30/13**
10:00 a.m.	**Current Asset Allocation Review**
10:10 a.m.	**Round Table Discussion**
10:20 a.m.	**Principal Global Investors – *Randy Mundt, President and Chief Investment Officer – Principal Real Estate Investors***
10:50 a.m.	**Review of Investment Reports** • **Real Estate Review**
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***
- ***Fixed Income***
- ***Alternative Investments***
- ***Basket Clause***

<u>2013 Meeting Schedule</u>

Tuesday, December 3, 2013

All meetings start at 9:30 a.m.

www.michigan.gov/treasury

MEETING TOPICS

I. Proposed Meeting Dates for 2014

Thursday, March 6, 2014
Thursday, June 5, 2014
Thursday, September 4, 2014
Tuesday, December 3, 2014

II. Meeting Topics

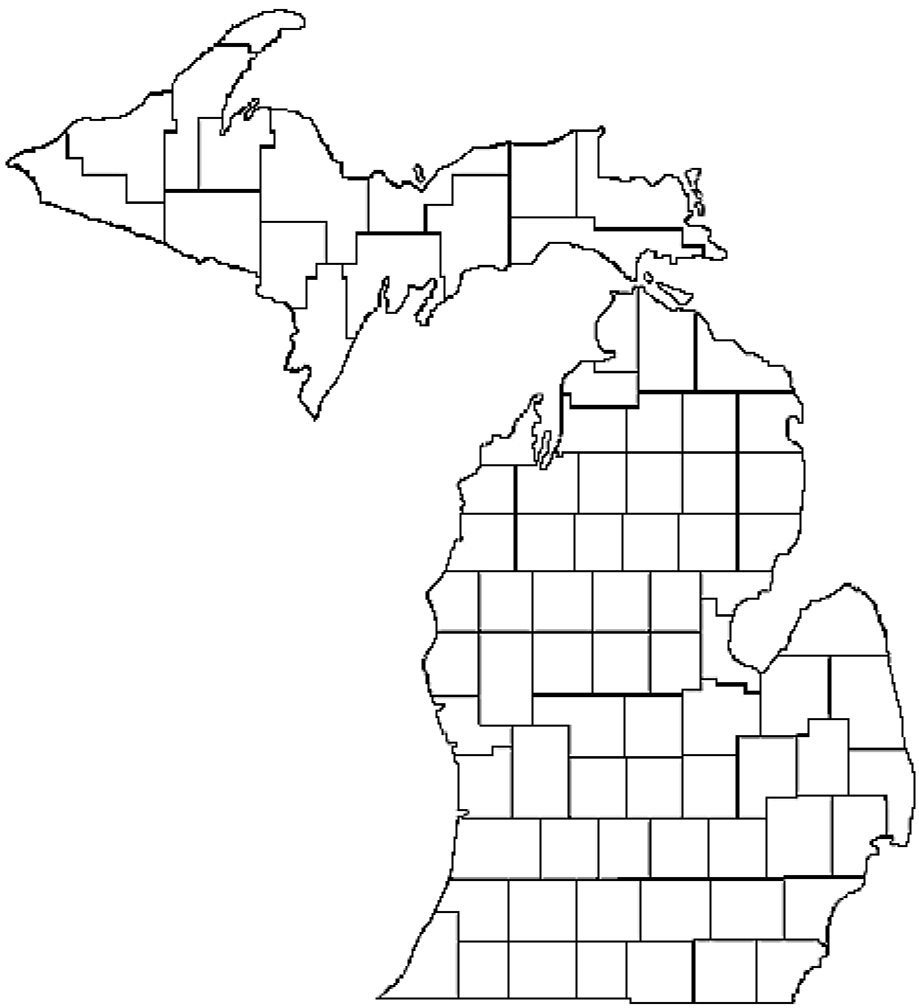
- **Possible topics for future meetings:**
  - **Rebalance Policy**
  - **U.S. versus Foreign Fixed Income**
  - **Distressed Funds**
  - **Number of Managers**
  - **Hedge Funds / Absolute Return**
  - **International Equities**
  - **Pros and cons on different investment approaches to asset allocation**
  - **Have each portfolio manager give an Executive Summary of their area**
  - **Economic Outlook**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

MINUTES

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

INVESTMENT ADVISORY COMMITTEE

The Investment Advisory Committee (IAC) held its quarterly meeting on Thursday, June 18, 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
Steve Arwood, LARA
Phillip J. Stoddard, DTMB

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

Others in attendance: Becky Gratsinger, Jim Voytko, Molly Jason, Ben Spalding, Renaye Manley, and June Morse. Special guests from Apollo: Marc Rowan, Robert Burdick, Jeremy Bergman, and Seth Ruthen.

Call to Order

Chairman Khouri called the June 18, 2013, IAC meeting to order at 9:30 a.m. and thanked everyone for taking time from their busy schedules to attend the June IAC meeting. He began by noting that the agenda was full and included a guest speaker from Apollo Global Management. He noted that the asset class chosen for this meeting's discussion was fixed income which is approximately 13% of the total plan. He noted this is about half of the typical pension plan fund. He also mentioned that everyone is talking more about credit and how it fits into portfolios.

Approval of Minutes of March 7, 2013

Chairman Khouri asked for a motion to approve the minutes of the March 7, 2013, IAC meeting. Mr. James Nicholson so moved, seconded by Mr. Erik Lundberg; there were no objections.

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

Executive Summary & Performance

Mr. Braeutigam briefly discussed the performance of the plan ending March 31, 2013, noting that the return for the plan was 10.4% for the one year, 9.8% for the three year, and 8.2% for the ten year. This has surpassed the actuarial rate of return for ten years now. The absolute return has been good along with the equity markets being up during this time. Mr. Braeutigam turned the meeting over to Mr. Greg Parker to review the Executive Summary section noting that he would return to performance after Mr. Parker concludes.

Executive Summary

Mr. Parker began by noting that the system has paid out $2.9 billion net of contributions over the past twelve months. This figure represents 5.7% of the March 31, 2013, market value. The plan put to work approximately $1.2 billion into the absolute return and real return/opportunistic strategies over the past year. These monies came from a combination of international equity, long-term fixed income, and real estate. He noted there is about $5.9 billion in outstanding commitments in illiquid asset classes, which is about 11% of the March 31, 2013, market value. These are all important factors to keep in mind when making investment decisions.

He provided a brief update on the capital markets that the interest rates for bonds, over the past twelve months, have dropped. Corporate spreads were about average and high-yield spreads were below normal. He noted for the fixed income portfolio, this would not be a great time to go into high yield. The ten-year sovereign rates in Italy and Spain decreased by 160 basis points over the year, the lowest they have been since late 2010. He noted that over the past one and three years, stocks have outperformed bonds, and small-cap stocks have outperformed large-cap stocks. However, when looking at the sector levels, it is the defensive, safer sectors with lower volatility that have performed better; the U.S. has outperformed foreign stocks with the U.S. usually considered safer than foreign stocks. Also, developed has outperformed emerging.

Mr. Parker discussed the economic backdrop. He mentioned the job market and housing, which both seem to be improving. In the U.S. there has been a recession, but today looking at the real GDP the U.S. is higher than in 2007. Japan and the Eurozone have yet to recover from the 2008 financial crisis. In Japan, in response to the poor economic conditions, Prime Minister Shinzo Abe is attempting to jump-start the economy by pushing through a number of large and controversial measures, which includes a massive fiscal stimulus, aggressive monetary easing, and structural reforms.

Mr. Parker talked about fixed income, noting that the more traditional long-term fixed income has outperformed the passive benchmark in Barclays Aggregate Index. He discussed the concerns with the benchmark today and the rates being influenced by the Federal Reserve policy. Economists have come to believe that the impact to longer term rates is in the neighborhood of 100 to 200 basis points. He noted that the Federal Reserve announced additional QE policy guidelines that are sometimes referred to as the Evans Rule. This 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 are well anchored. He concluded noting that at the end of March 2013, the plan had 13.3% of the total assets allocated to long-term fixed income, with 75% of the assets managed internally with almost 97% in bonds rated as investment grade. There were several questions asked and lengthy discussions regarding the topics in the Executive Summary section.

Performance

Mr. Braeutigam continued with the performance section digging deeper into the different asset classes and their rates of return. He noted that domestic equities have been strong and in comparing them to their peers, the trend appears to be good; and alternatives, with a high quality portfolio, have always done well relative to peers. He discussed reducing the allocation in alternatives, which is a slow process that will be done in a thoughtful, deliberate manner. He discussed the changes in international equities, which now includes emerging markets and an increase in the number of external managers. Mr. Braeutigam reviewed the three newer asset classes, real return and opportunistic, absolute return, and infrastructure which can, as newer classes, have a 'J' curve offset as seen in the real return and opportunistic asset class. He noted that the absolute return portfolio has, in his opinion, one of the best numbers in public funds in the U.S. He also discussed the hedge funds in the absolute return portfolio. He noted the 11.8% return in the infrastructure portfolio stating that there has been much thought into the projects, the GPs, and the co-investments that are being made, which has resulted in excellent returns. There was a brief discussion on the opportunities in infrastructure and how infrastructure helps to diversify the fund.

Remarks

Chairman Khouri discussed the topic options for the next few meetings, noting that performance and asset allocation are a normal part of the agenda. He noted that an asset liability study was discussed at one meeting and then deeper dives into asset classes have been discussed at other meetings, which included equities and infrastructure with fixed income being discussed at this meeting. Real estate will be the asset class discussed at the September meeting.

Chairman Khouri introduced the guest of honor – Mr. Marc Rowan, Co-founder and Senior Managing Director of Apollo Global Management, LLC. Chairman Khouri noted that Mr. Rowan is one of the founding partners of Apollo Management. He asked him to talk a little about the firm, about the space, how it has changed over the last five years, and what he sees going forward over the next five years. He thanked Mr. Rowan for coming to the IAC meeting.

Apollo Presentation – *Mr. Marc Rowan, Co-founder and Senior Managing Director of Apollo Global Management, LLC*

Mr. Rowan thanked everyone for the invitation noting that it is a pleasure to be at the meeting. He provided a brief description of their business noting that he is one of three founders of Apollo, which has been around for 23 years, and the three of them have been together for 29 years. He noted that Apollo is on the New York Stock Exchange with roughly an $11 million market cap, and globally they have approximately 650 employees. He discussed the structure of the firm, which is in the top ten in terms of size with roughly $114 billion of assets under management, with $69 billion of credit and $45 billion of equity and their client base includes state retirement plans, endowment funds, and high net worth individuals. He noted that their equity business is driven by opportunity; and that he does not believe that their equity business will be or should be any bigger in five years. He discussed the credit business indicating that five years from now it will be $150 billion to $200 billion conservatively with the growth being driven by what has happened around us; and ironically, government intervention and regulation has been the single most positive driver of their business. Also, the destruction and deregulation of the banking system has driven risk out of all matter of fiduciaries which basically pushed credit into the investment market place for the first time. There were several questions asked and answered about credit and the banking industry.

Mr. Rowan discussed the markets noting that so much of what has happened to the equity or fixed income markets has been the right place / the right time. Interest rates going to near zero has been an unbelievable impact on every asset class. The retirement systems have not been big winners in this game, with the SMRS being an exception. He noted that many people, as a reaction to the financial crisis, took all the risk off the table. Mr. Rowan believes that the SMRS staff has done a lot of sensible things during the financial crisis with a positive impact on the returns. He discussed the size of the government intervention in Japan, and noted that limitless amounts of money can be printed, then sold to their own system which created inflation in an aging population with no immigration, with declining productivity, and declining demand. He discussed the investment world post crisis noting that their reaction to risk has been to take risk off, and to go short and liquid. Many have made money because interest rates have fallen, but it is masking a lot of problems in the lack of strategy, and this is not a long-term solution. He discussed the increase of volatility, noting that the volatility in Japan is off the chart. He noted that weekly high yield bonds are up in terms of redemption.

Mr. Rowan discussed credit opportunities which are generally driven by three sources: secular, which is the result of changes in behavior of market participants often the result of regulatory changes. The second is cyclical, which is the result of significant market dislocation, usually transitory in nature, and are happening faster and faster. The third is proprietary origination, which is believed to be unique opportunities sourced in specific market segments as a result of specialized knowledge. He believes that all three are good sources of credit opportunities and all three have a place in the portfolio. He discussed how the markets are subject to volatility spikes and that flexibility is key. He noted the secondary loan obligation of BBB versus loan spreads, and the BB versus high yield bond spreads, where the bank loan pays more in interest than the higher bond – senior credit pays more than junior credit. He discussed the proprietary opportunities in different types of businesses and how they have driven the businesses today, some positively and some negatively. He talked about how fixed income has shifted over the past few years. Fixed income used to do two things: it provided returns and was liquid – one regime covered both things. He noted that he believes that today there is a choice to have liquidity or yield, but you can not really have both, which is why the typical fixed income bucket is now 15% to 20% of the portfolio, versus 25% to 30%, and has migrated to credit. There were lengthy discussions about the various topics in the fixed income area and greater insight was provided by Mr. Rowan from his presentation.

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, September 5, 2013. Chairman Khouri adjourned the meeting at 11:31 a.m. and thanked everyone for coming.

Approved:

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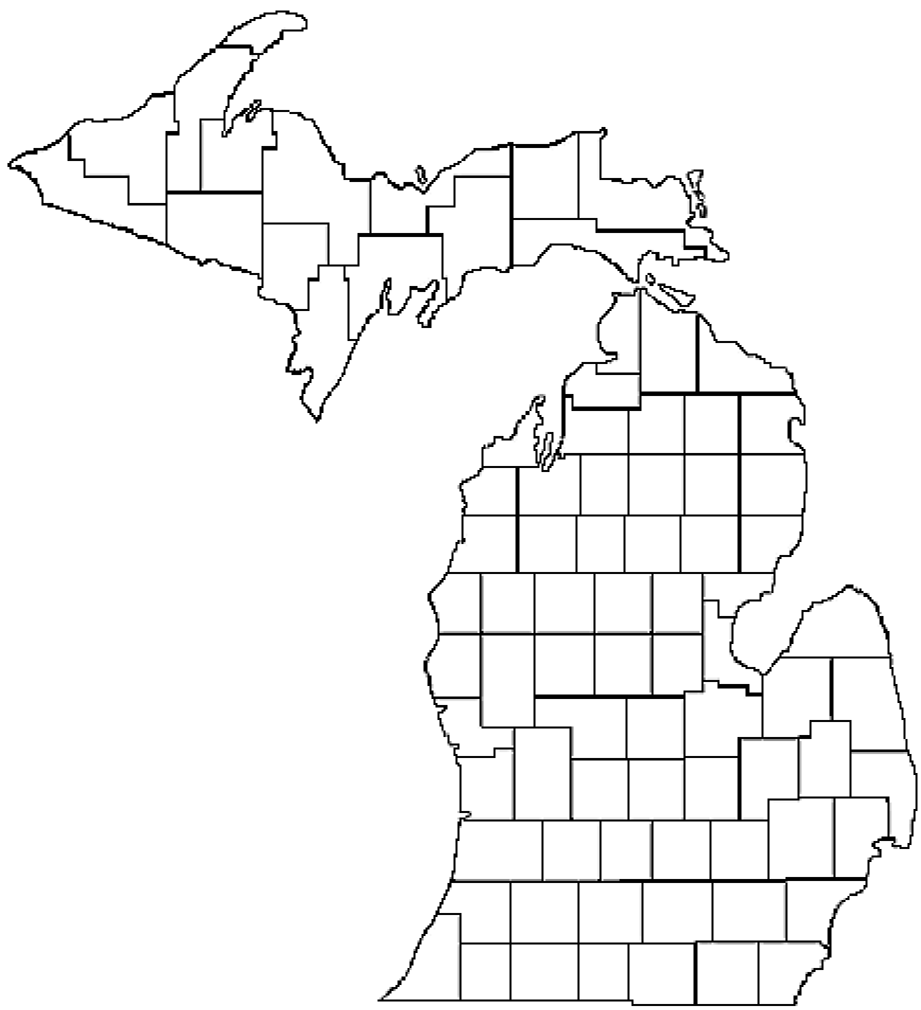
Nick Khouri, Chairman

STATE OF MICHIGAN
RETIREMENT SYSTEMS

EXECUTIVE SUMMARY

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



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

EXECUTIVE SUMMARY

June 30, 2013

Performance

Some key performance highlights.

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	12.2%	11.9%	4.6%	5.3%	7.4%
Policy Return	12.6%	13.4%	5.9%	5.7%	7.4%
Peer Median Return	12.4%	11.4%	4.6%	5.3%	7.3%
Rank vs. Peers	56	36	53	49	47

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

- The plan's return relative to peers for the one, five, seven, and ten-year time periods was on target. The plan's return was substantially higher than peers for the last three years.

- With the strong public equity market, the plan was slightly below its policy return as we are below target allocation to U.S. public equities.

Asset Allocation

Using equities to pay benefits, increasing diversifying strategies.

- The combined systems paid out $2.7 billion net of contributions over the past twelve months ending in June. This figure represents 5.5% of the June 30, 2012, market value.

- The plans put to work $1.2 billion in real return / opportunistic and absolute return strategies over the past year. Over the same time period, domestic equities and alternative investments (private equity) were decreased by $3.9 billion. Cash equivalents, as a percent of the total, was increased by $0.6 billion; from 4.6% to 5.5%.

- The plans have outstanding capital commitments to fund approximately $6.1 billion in illiquid asset classes, primarily private equity. This figure is about 11.6% of the June 2013 market value and is an additional liquidity consideration. By contrast, the current outstanding commitments are roughly $820 million 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's allocation of 12.7%. With the 10-year U.S. Treasury yielding approximately 2.5% 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.

Capital Markets

An update on stocks and bonds.

- After numerous warnings and false starts, the market finally experienced a meaningful increase in interest rates. The 10-year U.S. Treasury rate at the end of July was 2.6%; this is the highest month-end closing price since August of 2011 and it is 1.1% higher than one year ago.

- Interest rates still remain very low. The 10-year U.S. Treasury closed July at a rate of 2.6%, credit spreads are normally priced at 1.3% over in contrast to high-yield spreads that are now 30 bps below normal. Italian and Spanish ten-year sovereign rates have dropped by 200 bps since a year prior.

- U.S. long-term fixed income is priced to return a very low rate of return. At the end of June, the Barclays U.S. Aggregate Index had a yield to maturity of only 2.0%. The plans currently have 12.7% of the assets allocated to traditional fixed income.

- The returns in domestic equities continue to be strong. The broad domestic market index, S&P 1500, returned 26% over the past one year ending in July. Over the past one, three, five, and ten years small caps have annually outperformed large caps by 9.7%, 0.9%, 1.2%, and 2.0% respectively.

- Annualized over the past one, three, five, and seven years foreign stocks have underperformed the U.S. by 9.0%, 11.5%, 7.8%, and 4.0% respectively. As of the end of July, emerging markets have trailed developed markets over the past one, three and five years annualized by 21.5%, 7.6% and 0.5% respectively. Before costs, the currency hedged developed market index outperformed the dollar priced benchmark by 4.4% over the past year ending July.

<u>Economic Backdrop</u>

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

- Growth in the U.S. is positive, though tepid. The GDP is growing at a rate of just 1.7%. After being decimated during the financial crisis of 2008, jobs growth and housing are bright spots. Though both are still more than a year from being fully recovered. With 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 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 to 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 to 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 – Real Estate

A summary

Real Estate	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	9.5%	11.9%	-2.8%	1.7%	5.2%
NPI Benchmark	9.3%	11.7%	1.5%	4.3%	7.3%
Peer Median Return	9.7%	12.8%	-1.6%	1.7%	5.3%
Rank vs. Peers	53	68	76	52	54

- The strategic objective of the real estate portfolio is to provide diversification from traditional capital market risk. The real estate portfolio sectors are categorized as apartment, hotel, industrial, office, residential, retail, and land.

- As a private market asset class, real estate investments are typically made through partnerships and other similar legal entities. The top ten advisors make up about 75% of the plan's total real estate investments.

- The private market benchmark is about 60% correlated to the one-year lagged public market REIT Index. However, the private market returns are about 1/3 as volatile as the REIT Index.

- Real estate remains attractively priced versus bonds; however, valuation metrics are higher than normal, meaning repeating past performance most likely will prove to be difficult. On the other hand, there is a great deal of momentum in real estate prices. Real estate assets have delivered positive rates of returns for thirteen consecutive quarters. From 1994 until 2008, the NPI benchmark marked positive rates of returns for 58 consecutive quarters.

- At the end of June, 2013, the plan had 9.7% of the total assets ($5.1 billion) allocated to the real estate asset class with $249 million in unfunded commitments. Over the past year, approximately $260 million has been withdrawn from real estate strategies.

- Principal Global Investors Chief Investment Officer Randy Mundt will give an overview of the real estate market. Principal manages nearly $550 million of the plan's assets; both real estate and securitized debt.

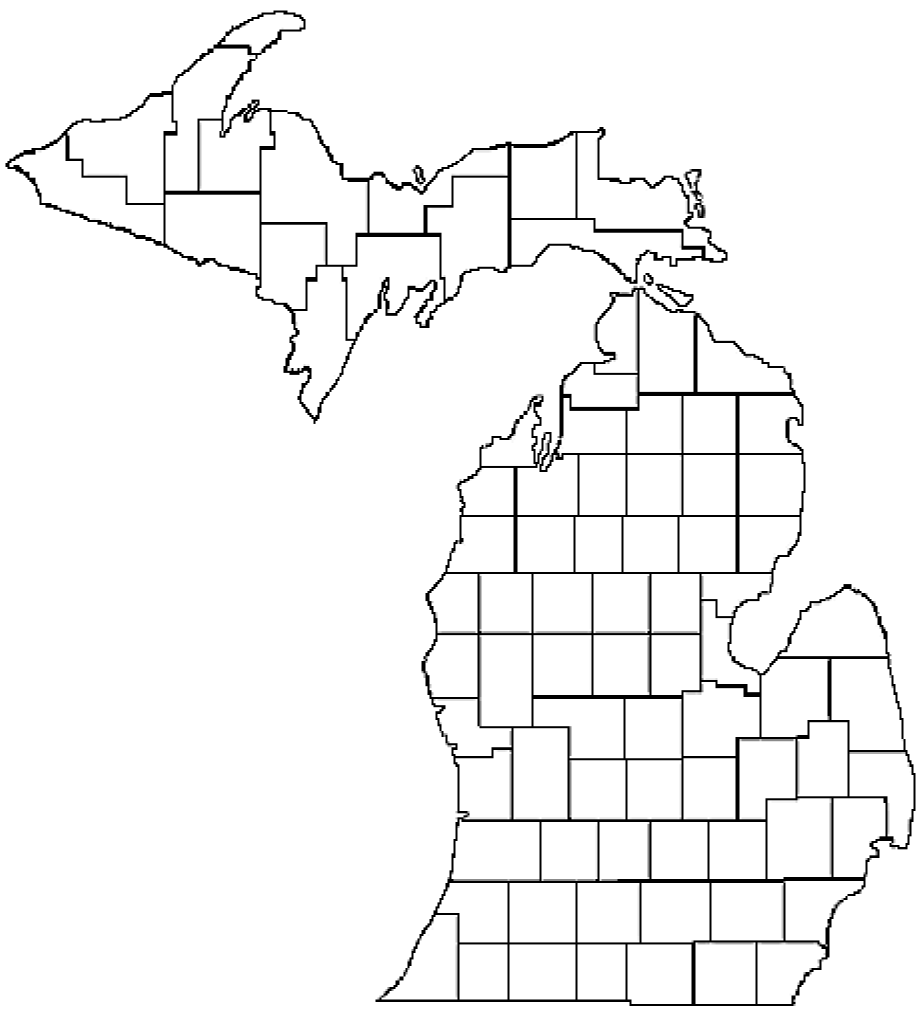
STATE OF MICHIGAN
RETIREMENT SYSTEMS

PERFORMANCE

FOR PERIODS ENDING
JUNE 30, 2013

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

Bureau of Investments

Mission Statement

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

SMRS Goals

Maintain sufficient liquidity to pay benefits.

Meet or exceed the actuarial assumption over the long term.

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

Diversify assets to reduce risk.

Exceed individual asset class benchmarks over the long term.

MPSERS PENSION

Time-Weighted Rates of Return

Periods Ending June 30, 2013

	% of Portfolio 06/30/13	Ten Years[1] Rate	Ten Years[1] Rank	Seven Years[1] Rate	Seven Years[1] Rank	Five Years[1] Rate	Five Years[1] Rank	Three Years[1] Rate	Three Years[1] Rank	One Year[1] Rate	One Year[1] Rank	Current Quarter Rate	Current Quarter Rank
TOTAL PLAN	**100.0**	**7.4**	**47**	**5.3**	**49**	**4.6**	**53**	**11.9**	**36**	**12.2**	**56**	**1.2**	**14**
Median - Greater than $10 Billion[2]		7.3		5.3		4.6		11.4		12.4		0.0	
MPSERS Total Plan Policy		7.4		5.7		5.9		13.4		12.6		2.2	
DOMESTIC EQUITIES	**27.8**	**7.5**	**47**	**5.9**	**34**	**7.4**	**29**	**18.0**	**45**	**22.8**	**14**	**3.4**	**11**
Median[2]		7.3		5.6		6.5		17.5		21.1		2.6	
S&P 1500 Index		7.7		5.9		7.3		18.6		21.1		2.8	
ALTERNATIVE INVESTMENTS	**19.6**	**14.5**	**26**	**10.8**	**21**	**6.8**	**33**	**14.8**	**24**	**11.8**	**54**	**3.5**	**43**
Median[2]		11.4		8.7		5.5		12.5		12.3		3.0	
Alternative Blended Benchmark[4]		11.3		10.1		11.8		24.4		17.0		11.1	
INTERNATIONAL EQUITIES	**14.2**	**7.3**	**70**	**1.3**	**75**	**0.1**	**43**	**8.9**	**73**	**13.9**	**80**	**-3.6**	**85**
Median[2]		9.0		2.7		0.0		9.9		16.7		-2.1	
International Blended Benchmark[3]		6.9		0.5		-0.4		7.7		14.1		-2.9	
BONDS	**12.7**	**5.3**	**46**	**6.5**	**34**	**6.3**	**39**	**4.4**	**85**	**1.3**	**42**	**-2.0**	**22**
Median[2]		5.3		6.1		6.2		5.4		1.1		-2.4	
Barclays Aggregate		4.5		5.6		5.2		3.5		-0.7		-2.3	
REAL ESTATE	**9.9**	**5.2**	**54**	**1.7**	**52**	**-2.8**	**76**	**11.9**	**68**	**9.5**	**53**	**2.8**	**44**
Median[2]		5.3		1.7		-1.6		12.8		9.7		2.5	
NCREIF - Property Blended Index[5]		7.3		4.3		1.5		11.7		9.3		2.6	
NCREIF Open Fund Index Net		6.0		2.4		-1.1		13.9		11.1		3.6	
REAL RETURN AND OPPORTUNISTIC	**4.9**							**7.1**		**4.6**		**0.7**	
50% (CPI +500bp) + 50% (8% accuarial rate)								7.7		7.4		1.7	
ABSOLUTE RETURN	**4.4**					**-0.7**		**5.5**		**11.6**		**3.1**	
HFRI FOF Cons 1 mth lagged						-0.4		3.0		7.8		2.3	
COMMODITY INVESTMENTS	**0.6**							**0.8**		**-4.4**		**-8.3**	
DJ-UBS Commodity Index TR								-0.3		-8.0		-9.5	
INFRASTRUCTURE INVESTMENTS	**0.6**									**15.9**		**2.3**	
CPI + 400 bp 3 month lagged										5.5		2.4	
CASH EQUIVALENTS	**5.3**	**1.6**		**1.3**		**0.8**		**0.3**		**0.5**		**0.1**	
1 Month T-Bill		1.5		1.2		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 6/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MPSERS	**12.2**	**7.3**	**11.9**	**11.6**	**4.6**	**3.1**	**5.3**	**6.2**	**6.4**	**7.4**
Public Plan - Median (> $10 billion)*	**12.4**	**6.6**	**11.4**	**11.6**	**4.6**	**3.2**	**5.3**	**5.9**	**6.5**	**7.3**
Rank	**56**	**22**	**36**	**52**	**53**	**57**	**49**	**27**	**59**	**47**
bp Difference - Median	**-22**	**66**	**48**	**-1**	**-2**	**-6**	**0**	**24**	**-7**	**7**

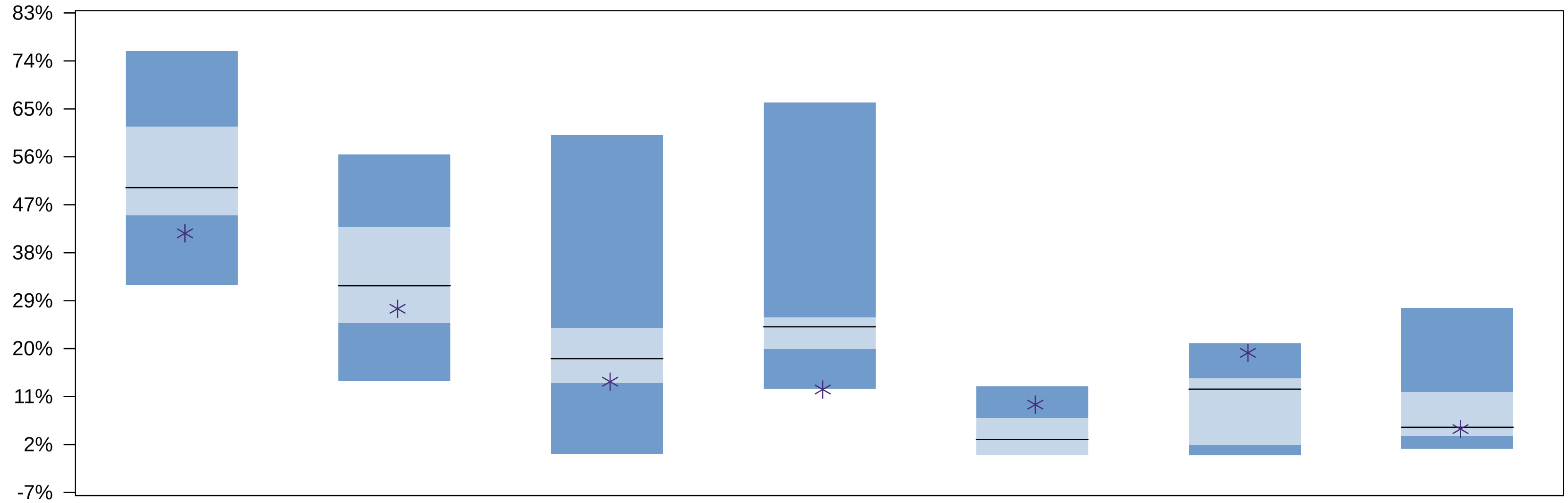
Consecutive For Years Ending

	6/13	6/12	6/11	6/10	6/09	6/08	6/07	6/06	6/05	6/04
MPSERS	**12.2**	**2.6**	**21.7**	**10.9**	**-19.3**	**-4.0**	**19.3**	**12.5**	**8.3**	**16.5**
Public Plan - Median (> $10 billion)*	**12.4**	**1.2**	**22.3**	**13.4**	**-19.5**	**-3.7**	**18.3**	**10.9**	**10.6**	**16.3**
Rank	**56**	**22**	**59**	**82**	**46**	**57**	**21**	**28**	**93**	**44**
bp Difference - Median	**-22**	**138**	**-56**	**-255**	**15**	**-32**	**104**	**166**	**-234**	**19**

*State Street Public Funds Universe > $10 Billion.

MPSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $10 Billion (SSE) - Allocation
6/30/13



	Equities %	Equities US %	Equities Non US %	Fixed Income %	Real Estate %	Private Equity %	Cash Equiv %
5th Percentile	75.85	56.36	60.04	66.17	12.93	21.01	27.64
25th Percentile	61.73	42.79	23.90	25.92	7.02	14.47	11.92
50th Percentile	50.21	31.80	18.12	24.09	2.95	12.39	5.24
75th Percentile	45.03	24.78	13.52	19.91	0.00	1.89	3.55
95th Percentile	32.03	13.94	0.26	12.52	0.00	0.00	1.23
No. of Obs	29	29	29	29	29	29	27
TOTAL PUBLIC SCHOOL	42.01 88	27.85 57	14.16 71	12.71 94	9.87 15	19.58 14	5.28 43

Provided by State Street Investment Analytics

MSERS
Cumulative and Consecutive
Total Fund Returns

Cumulative For Years Ending 6/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSERS	**12.2**	**7.2**	**11.8**	**11.5**	**4.5**	**3.0**	**5.2**	**6.1**	**6.3**	**7.3**
Public Plan - Median (> $1 billion)*	**12.9**	**6.6**	**11.6**	**12.2**	**4.9**	**3.4**	**5.4**	**6.0**	**6.5**	**7.3**
Rank	**67**	**29**	**46**	**62**	**68**	**70**	**63**	**43**	**69**	**51**
bp Difference - Median	**-69**	**54**	**19**	**-68**	**-41**	**-39**	**-18**	**8**	**-17**	**-3**

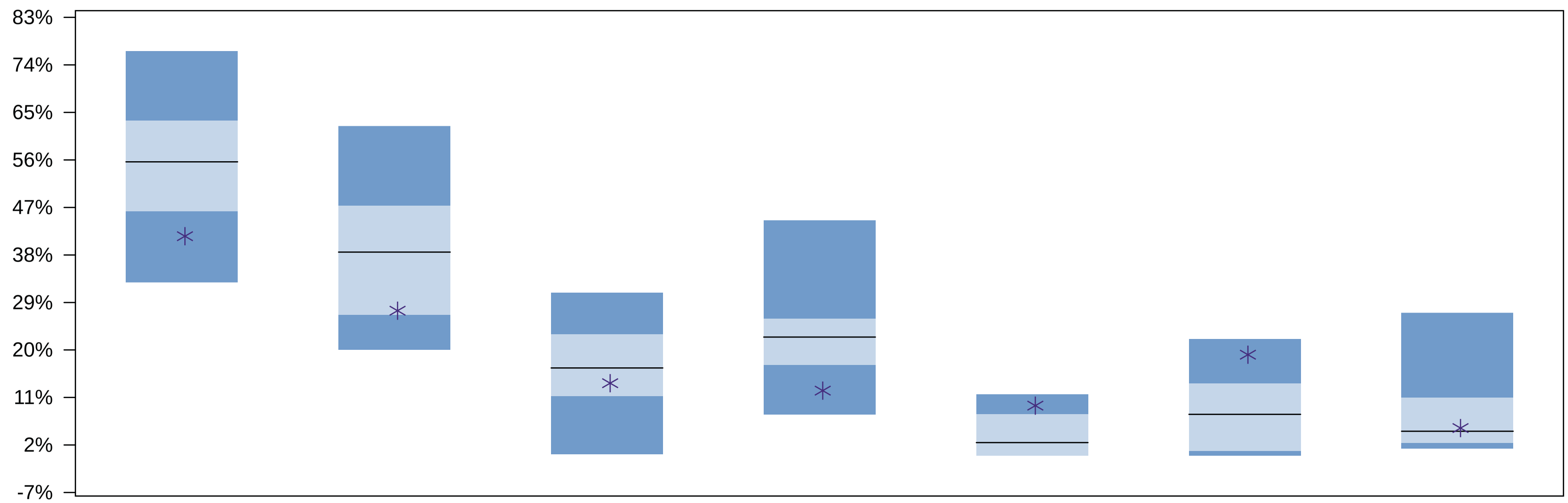
Consecutive For Years Ending

	6/13	6/12	6/11	6/10	6/09	6/08	6/07	6/06	6/05	6/04
MSERS	**12.2**	**2.4**	**21.7**	**10.5**	**-19.5**	**-4.1**	**19.3**	**12.5**	**8.3**	**16.3**
Public Plan - Median (> $1 billion)*	**12.9**	**0.8**	**22.5**	**13.1**	**-19.3**	**-3.9**	**17.9**	**11.4**	**9.9**	**16.3**
Rank	**67**	**15**	**67**	**81**	**55**	**52**	**16**	**23**	**91**	**52**
bp Difference - Median	**-69**	**158**	**-78**	**-262**	**-19**	**-17**	**134**	**114**	**-155**	**-4**

*State Street Public Funds Universe > $1 Billion.

MSERS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
6/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	76.60		62.40		30.87		44.57		11.55		22.10		27.02	
25th Percentile	63.52		47.40		23.00		25.99		7.88		13.71		11.05	
50th Percentile	55.64		38.55		16.60		22.45		2.46		7.81		4.62	
75th Percentile	46.22		26.57		11.25		17.19		0.00		0.83		2.34	
95th Percentile	32.82		20.03		0.31		7.82		0.00		0.00		1.31	
No. of Obs	58		58		58		58		58		58		56	
TOTAL EMPLOYEES	41.92	91	27.81	73	14.10	63	12.68	93	9.84	15	19.48	12	5.59	36

Provided by State Street Investment Analytics

MSPRS

Cumulative and Consecutive Total Fund Returns

Cumulative For Years Ending 6/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MSPRS	**12.1**	**7.2**	**11.8**	**11.5**	**4.5**	**3.0**	**5.2**	**6.1**	**6.4**	**7.3**
Public Plan - Median (> $1 billion)*	**12.9**	**6.6**	**11.6**	**12.2**	**4.9**	**3.4**	**5.4**	**6.0**	**6.5**	**7.3**
Rank	**72**	**29**	**46**	**62**	**69**	**70**	**61**	**40**	**64**	**50**
bp Difference - Median	**-80**	**51**	**19**	**-69**	**-42**	**-37**	**-14**	**13**	**-13**	**1**

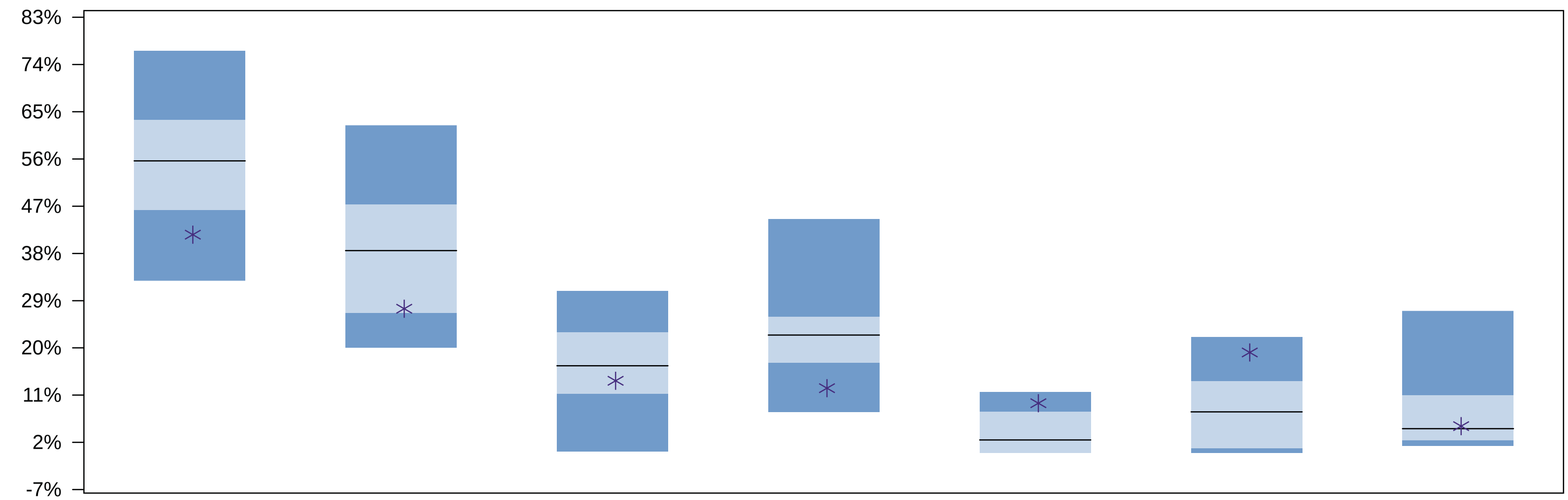
Consecutive For Years Ending

	6/13	6/12	6/11	6/10	6/09	6/08	6/07	6/06	6/05	6/04
MSPRS	**12.1**	**2.5**	**21.8**	**10.4**	**-19.5**	**-3.9**	**19.5**	**12.6**	**8.3**	**16.2**
Public Plan - Median (> $1 billion)*	**12.9**	**0.8**	**22.5**	**13.1**	**-19.3**	**-3.9**	**17.9**	**11.4**	**9.9**	**16.3**
Rank	**72**	**14**	**66**	**81**	**56**	**50**	**14**	**22**	**90**	**52**
bp Difference - Median	**-80**	**162**	**-71**	**-265**	**-21**	**2**	**151**	**123**	**-153**	**-11**

*State Street Public Funds Universe > $1 Billion.

MSPRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
6/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	76.60		62.40		30.87		44.57		11.55		22.10		27.02	
25th Percentile	63.52		47.40		23.00		25.99		7.88		13.71		11.05	
50th Percentile	55.64		38.55		16.60		22.45		2.46		7.81		4.62	
75th Percentile	46.22		26.57		11.25		17.19		0.00		0.83		2.34	
95th Percentile	32.82		20.03		0.31		7.82		0.00		0.00		1.31	
No. of Obs	58		58		58		58		58		58		56	
TOTAL POLICE	41.96	91	27.84	73	14.12	63	12.71	93	9.85	15	19.52	12	5.48	36

MJRS
Cumulative and Consecutive Total Fund Returns

Cumulative For Years Ending 6/30/13

	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
MJRS	**12.2**	**7.2**	**11.9**	**11.0**	**4.2**	**2.9**	**5.0**	**5.9**	**6.1**	**7.0**
Public Plan - Median (> $1 billion)*	**12.9**	**6.6**	**11.6**	**12.2**	**4.9**	**3.4**	**5.4**	**6.0**	**6.5**	**7.3**
Rank	**65**	**29**	**39**	**78**	**77**	**72**	**69**	**61**	**75**	**73**
bp Difference - Median	**-64**	**53**	**31**	**-121**	**-67**	**-52**	**-33**	**-11**	**-37**	**-32**

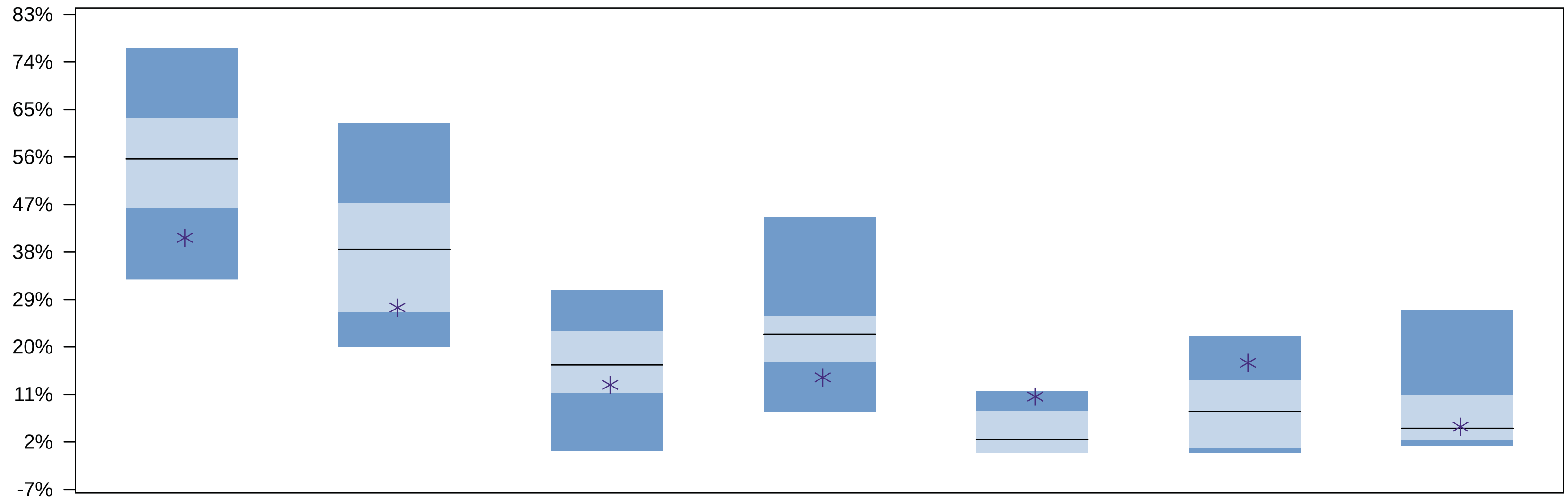
Consecutive For Years Ending

	6/13	6/12	6/11	6/10	6/09	6/08	6/07	6/06	6/05	6/04
MJRS	**12.2**	**2.4**	**22.1**	**8.0**	**-18.9**	**-3.6**	**19.0**	**12.0**	**8.1**	**15.0**
Public Plan - Median (> $1 billion)*	**12.9**	**0.8**	**22.5**	**13.1**	**-19.3**	**-3.9**	**17.9**	**11.4**	**9.9**	**16.3**
Rank	**65**	**15**	**62**	**98**	**42**	**45**	**27**	**35**	**93**	**72**
bp Difference - Median	**-64**	**152**	**-36**	**-507**	**35**	**32**	**101**	**66**	**-178**	**-133**

*State Street Public Funds Universe > $1 Billion.

MJRS TOTAL PLAN UNIVERSE REPORT

Public Funds (DB) > $1 Billion (SSE) - Allocation
6/30/13



	Equities %		Equities US %		Equities Non US %		Fixed Income %		Real Estate %		Private Equity %		Cash Equiv %	
5th Percentile	76.60		62.40		30.87		44.57		11.55		22.10		27.02	
25th Percentile	63.52		47.40		23.00		25.99		7.88		13.71		11.05	
50th Percentile	55.64		38.55		16.60		22.45		2.46		7.81		4.62	
75th Percentile	46.22		26.57		11.25		17.19		0.00		0.83		2.34	
95th Percentile	32.82		20.03		0.31		7.82		0.00		0.00		1.31	
No. of Obs	58		58		58		58		58		58		56	
TOTAL JUDGES	41.06	93	27.85	72	13.20	68	14.62	87	10.98	7	17.38	17	5.27	38

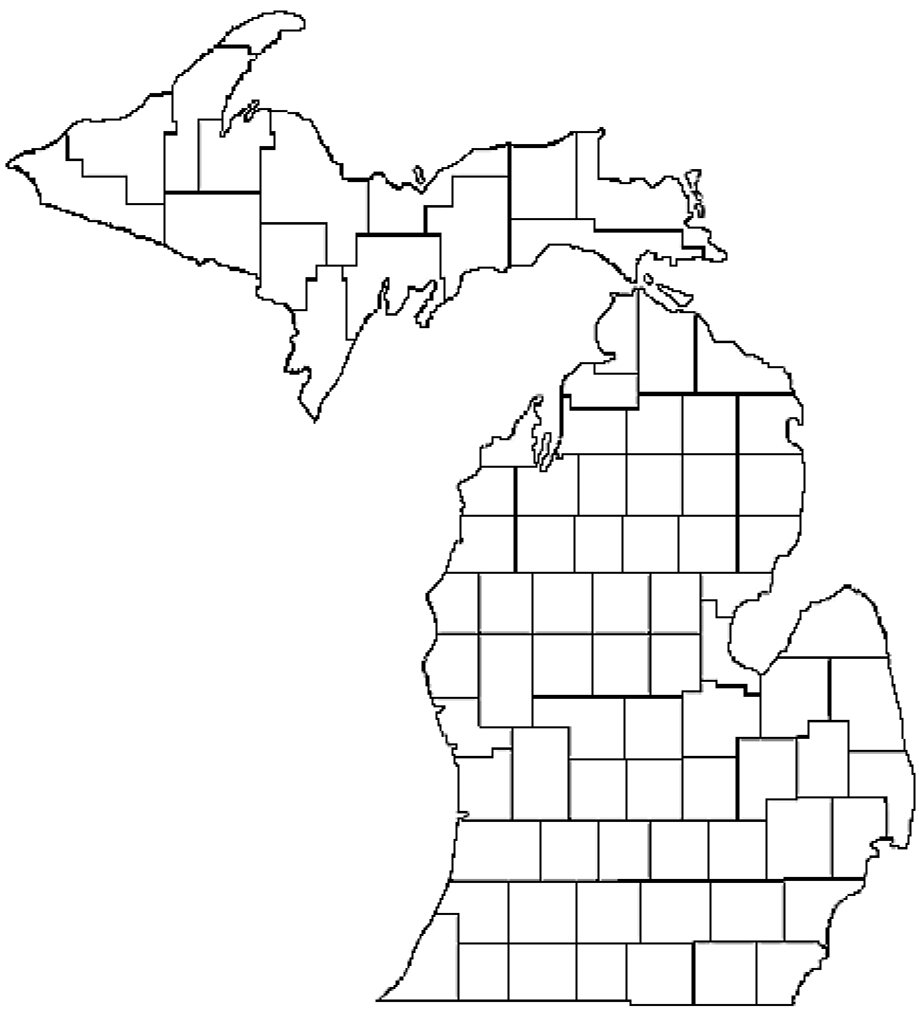
Provided by State Street Investment Analytics

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ASSET ALLOCATION REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

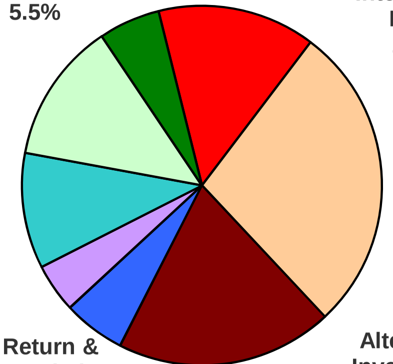
SEPTEMBER 5, 2013



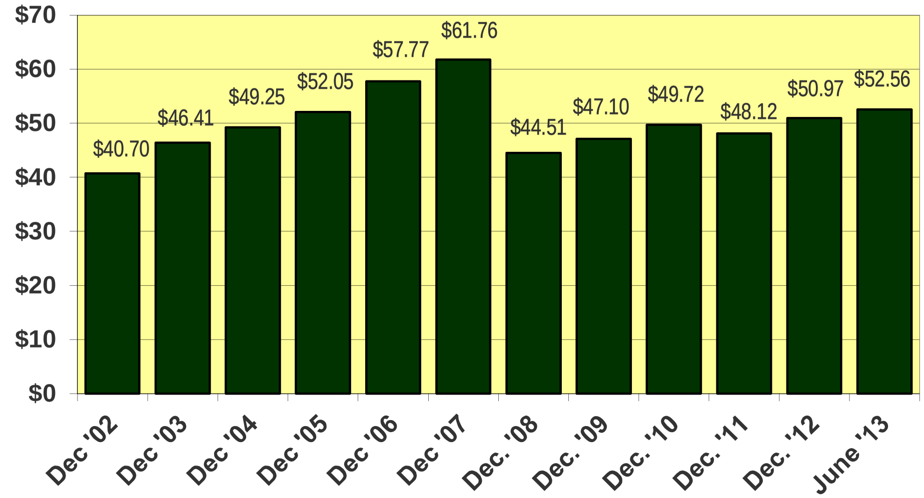
Jon M. Braeutigam
Chief Investment Officer
Bureau of Investments

STATE OF MICHIGAN RETIREMENT SYSTEMS
PROFILE - JUNE 2013

Asset Allocation 6/30/13



Market Value*
(Billions of Dollars)



Asset Allocation By Market Value
(In Millions)

Investment Strategies	6/30/13		3/31/13	
Domestic Equity	$14,563	27.7%	$14,722	28.0%
Alternative Investments	10,254	19.5%	10,429	19.8%
International Equity	7,465	14.2%	7,745	14.7%
Fixed Income	6,672	12.7%	6,806	13.0%
Real Estate & Infra.	5,474	10.4%	5,372	10.2%
Real Return & Opport.	2,935	5.6%	2,919	5.6%
Short Term***	2,904	5.5%	2,465	4.7%
Absolute Return	2,294	4.4%	2,099	4.0%
TOTAL	$52,561	100.0%	$52,557	100.0%

Market Value By Plan ~ 6/30/13
(in Millions)

	Pension Plan Mkt. Value	OPEB** Mkt. Value	Combined Mkt. Value	%
MPSERS	$39,205	$1,744	$40,949	77.9%
MSERS - (closed)	9,563	654	10,217	19.4%
MSPRS	1,105	42	1,147	2.2%
MJRS - (closed)	247	1	248	0.5%
TOTAL	$50,120	$2,441	$52,561	100.0%

Short Term Equivalents *(in Billions)*

Short Term Strategy***	$2.9	
Short Term in Other Inv. Strategies	0.8	
TOTAL SHORT TERM	$3.7	7.0% of Total Funds

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

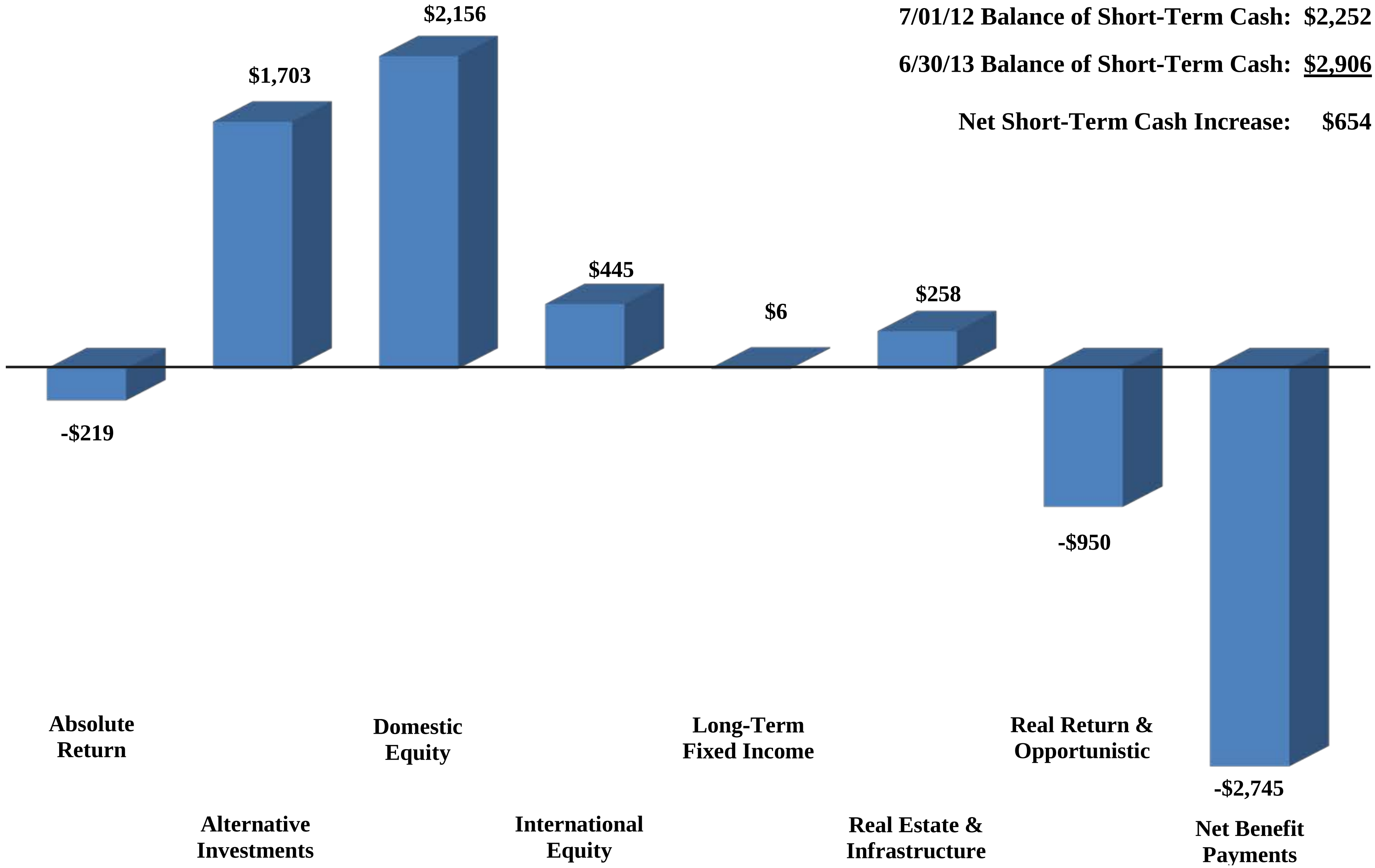
Pensions & Investments Survey - February 4, 2013 Issue

**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

June 2012 ~ June 2013



7/01/12 Balance of Short-Term Cash: $2,252

6/30/13 Balance of Short-Term Cash: $2,906

Net Short-Term Cash Increase: $654

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 6/30/13***	***Target 9/30/13***	***Target* 9/30/14***	***Actual 6/30/13***	***Target 9/30/13***	***Target* 9/30/14***	***Actual 6/30/13***	***Target 9/30/13***	***Target* 9/30/14***	***Actual 6/30/13***	***Target 9/30/13***	***Target* 9/30/14***	***Ranges***
Broad U.S. Equity	27.7%	28.5%	31.0%	27.7%	28.5%	31.0%	27.7%	28.5%	31.0%	27.8%	29.0%	29.0%	20% - 50%
Alternative Invest.	19.5%	18.5%	16.0%	19.5%	18.5%	16.0%	19.5%	18.5%	16.0%	17.4%	14.5%	14.0%	10% - 25%
Broad Int'l Equity	14.2%	15.5%	16.0%	14.2%	15.5%	16.0%	14.2%	15.5%	16.0%	13.3%	15.0%	15.0%	10% - 20%
U.S. Fixed Income Core	12.7%	14.0%	15.0%	12.7%	14.0%	15.0%	12.7%	14.0%	15.0%	14.6%	17.0%	19.0%	10% - 25%
Real Estate Core	9.9%	8.0%	6.0%	9.8%	8.0%	6.0%	9.8%	8.0%	6.0%	11.0%	10.0%	7.0%	5% - 15%
Real Return / Opportunistic	5.7%	5.0%	5.0%	5.5%	5.0%	5.0%	5.6%	5.0%	5.0%	5.6%	5.0%	5.0%	0% - 10%
Absolute Return	4.4%	4.0%	4.0%	4.4%	4.0%	4.0%	4.4%	4.0%	4.0%	4.4%	3.5%	4.0%	0% - 12%
Cash	5.3%	5.0%	4.0%	5.6%	5.0%	4.0%	5.5%	5.0%	4.0%	5.3%	4.0%	4.0%	1% - 9%
Infrastructure	0.6%	1.5%	3.0%	0.6%	1.5%	3.0%	0.6%	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%	

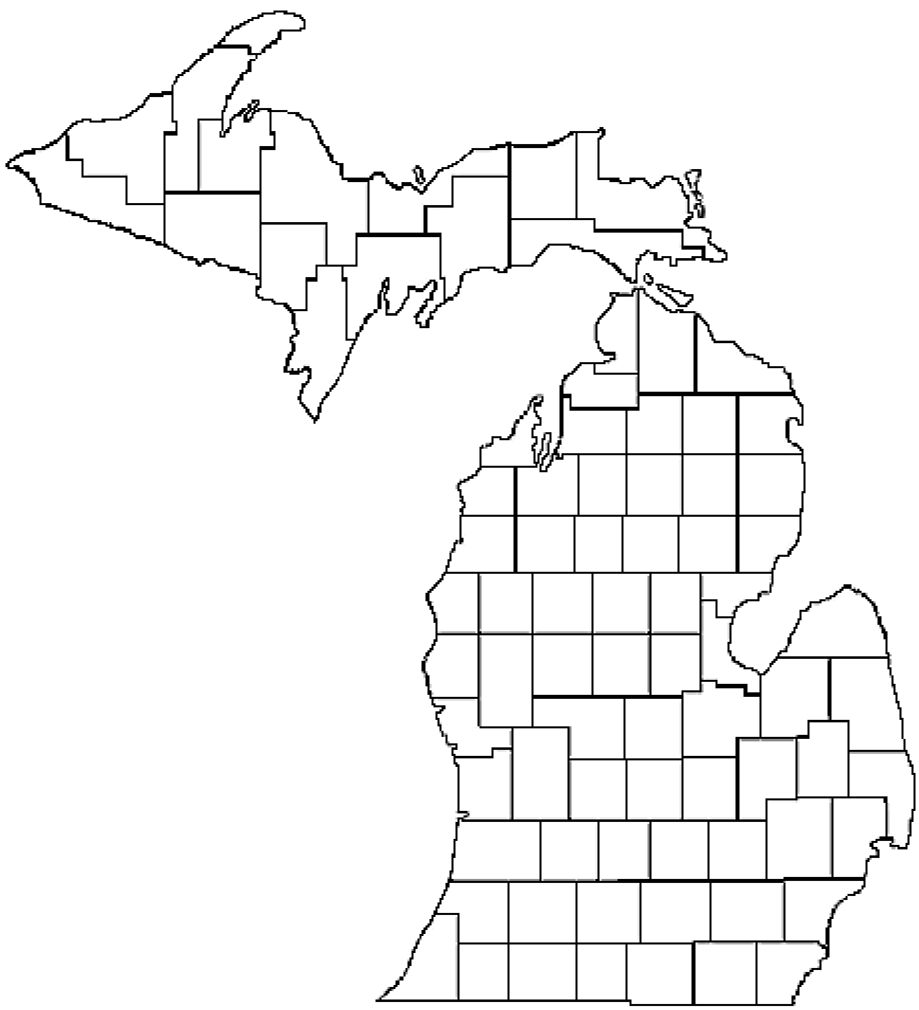
***Complies with basket clause and international restrictions.**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

CAPITAL MARKETS OVERVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



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

CAPITAL MARKETS

Return and Risk Assumptions, Benchmark and Outlook

A starting point.

MPSERS Plan	Assumed Return* (Arithmetic)	Standard Deviation*	Trailing 10-Year (Benchmark**)	Tactical (Short Term) Expectations***
Private Equity	11.8%	30.3%	11.4%	Trim
International Equity	8.7%	20.8%	9.1%	Hold
Domestic Equity	7.9%	18.0%	7.7%	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%	6.8%	Add
Absolute Return	6.8%	9.8%	5.5%	Hold
Long-Term Fixed	3.5%	5.8%	4.5%	Trim
Short-Term	2.3%	3.0%	1.5%	Hold

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

Overview

A back-up in interest rates.

- In numerous public statements, the Federal Reserve has tied its quantitative easing (QE) policy to the health of the economy and the jobs market. In early May, the jobs market data came out surprisingly strong. Later in the month, Chairman Ben Bernanke discussed the possibility of “tapering” (or reducing) the QE bond purchases. The result: higher interest rates. At the end of July, the 10-year U.S. Treasury rate was 2.6%, up a full 90 basis points (bps) from three months earlier, and an increasing trend appears to be in place as well. At the end of July, the yield curve was in the historically top decile in terms of steepness.

- Despite the dramatic rise in rates, credit spreads at the end of July were virtually unchanged from the end of April. Sovereign rates bumped higher, though less so. For example, ten-year rates for Italy, Spain, and Japan were about 50 bps higher in July than they were in April, but the increase in rates appeared to be within the normal fluctuations of those markets.

- The returns in domestic equity remains strong and in fact the price trend has re-accelerated higher in 2013. The U.S. stock market ended July at an all-time month-end high at a level of 1685.73. For the calendar year ending July, the total return on the S&P 500 Index is 19.6%.

- The great returns of domestic equity are in stark contrast with lackluster returns of international equities. As of the end of July, developed international markets have underperformed the U.S. stock market broadly by 10.4%, and emerging markets have underperformed by 28.6% year to date. Over the longer term of the past five years, developed markets have underperformed the U.S. by 7.5% annually and emerging markets have lagged the U.S. by 8.0% annually.

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

Domestic Equity

The run higher continues.

- The returns in domestic equities continue to be strong. The broad domestic market index, S&P 1500, returned 21.1% over the past year and 18.6% over the past three years ending June. This is despite the fact that earnings growth has been lackluster. Of the 21.1% one-year return ending June; 4% was from earnings growth, 2% was from dividends, and 15% was due to P/E multiple expansion.
- Domestic equity remains attractively priced relative to bonds, though less compelling than a year ago. Valuation metrics are mixed meaning there is uncertainty whether the returns in absolute over the next cycle will be as strong as the historical average. The price trend has re-accelerated higher though, suggesting the market might continue to trend higher in the near-term.
- Active strategies had some success against the passive index over the past year ending June; the MPSERS combined domestic equity active component outperformed the S&P 1500 by 2.7%. Over the past three years, the active component is behind the benchmark by roughly 90 bps per year and about even for the past five years.

International Equity

The underperformance of emerging markets and passive strategies.

- International Equities continue to underperform Domestic. Over the past one, three, five, and seven years ending June, the broad international market index, MSCI ACWI ex USA, underperformed the domestic S&P 1500 index by 6.2%, 9.0%, 7.5%, and 3.5% annualized respectively. It is only in the longer term, over the past ten years, that international equity outpaced domestic by 0.9% annualized.
- Within International Equities, over the past one and three years ending in June, emerging markets have underperformed developed markets annualized by 13.3% and 6.1% respectively. The plan increased its weight to emerging markets by roughly 5% beginning in the fourth quarter of 2012 and due to the magnitude of the underperformance to date (roughly 18% as of July), the relative returns and peer rankings have suffered.
- The plan is underweight international equities relative to the strategic policy (14.2 vs. 16.0) as well as to a global benchmark. Emerging market exposure is approximately 28% of total international equity; this is a 5.8% overweight.
- Active strategies have done well against the international equity indexes. Over the past one, three, and five years, both the developed and emerging market MSCI indexes have ranked near the bottom quartile of a manager universe, gross of fees. The split between active and passive strategies is now close to 50/50. This is an increase from five years ago when the split was closer to 25% active, 75% passive.
- 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 back up a bit.

- After numerous warnings and false starts, the market finally experienced a meaningful increase in interest rates. The 10-year U.S. Treasury rate at the end of July was 2.6%; this is the highest month-end closing price since August of 2011 and it is 1.1% higher than one year ago.
- As compared with historical spikes in interest rates, this latest episode is (so far) just mediocre. Since the apex in the 10-year U.S. Treasury rate in 1981, rates have been in a secular decline. During past notable bounces off the bottom, rates have typically increased 2-3% before eventually settling back down to new lows.
- Italian and Spanish ten-year sovereigns ended July nearly a full 200 bps lower than a year ago, though rising in sympathy with U.S. rates; they were 50 bps higher in July than in April.
- The yield curve is steep as measured by the difference between the 10 and 2-year U.S. Treasury rates. These rates rank in the top decile in terms of steepness since 1977 increasing the opportunities to “ride down the yield curve”.
- Credit spreads at the end of July are still wider than at their historic average of 1.3% over. On the other hand, high yield spreads are 30 bps lower than normal at 4.5% over.
- 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 5.5 years; an historic high for the index measuring more than 0.7 years higher than normal.

Real Estate

Taking a little breather.

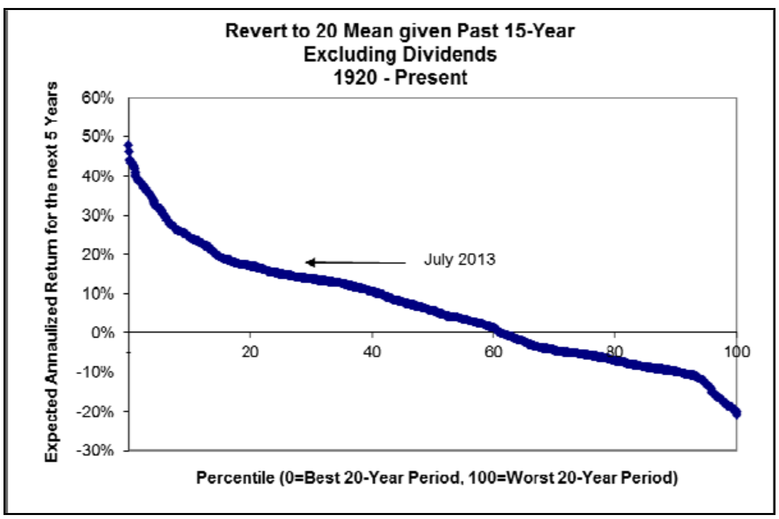
- The returns in publicly traded FTSE NAREIT REIT Index were weak during the second calendar quarter, down 2.1%. This was not totally surprising given the increase in interest rates during the quarter. Over longer periods, the index has performed well. For the period ending July, the FTSE NAREIT Index has returned annualized 8.3%, 15.0%, 7.0%, and 10.4% 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 this indicates that the 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 – 7/31/13

- At the beginning of 2012, the S&P 500 price broke out above the 200-day moving average.
- At the beginning of 2013, the price trend re-accelerated upward.
- The market hit its 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 184% or 5.4% annualized.
- The S&P 500 has increased by 45.8% over the past 15 years.
- Using the 20-year median price return as a projection, the S&P 500 price return would be 14.3% over the next 5 years based on the previous 15-year return.

Earnings Based Outlook

Scenerio	Price Return Estimate	Total Return Estimate
Super Bull	19.3%	22.8%
Bull	8.4%	12.6%
Base	1.1%	4.7%
Bear	-9.2%	-6.6%
Super Bear	-16.9%	-12.4%

Assumptions

	2018 Earnings	2018 P/E Ratio	Dividend Payout
High	$163	25.0	62%
Mid	$115	15.5	54%
Low	$67	10.0	42%

Based on Robert Shiller data

International Equities

Developed Markets

<u>MSCI EAFE</u> – 12/31/01 – 7/31/13

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

Emerging Markets

<u>MSCI Emerging Markets</u> – 12/31/01 – 7/31/13

- The "V-shaped" recovery in emerging markets began in 2008. However, the rate of appreciation has slowed since late 2009.
- The upward sloping price trend established in 2002 is still intact.
- The trend since 2007 has been price weakness; however, the price remains at the high end of the range.
- In June, the price fell below its 200-day moving average, an indication of further weakness.

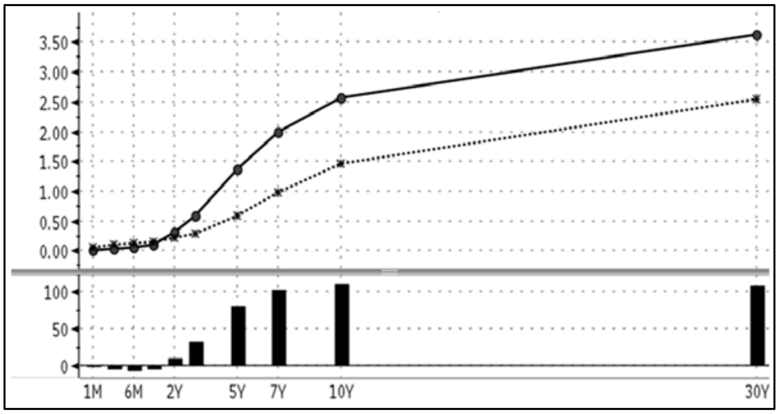
Count of Markets Priced
Below a 200-Day Moving Average

	Developed	Emerging
July 31, 2013	6	13
December 31, 2012	0	0
December 31, 2011	5	2

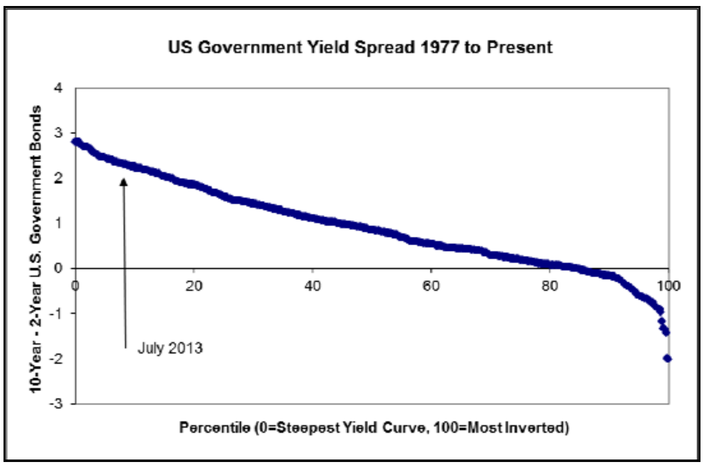
Prices above/below a 200-day moving average is a proxy for the near term direction of the stock market.

U.S. Cash and Fixed Income

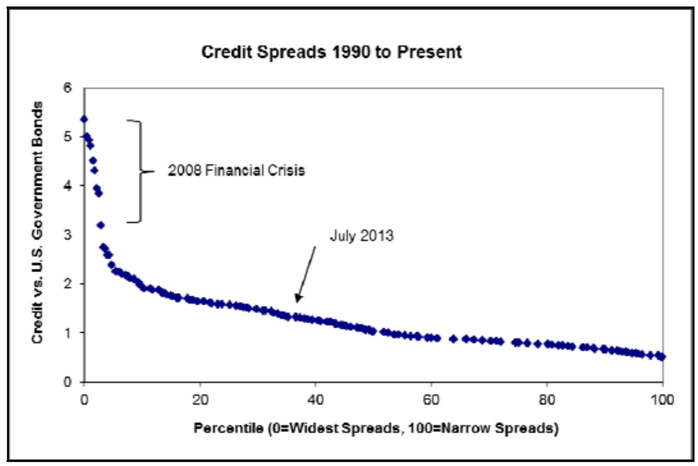
7/31/12 – 7/31/13



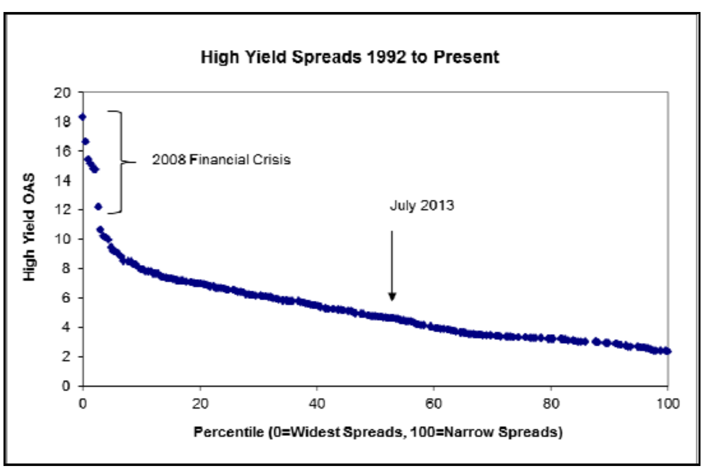
- Rates are higher year-over-year especially at the long end.
- Rates at the short end are still very low.



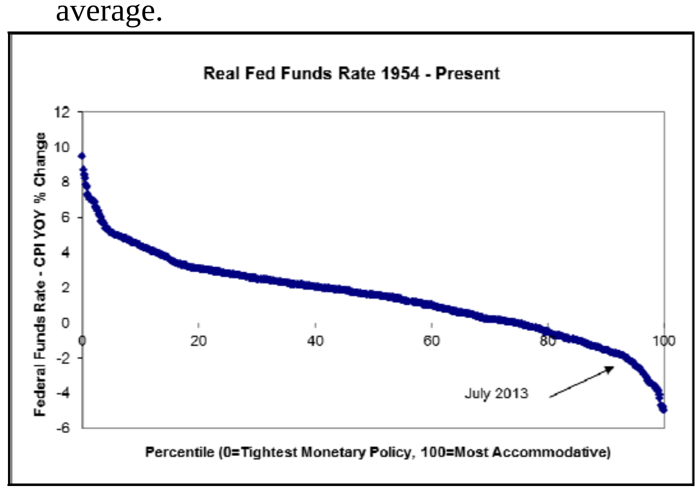
- The yield curve is elevated.
- 140 bps of flattening to get to average.



- Credit spreads are slightly elevated.
- Credit spreads are 30 bps above the historic average.



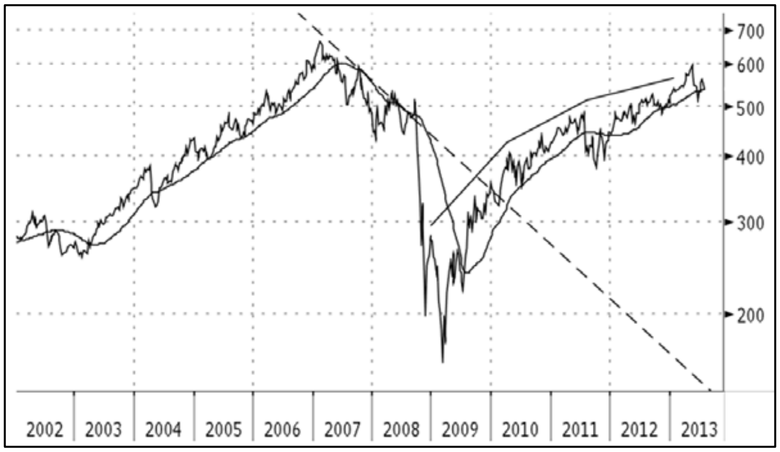
- Today, high yield spreads are 30 bps below their historic average of +4.8%.



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

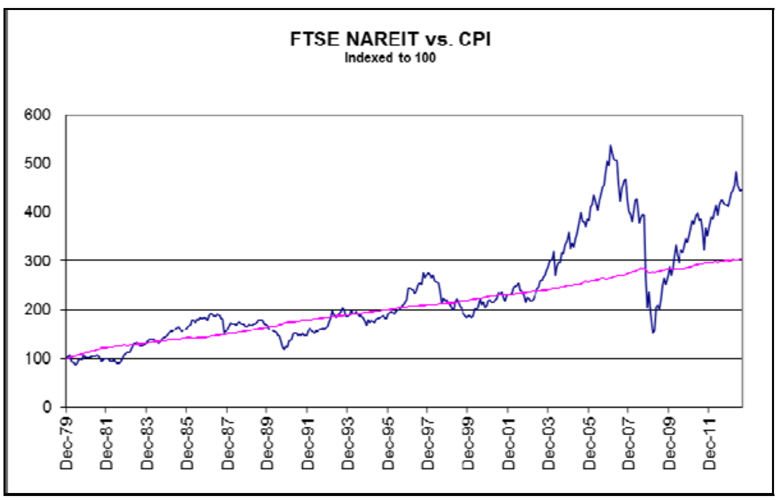
U. S. Real Estate

<u>FTSE NAREIT Index</u> – 12/31/05 – 7/31/13

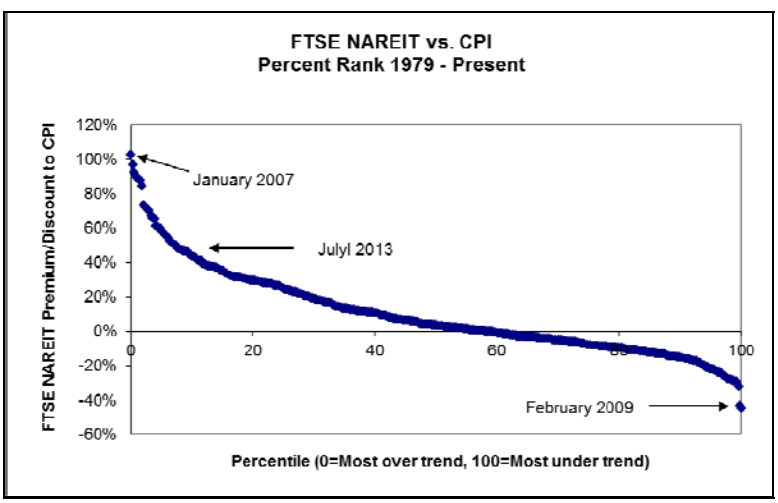


- Commercial real estate represented by the FTSE NAREIT Index has rebounded strongly since the first quarter of 2009 and has been trending up.
- The index price is at its 200-day moving average.
- The trend rate of price appreciation has moderated.

<u>Return Outlook</u>

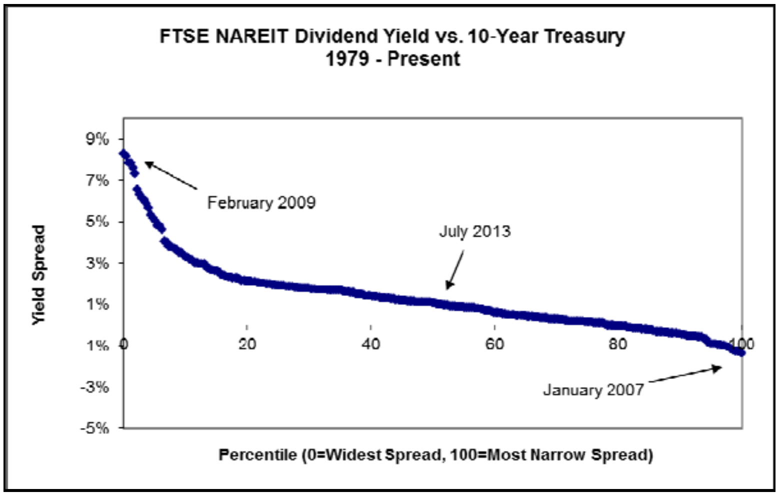


- REITs prices have trended around CPI.

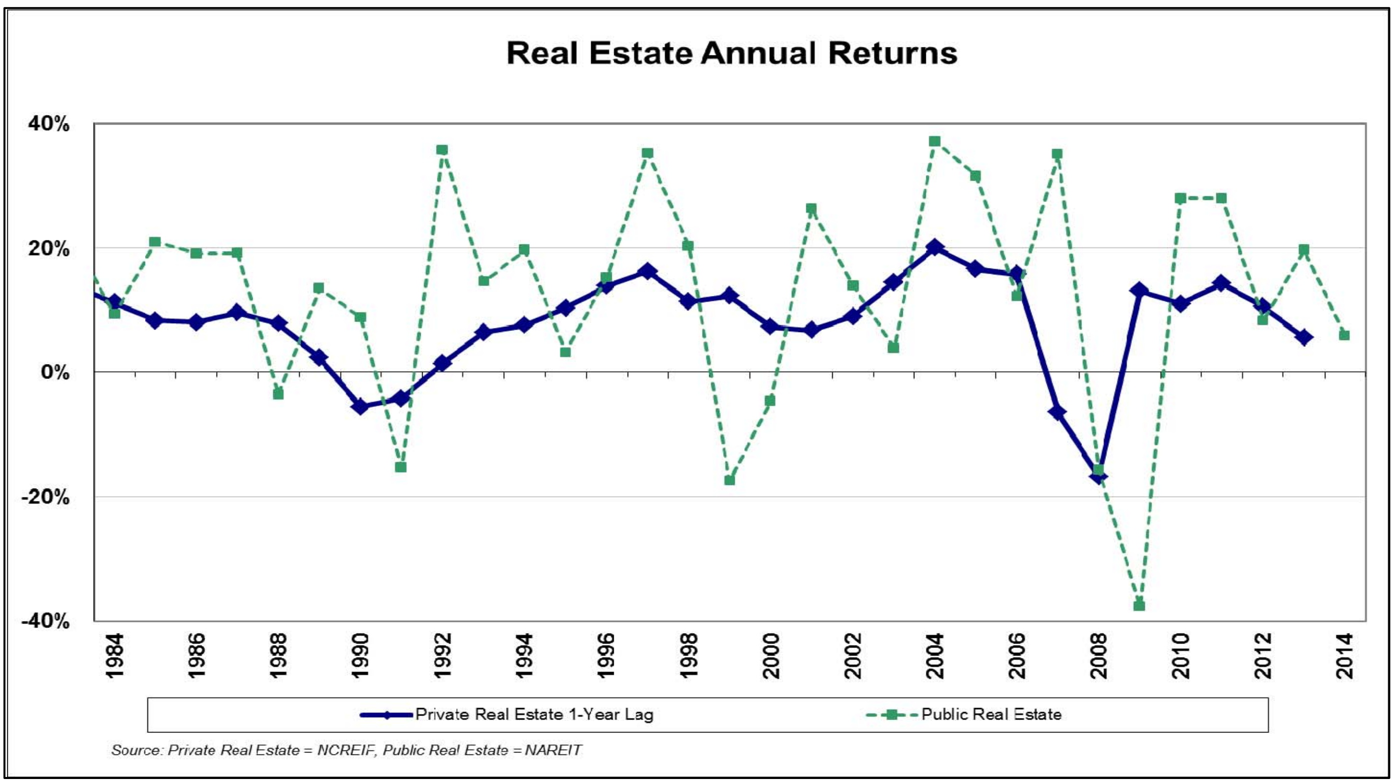


- REITs have priced lower ~ 90% of the time.
- REITs are very expensive when compared to the CPI.

U.S. Real Estate - Continued



- The Index normally yields 1.00% more than 10-Year U.S. Treasuries.
- Current dividend yield is at 3.5%.
- When compared against the 10-Year U.S. Treasury, REITs are fairly priced.



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

Commodities

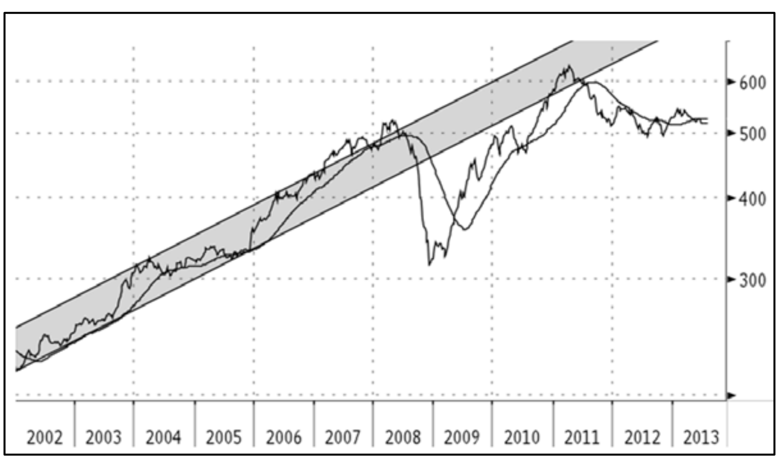
<u>CRB Index</u> – 12/31/01 – 7/31/13

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

<u>CRB Food Index</u> – 12/31/01 – 7/31/13

- 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 – 7/31/13



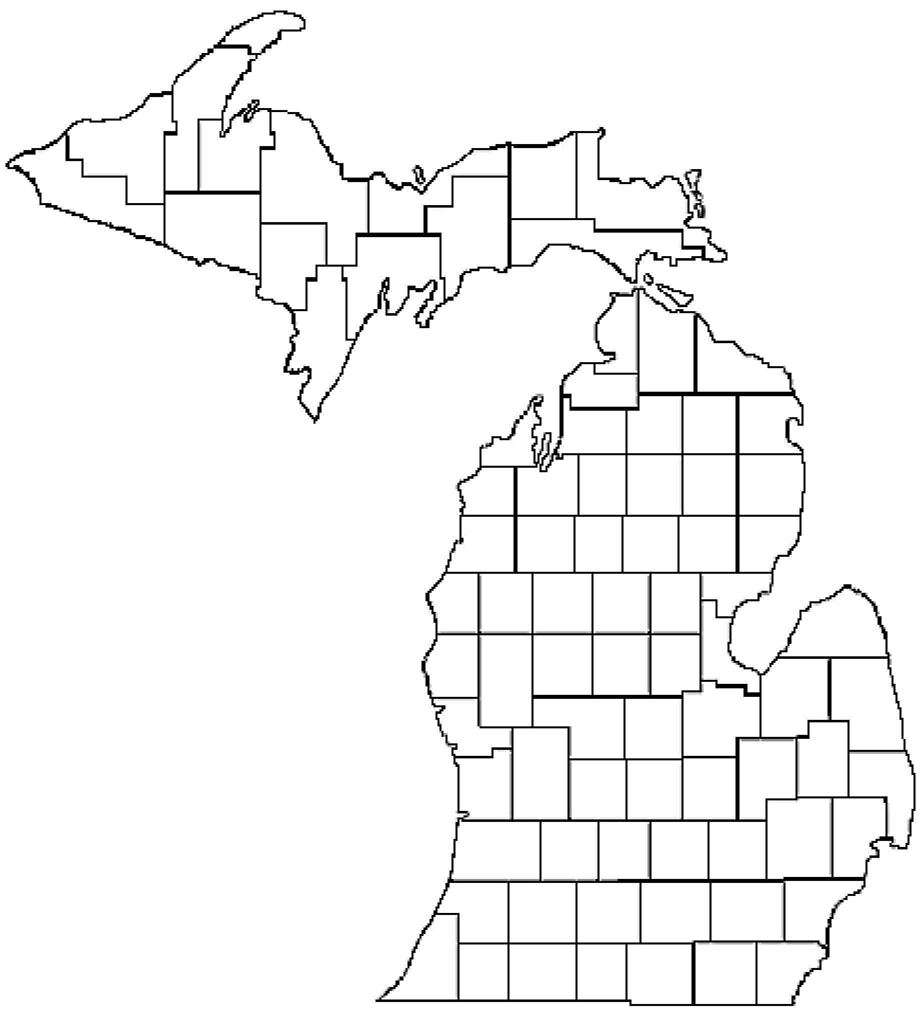
- CRB Raw Industrials index trend has rolled over.
- There appears to be no trend in the price of Raw Industrials.

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ECONOMIC AND MARKET REVIEW AND OUTLOOK

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



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

ECONOMIC OUTLOOK

Select Historic Economic Growth with Forecasts

Slower 2013 growth and lowering expectations.

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

*Source: Bloomberg

U.S. Economic Overview

Slow, steady improvement.

- The most recent reading of the annualized U.S. GDP growth was just 1.7%, though greatly above consensus estimates of 1.0%. However, simultaneously the prior period measure was reduced by 0.7% as well. Taking these facts together, it appears that the above consensus GDP growth was more statistical quirk than outright stronger than expected growth.

- Coincidental economic indicators such as the Institute for Supply Management's Manufacturing and Non-Manufacturing PMI Indexes are both slightly above 50, indicating that there is some, if modest expansion in the U.S. economy. The economy continues to grind higher, albeit at a very slow pace.

- The U.S. jobs picture continues to steadily improve. The unemployment rate at the end of July was 7.4%, down from 8.2% one year prior. Skeptics point to the labor participation rate of 63.4% just 0.1% higher than April, which was the lowest rate since 1978. According to the July reports, the economy added close to 200,000 jobs. Since the beginning of the job recovery, the economy has added approximately 185,000 jobs per month on average.

- Given that there are still approximately 2 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.

- With the back-up in interest rates, the U.S. housing market appears to be taking a breather. New housing starts fell 16% since March and they are back to September 2008 levels, though starts are still up over 10% on a year-over-year basis. Existing home sales are up 15% year-over-year and they seem to be unaffected by the increase in rates so far.

- House values (as measured by the S&P / Case-Shiller Index) increased by 12% over the last year, and are now 25% off the 2006 market peak. Due to the back-up in mortgage interest rates coupled with the increase in home values, housing affordability is not as great as it was a few months ago, but houses still are historically highly affordable.

- 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.

International Economic Overview

Japanese economic policies in focus.

- Forecasters have lowered their estimates for 2013 global GDP growth by 0.3% and they are nudging 2014 and 2015 expectations lower as well.

- 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. After the initially positive reception by the markets, the Japanese stock market is down roughly 12% from its high and the Yen has strengthened by 5.5% against the dollar as of the end of July.

    - 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.

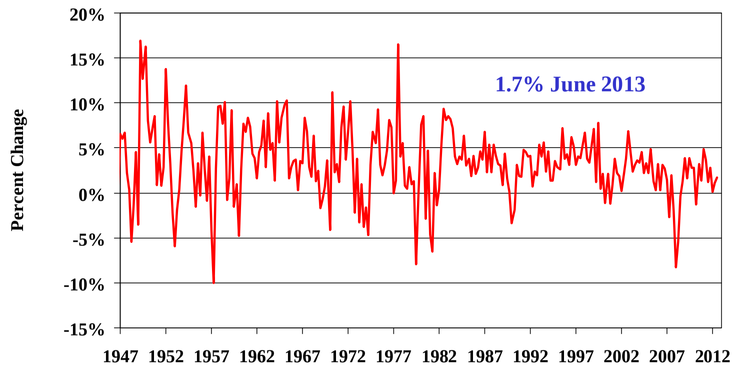
    - Japan's quantitative ¥7 trillion yen per month easing program is over 2.5x the size of the Federal Reserve's $85 billion per month program when scaled to the size of Japan's economy. At the end of July, the 10-year Japanese government bond rate was 0.8%, or roughly where it was a year earlier.

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

1

GDP

Annualized Quarter over Quarter Growth

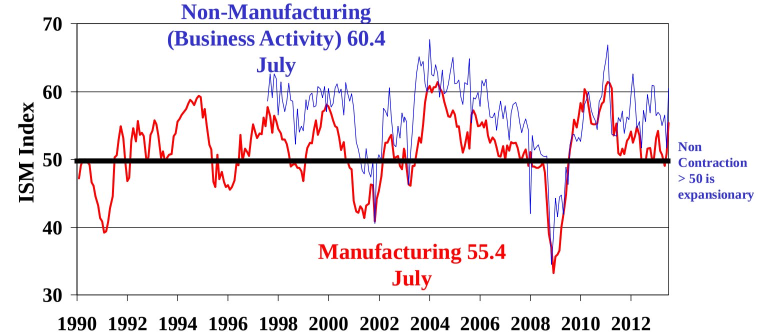


Source: Bureau of Economic Analysis

IAC 3-7-13

2

Manufacturing/Non-Manufacturing

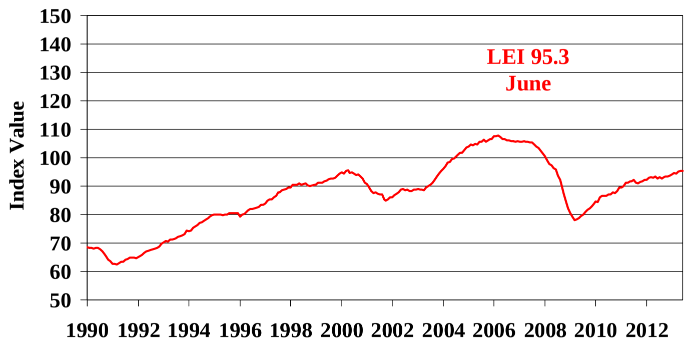


Source: Institute for Supply Management

IAC 9-5-13

3

U.S. Leading Economic Indicators

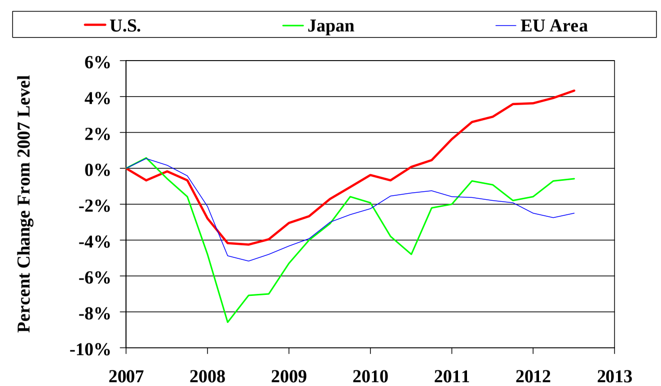


Source: Bloomberg

IAC 9-5-13

4

GDP of Select Developed Economies

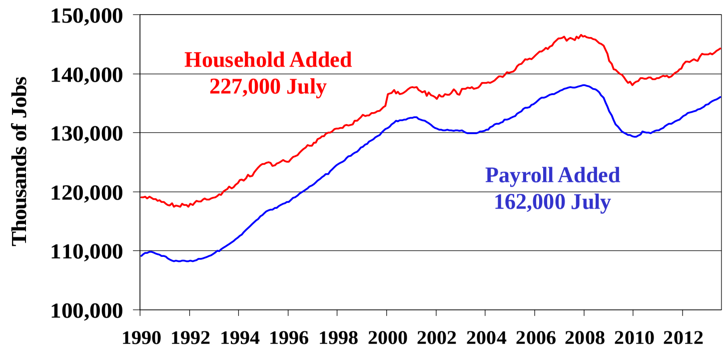


Source: Bureau of Economic Analysis

IAC 3-7-13

5

Job Market Growth



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

IAC 6-18-13

6

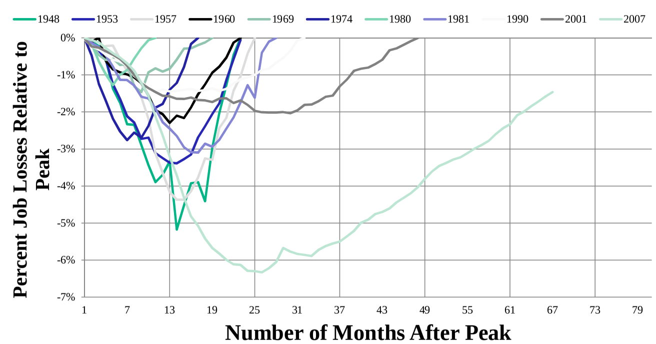
Initial Unemployment Claims

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

IAC 9-5-13

7

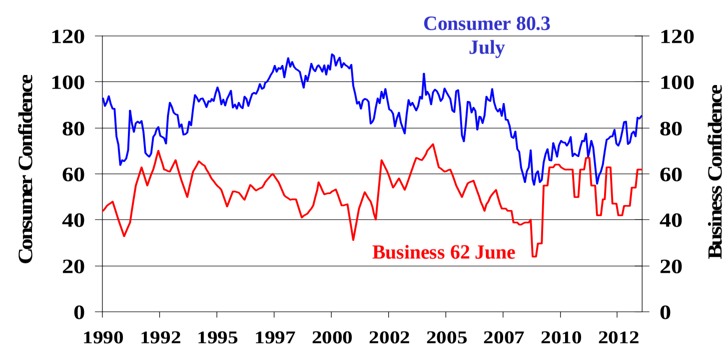
Percent Job Losses in Post WWI Recessions



Source: Federal Reserve Bank of St. Louis

8

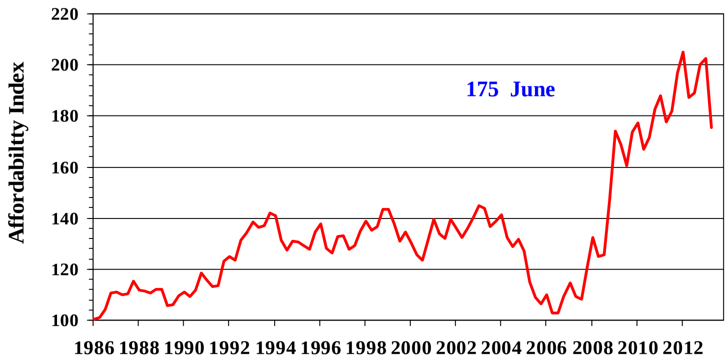
CEO Confidence & Consumer Sentiment



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

IAC 9-5-13

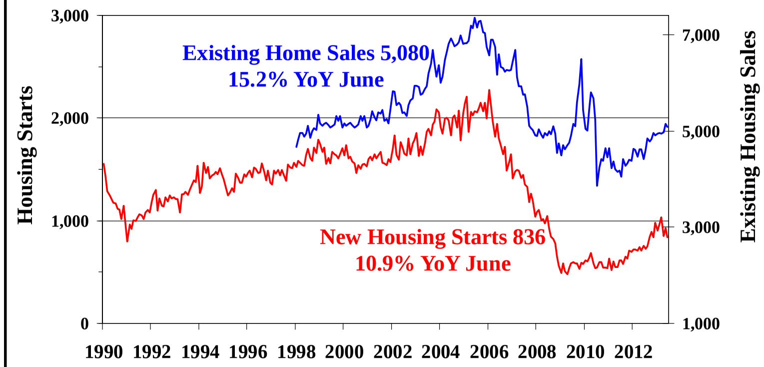
Housing Affordability Composite Index



Source: National Association of Realtors

IAC 3-7-13

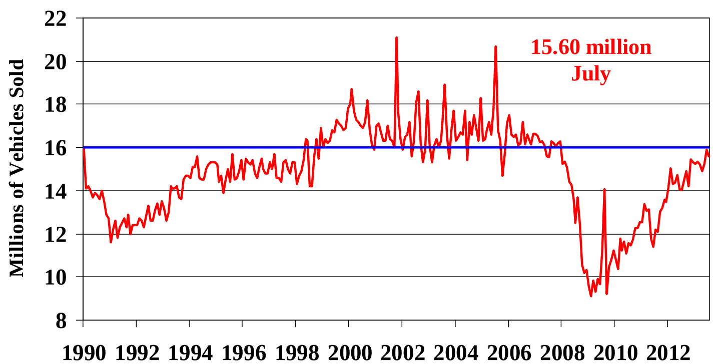
Existing Home Sales and Housing Starts



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

IAC 9-5-13

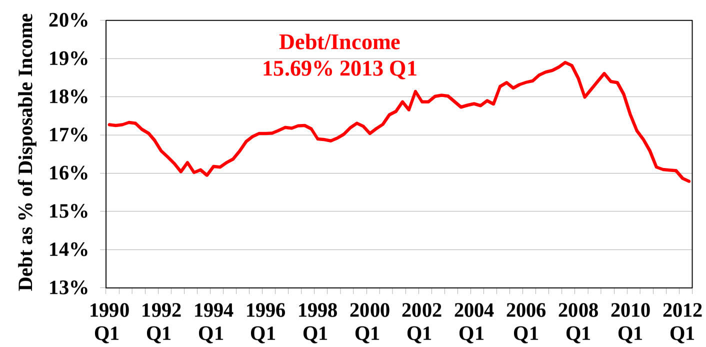
U.S. Light Vehicle Sales



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

IAC 9-5-13

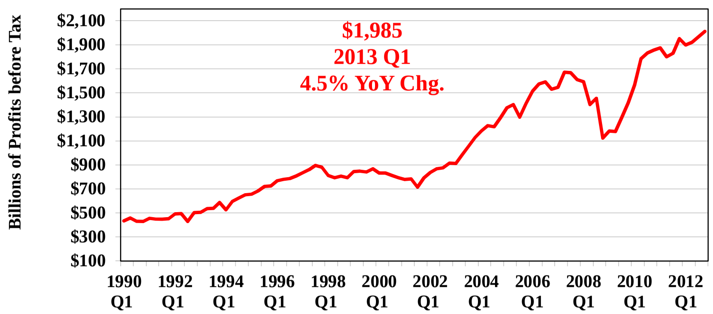
Financial Obligations as Percent of Disposable Income



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

IAC 9-5-13

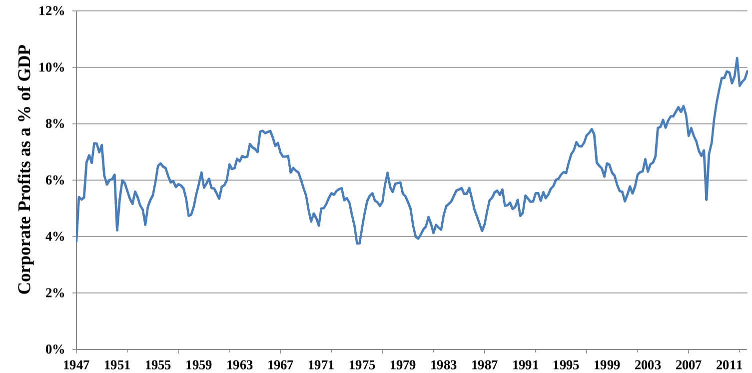
Corporate Profits



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

IAC 9-5-13

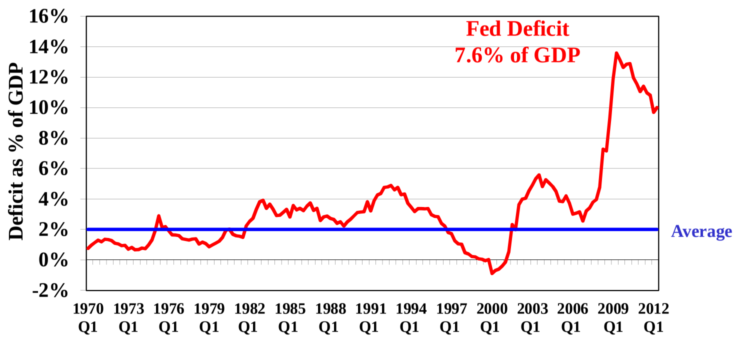
U.S. Corporate Profits as a Percent of GDP



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

IAC 9-5-13

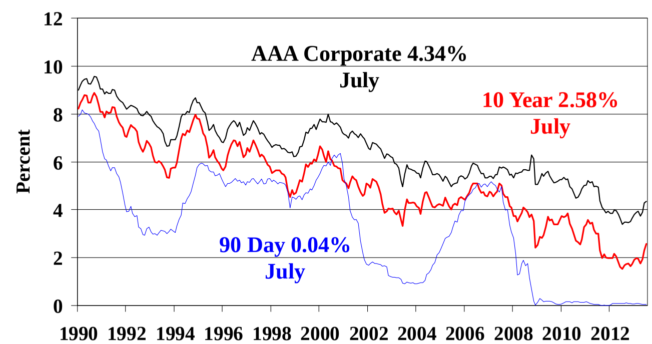
U.S. Deficit



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

IAC 9-5-13

Corporate Interest Rates



Source: Federal Reserve Board

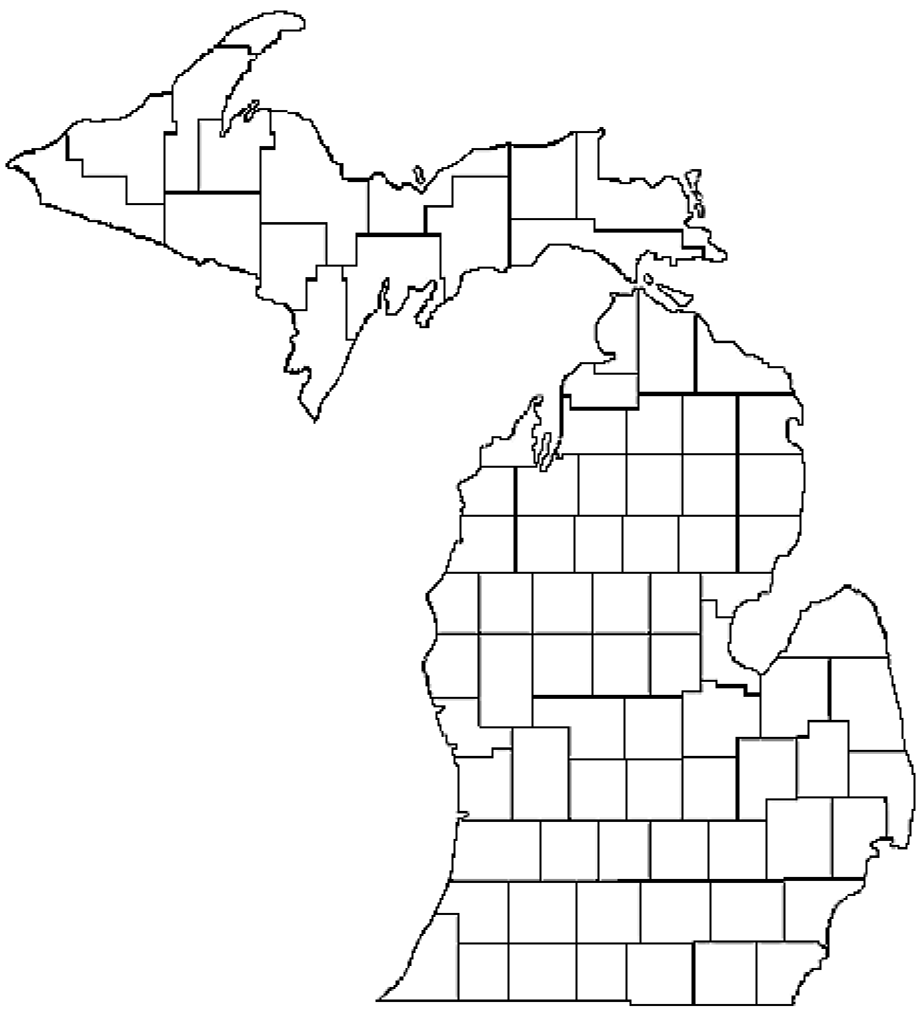
IAC 9-5-13

STATE OF MICHIGAN
RETIREMENT SYSTEMS

REAL ESTATE AND INFRASTRUCTURE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



Brian C. Liikala, Administrator
Real Estate & Infrastructure Division

EXECUTIVE SUMMARY
Real Estate

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Return	9.5	11.9	-2.8	1.7	5.2
NCREIF NPI	9.3	11.7	1.5	4.3	7.3
Peer Median Return	9.7	12.8	-1.6	1.7	5.3
Rank vs. Peers	53	68	76	52	54

- Total real estate market value ended the second quarter at $5.1 billion with a total return of 9.5% for the year. High quality, cash flowing, core real property assets have appreciated as investors seek current yield in a low interest rate environment.

- Valuations increased this quarter for the majority of REID's U.S. property types. Strong rent growth in apartments and increases in retail, and industrial warehouse 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 to take advantage of the strong market. Also, the general partners that specialize in credit strategies have been investing in distressed debt opportunities at discounted pricing yielding attractive returns.

- In the commercial mortgage-backed securities (CMBS) market, spreads over the swap rate for AAA-rated securities increased 23 bps and now stand at 69 bps. CMBS delinquencies declined to 7.2% (60-day delinquent). New issuance for CMBS in 2013 is projected by Commercial Mortgage Alert to exceed $85 billion.

- Unfunded capital commitments for real estate totaled $249 million. It is expected that market transaction activity will increase as the void between buyers and sellers diminish and the availability of low interest rate debt increases. Our real estate managers are being very selective, taking advantage of opportunities from owners and lenders in markets that have potential for growth and long-term liquidity.

- REID's strategy includes investing in distressed assets at a discount, consistently communicating with lenders for distressed debt opportunities, developing apartments in major urban markets, selling properties to institutional investors flush with capital, and exhibiting patience in order to find properties in markets that have strong economic fundamentals.

EXECUTIVE SUMMARY
Infrastructure

- Total market value of infrastructure investments ended the second quarter at $284 million (not including short-term cash investments) with a total return of 2.25% for the quarter. Total returns-to-date have exceeded expectations and our benchmark, as both REID's timing into the sector and execution of opportunities have served well.

- The objective for this asset class is to provide an attractive risk/return profile, low correlation with other asset classes, a predictable and defensible cash flow return, and 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 with several funds raising over $5 billion in capital.

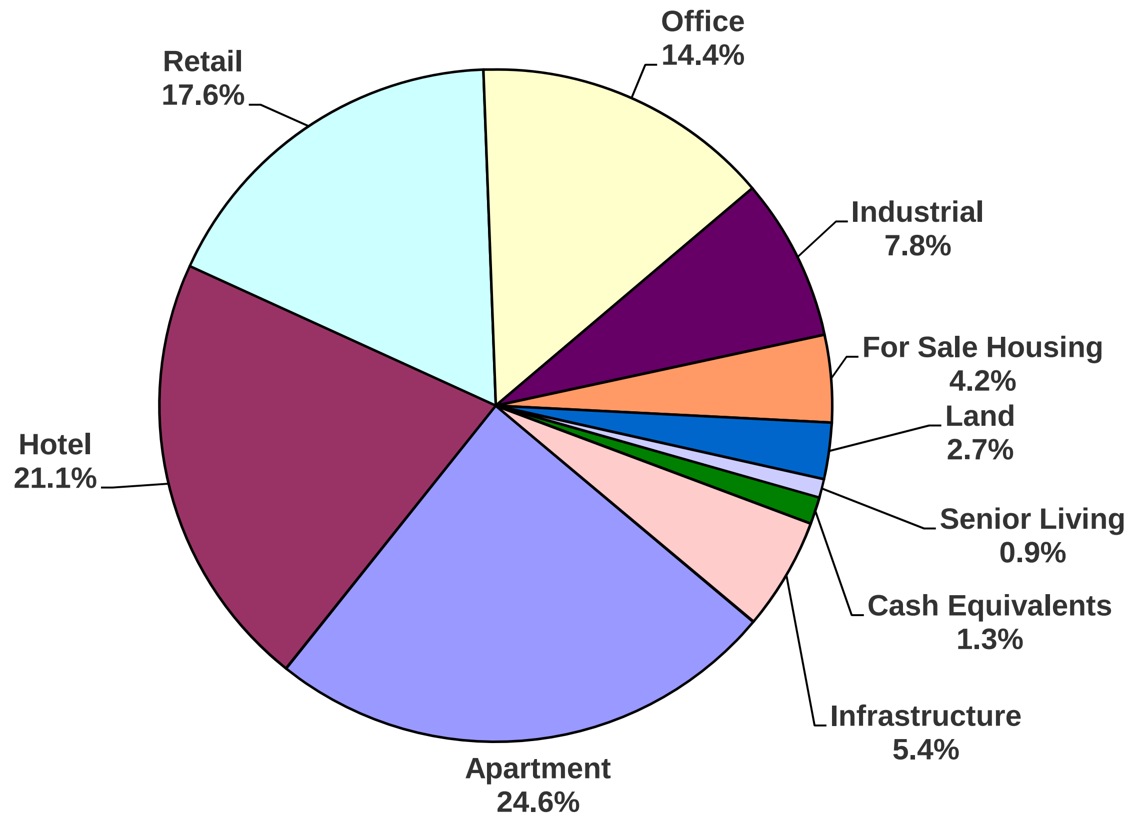
- No new commitments were made for this quarter. REID is reviewing additional core and multi-strategy infrastructure investment opportunities and actively meeting with major infrastructure managers in the industry. Total commitments to date are $565 million; additional commitments will be made over the next several years.

SMRS

Real Estate and Infrastructure Holdings

By Property Type

6/30/13



Market Value in Millions

	6/30/13		3/31/13	
Apartment	$1,344	24.6%	$1,324	24.6%
Hotel	1,153	21.1%	1,174	21.9%
Retail	966	17.6%	929	17.3%
Office	791	14.4%	769	14.3%
Industrial	424	7.8%	425	7.9%
For Sale Housing	228	4.2%	228	4.2%
Land	148	2.7%	148	2.8%
Senior Living	52	0.9%	61	1.1%
Total Investments	$5,106	93.3%	$5,058	94.1%
Infrastructure	296	5.4%	288	5.4%
Cash Equivalents	72	1.3%	26	0.5%
Total	**$5,474**	**100.0%**	**$5,372**	**100.0%**

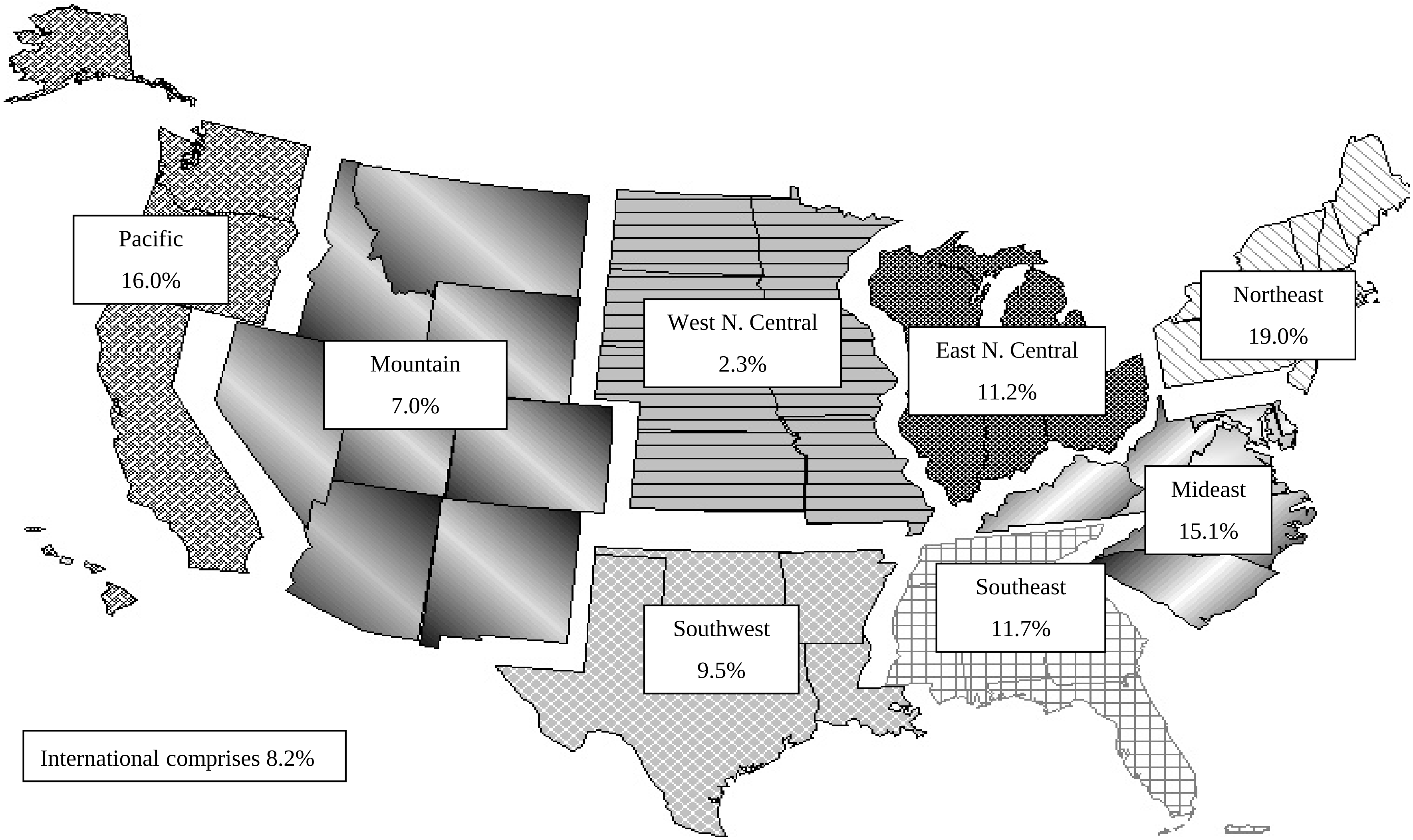
Michigan Department of Treasury, Bureau of Investments

Real Estate by Region

Based on Net Market Value

(excludes cash & cash equivalents)

6/30/13



Geographic regions defined by NCREIF, whose property index composition is: Pacific 29.1%, Mountain 5.6%, West N. Central 1.8%, Southwest 10.9%, East N. Central 7.9%, Southeast 10.6%, Northeast 20.1%, Mideast 14%

SMRS
Real Estate
6/30/13

Top Ten
Advisors or Companies

Advisor or Company		**Net Market Value**
Clarion Partners	$	948,534,959
MWT Holdings, LLC		844,265,003
Edens & Avant Investments, LP		688,183,626
Kensington Realty Advisors, Inc.		296,340,327
Principal Real Estate Investors		262,873,900
Five Star Realty Partners, LLC		215,507,459
Bentall Kennedy LP		198,445,722
CIM Group, Inc.		187,659,923
Blackstone Real Estate Advisors		149,729,872
KBS Realty Advisors, Inc.		132,304,352
	$	3,923,845,143

Occupancy
by Property Type

	Apartment	Office	Industrial	Retail	Hotel
SMRS Portfolio	96.1%	89.1%	87.8%	93.1%	59.8%
National Average	91.4%	84.7%	87.7%	94.8%	57.7%

Real Estate

Net Market Values by Ownership Entity

6/30/13

		Net Market Value		Unfunded Commitment
801 Grand Avenue Capital, LLC	$	104,494,469	$	0
AGL Annuity Contract GVA 0016		306,895,789		0
Avanath Affordable Housing I, LLC		12,761,453		10,140,007
Beacon Capital Strategic Partners IV, LP		17,608,079		0
Beacon Capital Strategic Partners V, LP		17,276,186		4,500,000
BlackRock Retail Opportunity Fund, LLC		11,580,824		6,000,000
Blackstone Real Estate Partners V, LP		58,487,961		2,208,906
Blackstone Real Estate Partners VI, LP		91,241,911		5,162,087
Capri Select Income II		5,221,831		0
Capri Urban Investors, LLC		20,638,235		0
CIM Fund III, LP		98,935,570		6,933,371
CIM Urban REIT, LLC		83,464,370		0
CIM VI (Urban REIT), LLC		5,259,981		19,884,926
City Lights Investments, LLC		115,456,041		6,500,000
Cobalt Industrial REIT		54,812,895		0
Cobalt Industrial REIT II		68,002,872		0
CPI Capital Partners N.A., LP		6,358,789		0
CPI Capital Partners N.A., Secondary, LP		18,330,501		0
Devon Real Estate Conversion Fund, LP		5,972,187		0
Domain Hotel Properties, LLC		792,065,960		0
Dynamic Retail Trust		57,109,836		0
Edens & Avant Investments, LP		631,073,790		5,000,000
Gateway Capital R/E Fund II, LP		90,832,978		1,276,875
Great Lakes Property Group Trust		280,491,598		0
Invesco Mortgage Recovery Feeder Fund		18,071,938		11,397,715
JBC Opportunity Fund III, LP		16,902,149		0
KBS/SM Fund III, LP		63,111,925		0
L & B Medical Properties Partners, LP		2,496,303		4,000,000
Landmark Real Estate Partners V, LP		34,987,916		3,900,000
LaSalle Asia Opportunity Fund II, LP		4,214,878		0
LaSalle Asia Opportunity Fund III, LP		42,120,525		7,500,000
Lion Industrial Trust		117,586,502		0
Lion Mexico Fund, LP		38,882,494		0
Lowe Hospitality Investment Partners		1,351,878		0
MERS Acquisitions, Ltd.		123,647,723		0
MG Alliance, LLC		6,220,602		13,932,112
Morgan Stanley R/E Fund V - International		11,530,448		0
Morgan Stanley R/E Fund VI - International		38,419,640		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		65,733,315		0
MWT Holdings, LLC		844,265,002		35,000,000
Northpark-Land Associates, LLLP		25,782,015		0
Paladin Realty Brazil Investors III (USA), LP		28,503,833		9,924,317
Principal Separate Account		158,379,431		0
* **Proprium RE Spec Situations Fund LP**		232,289		5,000,000
Rialto Real Estate Fund, LP		42,029,572		10,000,000
* **Rialto Real Estate Fund II, LP**		16,817,964		58,182,036
SM Brell II, LP		69,192,428		0
Stockbridge Real Estate Fund II-C, LP		27,719,216		0
Strategic LP		180,927,118		4,000,000
SWA Acquisitions, Ltd.		789,287		0
Trophy Property Development LP		62,178,888		11,250,000
True North High Yield Investment Fund II		45,056,254		7,213,251
Venture Center, LLC		32,281,461		0
Western National Realty Fund II, LP		23,932,865		455,264
	$	5,105,895,025		-
Short-Term Investments and Other		72,168,101		-
Total Real Estate Investments	**$**	**5,178,063,126**	**$**	**249,360,867**

* New commitment made during the quarter reported

Infrastructure Investments
Net Market Values by Ownership Entity
6/30/13

	Net Market Value	Unfunded Commitment
Balfour Beatty Infrastructure Partners, LP	$ 6,085,687	$ 35,227,441
Blackstone Energy Partners, LP	20,510,518	38,010,278
CSG Infrastructure Investment Program, LP	43,655,424	58,144
Customized Infrastructure Strategies, LP	61,011,533	42,681,523
Dalmore Capital Fund	39,971,329	20,324,174
JP Morgan AIRRO India Sidecar Fund US, LLC	75,860,547	6,560,421
JP Morgan AIRRO Fund II US, LLC	13,095,000	86,905,000
KKR Global Infrastructure Investors, LP	24,052,591	51,712,000
	$ 284,242,629	-
Short-Term Investments and Other	11,865,426	-
Total Infrastructure Investments	**$ 296,108,055**	**$ 281,478,981**

STATE OF MICHIGAN
RETIREMENT SYSTEMS

DOMESTIC EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 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	22.8%	18.0%	7.4%	5.9%	7.5%
S&P 1500	21.1%	18.6%	7.3%	5.9%	7.7%
State Street Peer Group	21.1%	17.5%	6.5%	5.6%	7.3%
Rank vs. Peers	14	45	29	34	47

Total Domestic Equity, Net	1-Year	3 Years	5 Years
Annualized Returns	22.6%	17.7%	7.1%
S&P 1500	21.1%	18.6%	7.3%
Morningstar Cap-Weighted Average	21.3%	16.8%	6.0%

Total Active Equity, Net	1-Year	3 Years	5 Years
Annualized Returns	23.5%	17.4%	7.1%
S&P 1500	21.1%	18.6%	7.3%
Morningstar Cap-Weighted Average	21.3%	16.8%	6.0%

- Total Domestic Equities delivered a 7.4% annualized gross return during the past five years, outperforming the S&P 1500 by 10 basis points (bps) and its State Street Peer Group by 90 bps. Active Equity returned 7.1%, underperforming the S&P 1500, net of fees, by 20 bps, while outperforming its cap-weighted Morningstar peer group benchmark by 110 bps.

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

  - Passive equity outperformed the S&P 900 by roughly 50 bps, as a result of fees earned through securities lending, as well as opportunistic trading.

  - The internal active fund composite returned 7%, matching the S&P 500 return and outperforming its Morningstar peer group by ~120 bps. The composite benefitted from strong stock selection in the healthcare sector, offset by its consumer discretionary, materials, and cash exposures.

  - The external manager composite returned 6.7%, underperforming the S&P 1500 by 60 bps while outperforming its Morningstar peer group by 70 bps. While a number of managers struggled, particularly in the growth space (see appendix for more detail on managers that are still part of the SMRS manager program), there were bright spots, such as Donald Smith Small-Cap Value (13.3% annualized return), Champlain Small-Cap (10.6% annualized return), and Artisan Partners Value (9.4% annualized return).

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

- During the past year, Active Equity outperformed the S&P 1500 and its Morningstar cap-weighted peer group average by 240 bps and 220 bps respectively.

  - Outperformance was driven by internal management (230 bps), external management (100 bps) and the equitization of cash via financial sector exposure.

  - Standout outperformers on the external management side include Seizert Capital (1690 bps), LSV (590 bps) and Edgewood (340 bps). Seizert Capital is a Michigan based company.

<u>Strategy Update</u>

- Domestic equity outflows totaled $650 million and $1.4 billion during the past quarter, the past 12 months, and fiscal year-to-date respectively.

- Two new internal concentrated fund strategies have been seeded and launched as of May 1 (Concentrated Equity and Concentrated All Cap Growth), both of which are off to a good start. The intent of such funds is to provide growth opportunities to analysts within the Bureau, to develop future portfolio management and leadership talent, and to further diversity the division's performance drivers.

- The All Cap Garp Fund and the Absolute Return Income Fund, internal funds that were launched on May 1, 2011, and January 1, 2009, respectively, both are outperforming their benchmarks by ~450 bps annualized since inception.

- SMRS consolidated its investment in Champlain Investment Partners' Mid-Cap product post the quarter, while terminating its investment in Champlain's Small-Cap product, thereby simplifying its portfolio and benefitting from a slightly improved fee schedule.

- SMRS continues to renegotiate fee agreements wherever possible, typically in conjunction with additional capital allocations. Seven agreements have been modified within the past two years, resulting in a lower average portfolio cost and, with the intention of improving future returns.

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

- On a total domestic equity basis large-caps make up approximately 87% of portfolio exposure, with mid-caps totaling 9% of the portfolio, and small-caps comprising 4%.

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

- The internal and external combined active equity portfolio is trading at 15x normalized earnings versus the S&P 500 at 17x normalized earnings, with similar exposure to systemic risk and similar capital return characteristics. If the active equity portfolio's normalized PE trades in line with the S&P 500 over time, this would imply outperformance of close to 15% versus the benchmark, likely occurring over a period of three to five years.

Market Environment and Outlook

- At 17x normalized earnings, equity markets look reasonably priced, particularly in comparison to bonds. Assuming a 3.8% normalized dividend yield and 5.0% long-term expected earnings growth, the S&P 500 is poised to return approximately 8.8% over the long-term. This compares to the 30-year U.S. Treasury at 3.7% and a historical average return of 9.2%.

- Within equities, large-cap stocks look attractive relative to small-caps, particularly on a risk adjusted basis. The normalized PE for the S&P 500 is ~17x versus the S&P 600 at ~22x, while the trailing twelve-month dividend yield for S&P 500 (including buybacks) is 3.8% versus the S&P 600 at .9%. Over the long-term, we believe that small-caps will return roughly 8% based on a ~1.5% 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.

- During the past five years small cap has outperformed large-cap value by nearly 25% on a cumulative basis (~3.5% 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	6.5%	7.0%	7.6%
S&P 400 Mid-Cap	8.9%	8.9%	8.9%
S&P 600 Small-Cap	10.0%	9.9%	9.8%

Philosophy

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

- Markets participants tend to make investment decisions based on “what is 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.

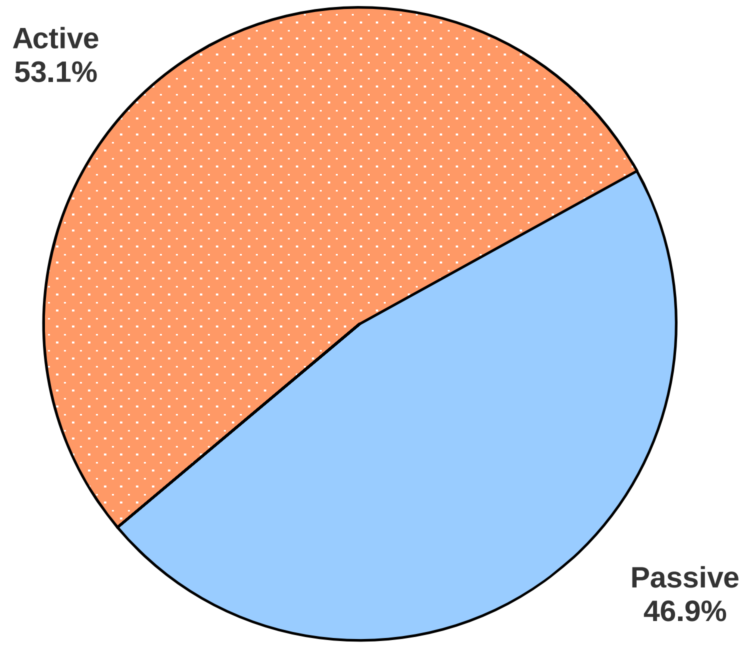
- Considerations for hiring and firing managers are based primarily on organizational structure and incentives, qualitative analysis of manager thought processes, bottom up analysis of holdings and fees. We do not typically use historical three and five-year performance to make hiring, firing, or allocation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

6/30/13

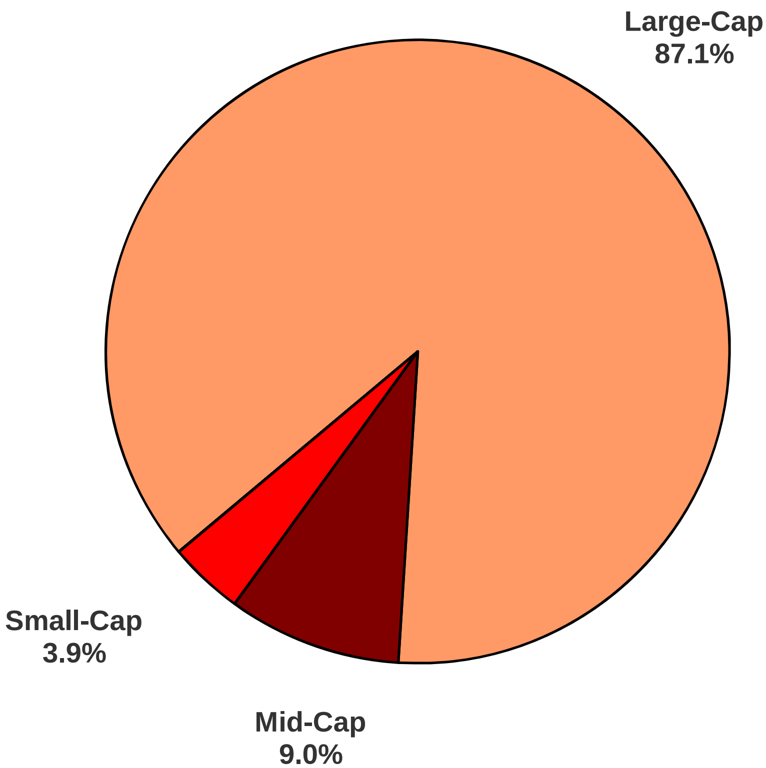


Market Value in Millions

	6/30/13		3/31/13	
	Assets	**Percent**	**Assets**	**Percent**
Active	$7,733	53.1%	$7,743	52.6%
Passive	6,830	46.9%	6,979	47.4%
Total Domestic Equity	**$14,563**	**100.0%**	**$14,722**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Domestic Equity Exposure By Market Cap
6/30/13



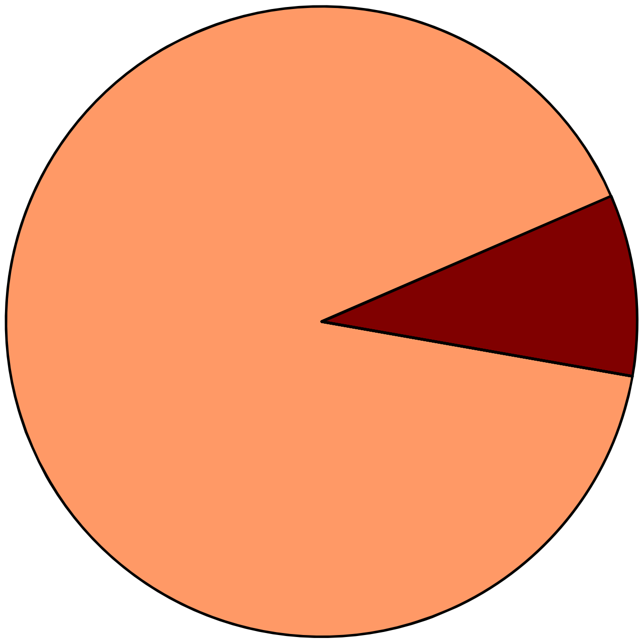
Market Value in Millions

	6/30/13		
	Assets	**Percent**	**S&P 1500**
Large-Cap (>$10B)	$12,684	87.1%	81.9%
Mid-Cap (>$4 <$10B)	1,311	9.0%	10.2%
Small-Cap (<$4B)	568	3.9%	7.9%
Total Domestic Equity	**$14,563**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

Domestic Passive Equity Investments
6/30/13

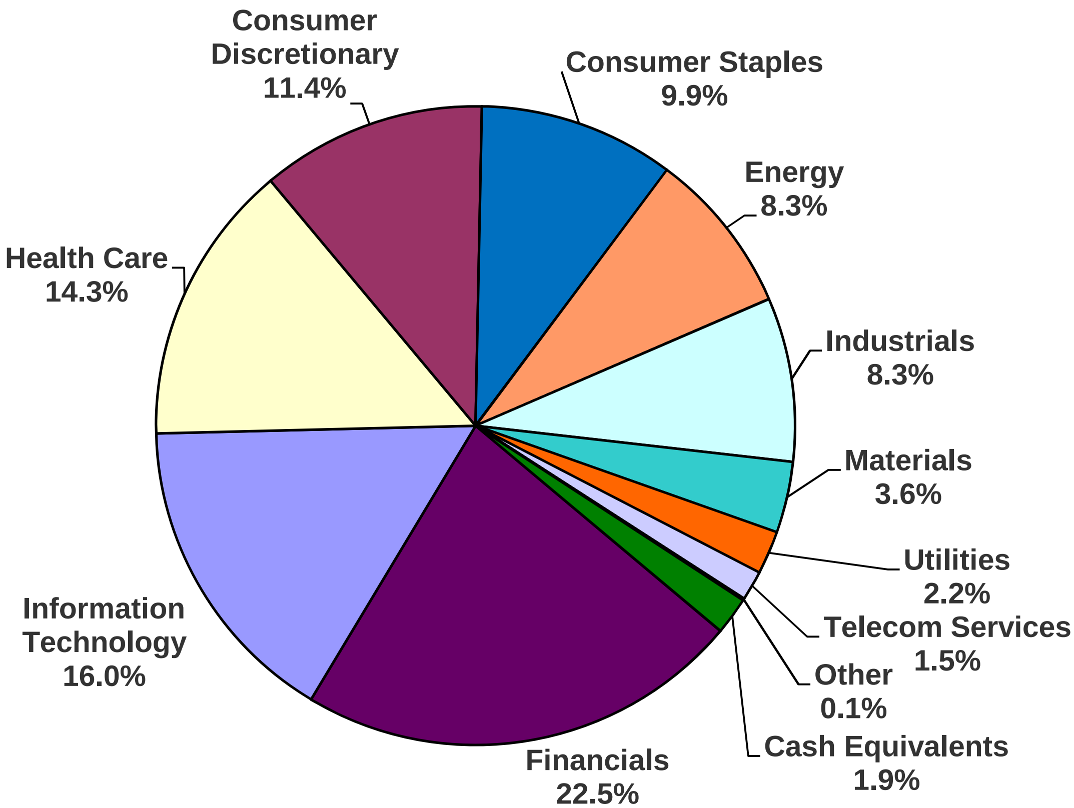


Market Value in Millions

	6/30/13		
	Assets	**Percent**	**Benchmark**
S&P 500	$6,197	90.7%	92.3%
S&P Mid-Cap	633	9.3%	7.7%
Total	**$6,830**	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
All Domestic Equity Holdings By Category
6/30/13



Market Value in Millions

	6/30/13			3/31/13	
	Assets	Percent	Benchmark	Assets	Percent
Financials	$3,270	22.5%	18.0%	$2,777	18.8%
Information Technology	2,335	16.0%	17.0%	2,527	17.2%
Health Care	2,090	14.3%	12.4%	2,152	14.6%
Consumer Discretionary	1,660	11.4%	12.4%	1,659	11.3%
Consumer Staples	1,439	9.9%	9.7%	1,382	9.4%
Energy	1,210	8.3%	9.9%	1,337	9.1%
Industrials	1,211	8.3%	10.8%	1,224	8.3%
Materials	526	3.6%	3.7%	455	3.1%
Utilities	317	2.2%	3.5%	299	2.0%
Telecom Services	225	1.5%	2.6%	250	1.7%
Other	5	0.1%	0.0%	261	1.8%
Total Investments	$14,288	98.1%	100.0%	$14,323	97.3%
Cash Equivalents	275	1.9%	0.0%	399	2.7%
Total	**$14,563**	**100.0%**	**100.0%**	**$14,722**	**100.0%**

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

SMRS

All Domestic Equities Composite

6/30/13

Date:	**6/30/13**	**3/31/13**	**12/31/12**	**9/30/12**
Assets ($million):	$14,563	$14,722	$13,408	$13,959
Number of Securities:	1,422	1,393	1,394	1,534

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):	$94.8	$93.9
Trailing 12-month P/E:	16.1x	16.5x
Forecast P/E:	14.2x	14.8x
Price/Book:	2.1x	2.3x
Beta:	0.98	1.01
Dividend Yield:	1.9%	2.0%
3-5 Year EPS Growth Estimate:	11.6%	11.2%
Return on Equity:	18.5%	18.4%

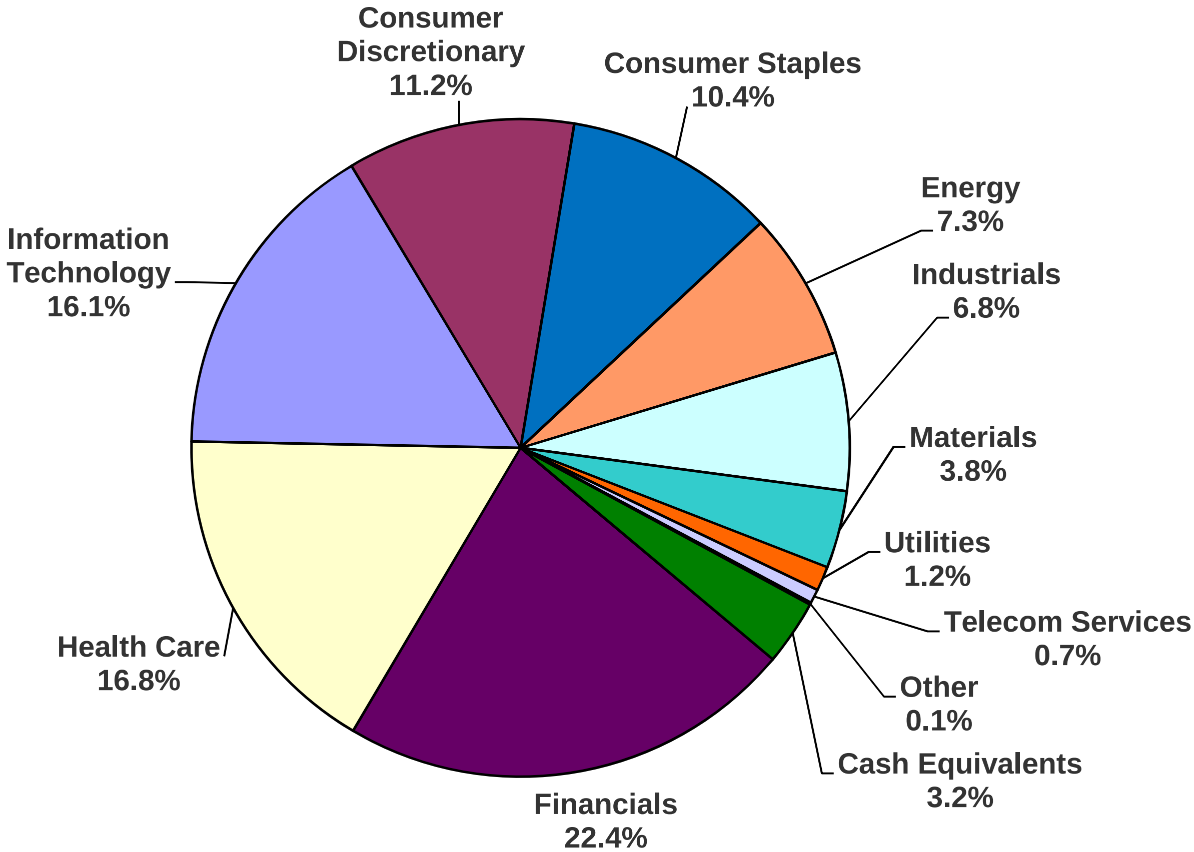
TOP TEN HOLDINGS - All Domestic Equities
6/30/13

	Portfolio Weight	**Total Shares**	**6/30/13 Price**	**YTD13 Total Return**	**Market Value**
Apple Inc.	2.97%	1,089,261	$396.53	-24.57%	$431,924,664
Johnson & Johnson	2.67%	4,535,254	$85.86	24.40%	389,396,908
SPDR S&P 500 ETF	2.57%	2,336,204	$160.42	13.74%	374,773,846
Google Inc. Cl A	1.96%	323,430	$880.37	24.46%	284,738,069
Bank of America Corp.	1.62%	18,349,462	$12.86	10.95%	235,974,081
Exxon Mobil Corp.	1.52%	2,451,564	$90.35	5.79%	221,498,807
PepsiCo Inc.	1.49%	2,646,154	$81.79	21.22%	216,428,936
Charles Schwab Corp.	1.39%	9,538,409	$21.23	48.88%	202,500,423
Microsoft Corp.	1.36%	5,719,407	$34.55	31.29%	197,576,915
Chevron Corp.	1.26%	1,545,968	$118.34	11.18%	182,949,853
TOTAL	18.80%				$2,737,762,503

SMRS

All Active Domestic Equity Holdings By Category

6/30/13



Market Value in Millions

	6/30/13			3/31/13	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
Financials	$1,734	22.4%	18.0%	$1,678	21.7%
Health Care	1,295	16.8%	12.4%	1,344	17.4%
Information Technology	1,246	16.1%	17.0%	1,356	17.5%
Consumer Discretionary	869	11.2%	12.4%	887	11.4%
Consumer Staples	805	10.4%	9.7%	706	9.1%
Energy	568	7.3%	9.9%	648	8.4%
Industrials	522	6.8%	10.8%	509	6.6%
Materials	292	3.8%	3.7%	207	2.7%
Utilities	93	1.2%	3.5%	56	0.7%
Telecom Services	56	0.7%	2.6%	70	0.9%
Other	5	0.1%	0.0%	47	0.6%
Total Investments	$7,485	96.8%	100.0%	$7,508	97.0%
Cash Equivalents	248	3.2%	0.0%	235	3.0%
Total	**$7,733**	**100.0%**	**100.0%**	**$7,743**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

Benchmark: S&P 1500

SMRS

All Actively Managed Composite

6/30/13

Date:	6/30/13	3/31/13	12/31/12	9/30/12
Assets ($million):	$7,733	$7,743	$7,021	$7,562
Number of Securities:	1,164	1,154	1,143	1,422

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	$93.9
Trailing 12-month P/E:	15.7x	16.5x
Forecast P/E:	13.8x	14.8x
Price/Book:	1.9x	2.3x
Beta:	0.97	1.01
Dividend Yield:	1.8%	2.0%
3-5 Year EPS Growth Estimate:	12.1%	11.2%
Return on Equity:	18.5%	18.4%

TOP TEN HOLDINGS - All Actively Managed
6/30/13

	Portfolio Weight	Total Shares	6/30/13 Price	YTD13 Total Return	Market Value
Johnson & Johnson	3.77%	3,394,394	$85.86	24.40%	$291,442,669
Apple Inc.	3.63%	708,028	$396.53	-24.57%	280,754,343
Charles Schwab Corp.	2.50%	9,091,292	$21.23	48.88%	193,008,129
Google Inc. Cl A	2.44%	214,312	$880.37	24.46%	188,673,855
Bank of America Corp.	2.32%	13,970,967	$12.86	10.95%	179,666,636
PepsiCo Inc.	2.13%	2,018,081	$81.79	21.22%	165,058,845
Teva Pharmaceutical Indust. Ltd. ADS	1.70%	3,346,717	$39.20	6.42%	131,191,306
Kellogg Co.	1.62%	1,949,308	$64.23	16.65%	125,204,053
American International Group Inc.	1.47%	2,551,538	$44.70	26.63%	114,053,749
General Mills Inc.	1.31%	2,086,270	$48.53	21.84%	101,246,683
TOTAL	22.89%				$1,770,300,268

SMRS

DOMESTIC EQUITIES

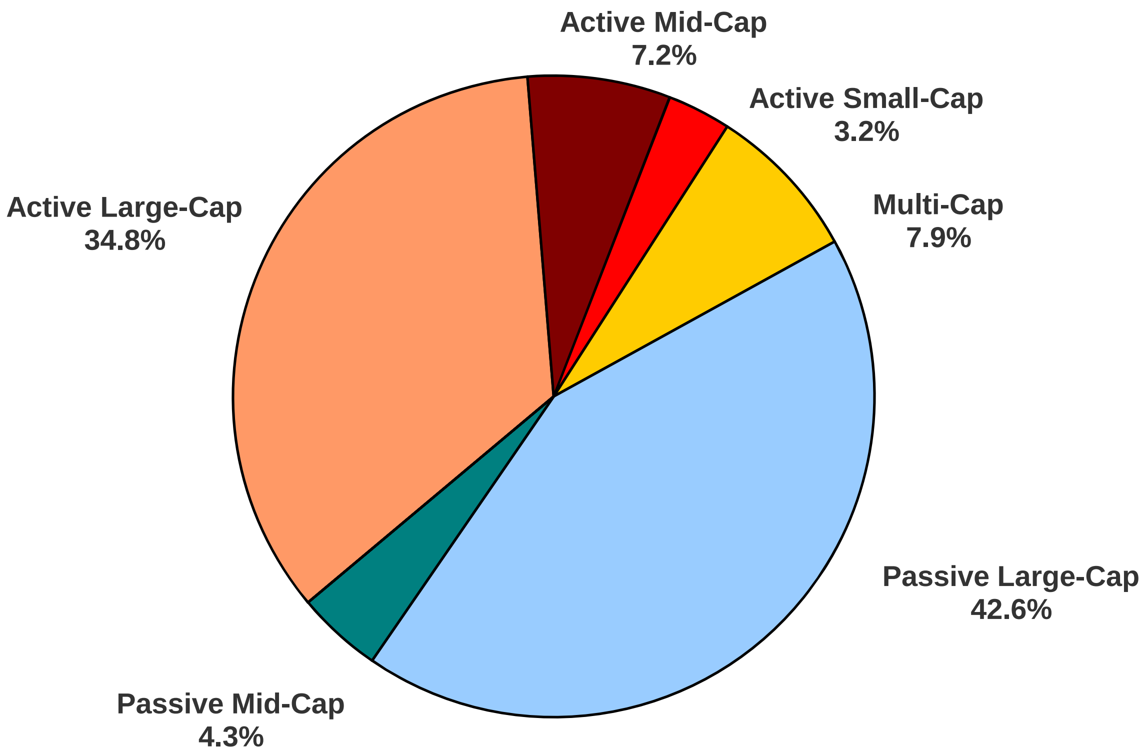
6/30/13

	Amount	% of Total
Passive		
S&P 500	$6,197,291	
S&P 400	632,703	
Sub Total	**$6,829,994**	49.5%
Internal Active		
Large-Cap Core	1,827,926	
Large-Cap Growth	1,171,356	
Absolute Return Income Fund	377,904	
All-Cap GARP	319,209	
Large-Cap Value	280,271	
Concentrated Equity Fund	48,904	
Tactical Asset Allocation	39,784	
Concentrated All-Cap Growth	12,084	
Sub Total	**$4,077,438**	28.0%
External Active		
LSV Large-Cap Value	$776,297	
Artisan All-Cap Value	622,391	
Donald Smith Small-Cap Value	354,175	
Fisher All-Cap Value	349,765	
Epoch Large-Cap Value	334,913	
Cramer Rosenthal McGlynn Mid-Cap Value	234,142	
JP Morgan Large-Cap Growth	164,261	
Attucks Asset Management	146,226	
Seizert Capital Partners All-Cap Core	142,505	
Bivium	128,052	
Edgewood Large-Cap Growth	93,783	
Los Angeles Capital Mid-Cap Plus Core	84,831	
Champlain Small-Cap Core	65,442	
Munder Mid-Cap Core	57,461	
Champlain Mid-Cap Core	50,483	
Northpointe Small-Cap Value	50,901	
Sub Total	**$3,655,628**	25.1%
TOTAL	**$14,563,060**	100.0%

SMRS

Domestic Equity Holdings By Category

6/30/13



Market Value in Millions

	6/30/13		3/31/13	
Active				
Large-Cap	$5,066	34.8%	$5,047	34.3%
Mid-Cap	1,049	7.2%	1,085	7.4%
Small-Cap	471	3.2%	476	3.2%
Multi-Cap	1,147	7.9%	1,135	7.7%
Total Active Equity	$7,733	53.1%	$7,743	52.6%
Passive				
Large-Cap	$6,197	42.6%	$6,308	42.8%
Mid-Cap	633	4.3%	671	4.6%
Total Passive Equity	$6,830	46.9%	$6,979	47.4%
Total Domestic Equity	**$14,563**	**100.0%**	**$14,722**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

Combined Active Equity Portfolio, Return Expectations

6/30/13

Return Assumption Estimates

	Yield to Maturity ****	Normal Dividend Yield **	LT Growth Rate ***
SAD Combined Active Equity	***9.3%***	***4.3%***	***5.0%***
S&P 500 Large-Cap	8.8%	3.8%	***5.0%***
S&P 400 Mid-Cap	8.3%	1.9%	***6.5%***
S&P 600 Small-Cap	7.8%	0.8%	***7.0%***
US 30 Year Treasury	3.5%	3.5%	0.0%

Trailing 12 Month and Normalized Earnings Characteristics

	TTM Price/Earnings	TTM Dividend Yield **	Normal Price/Earnings
SAD Combined Active Equity	***18.5***	**3.8%**	***15.2***
S&P 500 Large-Cap	16.6	3.8%	17.3
S&P 400 Mid-Cap	20.1	2.0%	22.0
S&P 600 Small-Cap	23.1	0.9%	24.8

Normalized Earnings & Dividend Characteristics

	Normal Earnings Yield *	Normal Payout Ratio	Normal Dividend Yield **
SAD Combined Active Equity	***6.6%***	***65%***	***4.3%***
S&P 500 Large-Cap	5.8%	66%	3.8%
S&P 400 Mid-Cap	4.6%	41%	1.9%
S&P 600 Small-Cap	4.0%	21%	0.8%

Portfolio and Benchmark Risk Estimates

	Yield to Maturity ****	Standard Deviation	Yield/Volatility
SAD Combined Active Equity	**9.3%**	**12.03%**	**0.77**
S&P 500	8.8%	11.75%	0.75
S&P 400	8.3%	13.46%	0.62
S&P 600	7.8%	14.26%	0.55
US 30 Year Treasury	3.5%	13.78%	0.25

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

SMRS Internal/External Manager Performance - Net of Fees
6/30/2013

Total Domestic Equity Performance, Gross

	Market Value	1 Year	3 Years	5 Years	7 Years	10 Years
Total Domestic Equity	***$14,564,502***	***22.8%***	***18.0%***	***7.4%***	***5.9%***	**7.5%**
S&P 1500		21.1%	18.6%	7.3%	5.9%	**7.5%**
State Street Peer Rank		*21.1%*	*17.5%*	*6.5%*	*5.6%*	*7.3%*

Total Domestic Equity Performance, Net

	Market Value	1 Year	3 Years	5 Years
Total Domestic Equity	***$14,564,502***	***22.6%***	***17.7%***	***7.1%***
S&P 1500		21.1%	18.6%	7.3%
Morningstar S&P 1500 Cap-Weighted Average		*21.3%*	*16.8%*	*6.0%*

Total Active Equity Performance, Net

	Market Value	1 Year	3 Years	5 Years
Total Active Equity	***$7,734,459***	***23.5%***	***17.4%***	***7.1%***
S&P 1500		21.1%	18.6%	7.3%
Morningstar S&P 1500 Cap-Weighted Average		*21.3%*	*16.8%*	*6.0%*

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Total Internal Active	***$4,039,024***	***23.4%***	***17.1%***	***7.0%***	***N/A***	
S&P 500		20.6%	18.5%	7.0%	N/A	
Morningstar Large Blend		20.8%	16.7%	5.8%		
Total External Active	***$3,655,629***	***23.3%***	***17.9%***	***6.7%***	***N/A***	
S&P 1500		21.1%	18.6%	7.3%	N/A	
Morningstar S&P 1500 Cap-Weighted Average		21.3%	16.8%	6.0%		
SMRS Large-Cap Core	$1,828,149	29.1%	17.5%	8.2%	4.6%	7/31/07
S&P 500		20.6%	18.5%	7.0%	4.0%	
Morningstar Large Blend		20.8%	16.7%	5.8%		
SMRS Large-Cap Growth	$1,171,633	18.3%	17.6%	7.1%	6.1%	5/1/05
S&P 500 Growth Index		16.8%	18.9%	7.6%	6.0%	
Morningstar Large Growth		17.2%	16.5%	5.6%		
LSV Large-Cap Value	$776,297	*30.9%*	*18.9%*	*N/A*	*14.6%*	12/31/09
S&P 500 Value Index		25.0%	18.1%	N/A	13.5%	
Morningstar Large Value		23.0%	16.9%	N/A		
Artisan All-Cap Value	$622,391	*19.7%*	*17.6%*	*9.4%*	*9.6%*	5/1/05
S&P 1500 Value/S&P 400 Value Blend		25.3%	18.9%	9.0%	8.5%	
Morningstar Mid-Cap Value		26.7%	17.6%	8.3%		
SMRS Absolute Return Income Fund	$377,904	16.4%	16.0%	N/A	16.4%	1/1/09
60% S&P 500/40% BARCLAYS AGG		11.7%	12.5%	N/A	11.9%	
Morningstar Moderate Allocation		12.2%	11.1%	N/A		

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Donald Smith & Co.	$354,175	*19.1%*	*11.5%*	*13.3%*	*7.9%*	1/31/07
S&P 600 Value Index		28.5%	19.9%	10.0%	4.9%	
Morningstar Small Value		25.6%	16.7%	9.3%		
Fisher All-Cap	$349,765	*16.9%*	*14.9%*	*7.1%*	*9.0%*	9/30/04
S&P 1500/S&P 600 Value Blend		21.7%	17.7%	8.8%	8.3%	
Morningstar Small Value		25.6%	16.7%	9.3%		
Epoch Large-Cap Value	$334,913	*19.7%*	*16.9%*	*N/A*	*11.9%*	12/31/09
S&P 500 Value Index		25.0%	18.1%	N/A	13.5%	
Morningstar Large Value		23.0%	16.9%	N/A		
SMRS All-Cap GARP *	$319,584	18.1%	N/A	N/A	14.7%	5/1/11
S&P 1500 Super Composite		21.1%	N/A	N/A	10.1%	
Morningstar S&P 1500 Cap-Weighted Average		*21.3%*	*N/A*	*N/A*		
SMRS Large-Cap Value	$280,766	*23.0%*	*16.6%*	*5.8%*	*1.0%*	*7/31/07*
S&P 500 Value Index		25.0%	18.1%	6.5%	2.2%	
Morningstar Large Value		23.0%	16.9%	6.0%		
Cramer Rosenthal All-Cap	$234,142	*21.6%*	*18.5%*	*8.4%*	*9.0%*	5/1/05
S&P 400 Value/S&P 1500 Blend		27.1%	18.9%	9.0%	8.5%	
Morningstar Mid-Cap Value		26.7%	17.6%	8.3%		
JP Morgan Large-Cap Growth	$164,261	N/A	N/A	N/A	11.9%	8/1/12
S&P 500 Growth Index		N/A	N/A	N/A	14.7%	
Morningstar Large Growth		N/A	N/A	N/A		
Attucks Asset Management	$146,226	*20.2%*	*17.0%*	*5.7%*	*3.3%*	11/1/07
S&P 1500 Super Composite		21.1%	18.6%	7.3%	3.3%	
Morningstar S&P 1500 Cap-Weighted Average		*21.3%*	*16.8%*	*6.0%*		
Seizert Capital Partners	$142,505	38.0%	23.1%	N/A	19.0%	11/1/09
S&P 1500/S&P 400 Value Blend		21.1%	20.9%	N/A	19.6%	
Morningstar Mid-Cap Blend		25.1%	17.4%	N/A		
Bivium Capital Partners	$128,052	19.8%	18.3%	6.9%	2.9%	11/1/07
S&P 1500 Super Composite		21.1%	18.6%	7.3%	3.3%	
Morningstar S&P 1500 Cap-Weighted Average		*21.3%*	*16.8%*	*6.0%*		
Edgewood Large-Cap Growth	$93,783	19.6%	20.5%	N/A	17.2%	4/1/09
S&P 500 Growth Index		16.8%	18.9%	N/A	20.0%	
Morningstar Large Growth		17.2%	16.5%	N/A		
LA Capital Mid-Cap Core	$84,831	*22.1%*	*18.6%*	*7.3%*	*9.6%*	5/1/05
S&P 400 Mid-Cap Index		25.2%	19.5%	8.9%	9.3%	
Morningstar Mid-Cap Blend		25.1%	17.4%	6.7%		
Champlain Small-Cap Core	$65,442	*21.5%*	*20.2%*	*10.6%*	*9.1%*	1/31/07
S&P 600 Index		25.2%	20.3%	9.9%	6.1%	
Morningstar Small Blend		24.6%	18.0%	8.0%		

Manager Performance, Net of Fees

	Market Value	1 Year	3 Years	5 Years	Inception	Inception Date
Munder Mid-Cap Core Growth	$57,461	*23.3%*	*18.7%*	*N/A*	*22.4%*	3/31/09
S&P 400 Mid-Cap Index		25.2%	19.5%	N/A	24.4%	
Morningstar Mid-Cap Blend		25.1%	17.4%	N/A		
Northpointe Small-Cap	$50,901	*23.0%*	*14.3%*	*6.4%*	*5.9%*	10/1/04
S&P 600 Value/Core Index Blend		25.2%	18.7%	9.3%	7.9%	
Morningstar Small Blend		24.6%	18.0%	8.0%		
Champlain Investment Partners, Mid-Cap	$50,483	*20.9%*	*18.1%*	*N/A*	*20.2%*	1/31/09
S&P 400 Mid-Cap Index		25.2%	19.5%	N/A	22.9%	
Morningstar Mid-Cap Blend		25.1%	17.4%	N/A		
SMRS Concentrated Equity	$48,904	*N/A*	*N/A*	*N/A*	*4.2%*	5/1/13
S&P 1500 Super Composite		N/A	N/A	N/A	2.1%	
Morningstar S&P 1500 Cap-Weighted Average		N/A	N/A	N/A		
SMRS Concentrated All Cap Growth	$12,084	*N/A*	*N/A*	*N/A*	*3.9%*	5/1/13
S&P 1500 Growth		N/A	N/A	N/A	1.4%	
Morningstar S&P 1500 Growth, Cap-Weighted Average Average		N/A	N/A	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. 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

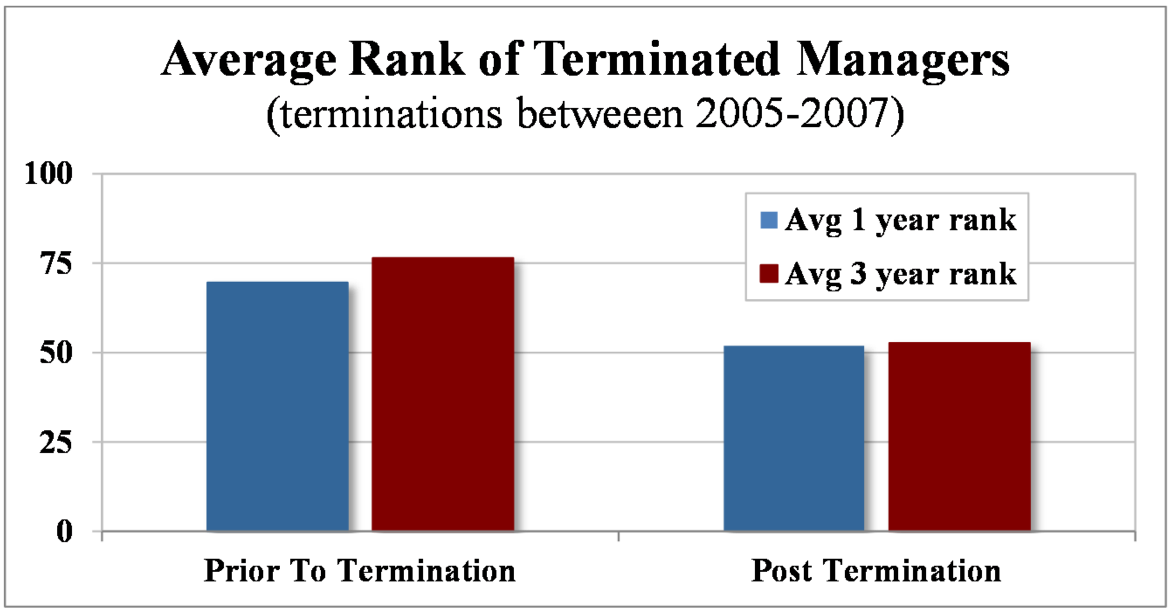
(1) For this analysis we used quarterly fund ranks for three year rolling periods; ranks are based on total gross of fees returns.
(2) The average is calculated on below median periods lasting more then one quarter; ouf of total 10 years analyzed in this study.
(3) Managers who experienced one or more 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.

“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.

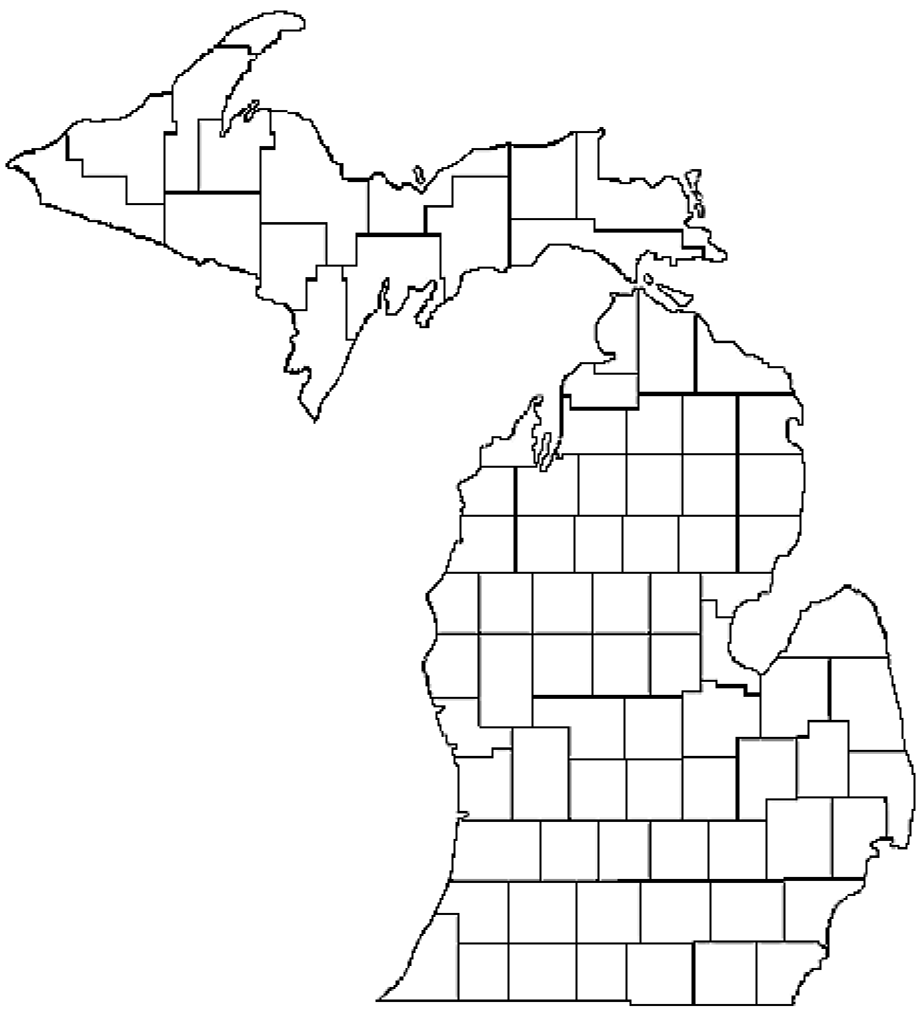
RVKuhns & ASSOCIATES, INC.

STATE OF MICHIGAN
RETIREMENT SYSTEMS

INTERNATIONAL EQUITY REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 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	13.9 %	8.9%	0.1%	1.3%	7.3%
Benchmark Return	14.1%	7.7%	-0.4%	0.5%	6.9%
Peer Return (> $1 B)	16.7%	9.9%	0.0%	2.7%	9.0%
Rank vs. Peers	80	73	43	75	70

- Performance in the second quarter was negatively affected by an emerging market overweighting, fixed income reaction to higher rates and Federal Reserve statements, and external manager underperformance within expected bands. Performance of the total international equity position versus the International Blended Benchmark with the MSCI ACWI ex USA benchmark in recent years was -3.6% versus -2.9% in the second quarter, resulting in a -77 basis points (bps) tracking error and a cumulative -47 bps for the trailing year. Both variance numbers are within the normal expected range that recognizes a 250 bps possible variance, but have been impacted by more negative emerging market returns. The return numbers for five years and over reflect the market decline in 2009 and recovery from the significant fixed income price disruption environment. The three and five-year tracking error numbers were +95 and +49 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 $144 million as of June 30, 2013. Recognized but unrealized gains from fixed income Libor notes, remarked at lower cost values, are now $2 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 -1.3% in the first quarter versus the benchmark's return of -0.8%, reflecting U.S. dollar strength.

- External active international fund managers had a return of -1.4% for the quarter and +18.5% for the trailing year. Manager returns are well diversified, and reflect fundamental, quantitative and fixed income enhancement strategies. The external Stock Plus strategies were challenged in the quarter relative to the internal fund, which benefited from its holdings mix of Libor notes, cash and the Global Dividend stock portfolio. 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 normally constrained to no more than 20% of their portfolios.

- The Emerging Market Index returns were -8.1% for the quarter, and +2.9% for the trailing year. Passive and active exposure of $2.1 billion to emerging markets are a current drag on relative performance, although the longer range economic outlook remains more positive than developed markets. Fifty-two percent of exposure to Emerging Markets is passive. Emerging Markets exposure is now +6% over its weight in 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 and reductions in systemic leverage as write-downs 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 still unresolved, but not an immediate risk. European earnings growth is expected to improve, but continue to lag the U.S. Emerging Markets have been negatively affected by China and general global economic slowdowns, and total investment flows are now negative for the emerging market category. Longer-term growth expectations in emerging markets remain positive, although at lower levels which are now being discounted. Political instability remains an issue.

- Additional allocations to international equities will be made slowly as opportunities are presented. Both internal and external managers will be used, although 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 were challenged in the second quarter, but are expected to continue to enhance returns over the three-year planning horizon.

- 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. Improvement of the economic outlooks in both the U.S. and Europe should improve the emerging market outlook as well. Critical infrastructure investments should also stimulate the emerging market economies.

Investment Plan

- The move toward higher strategic asset allocation target as a global recovery becomes more visible using 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 exchange-traded products. Accept reasonable tracking error risk in return for better liquidity and return enhancement.

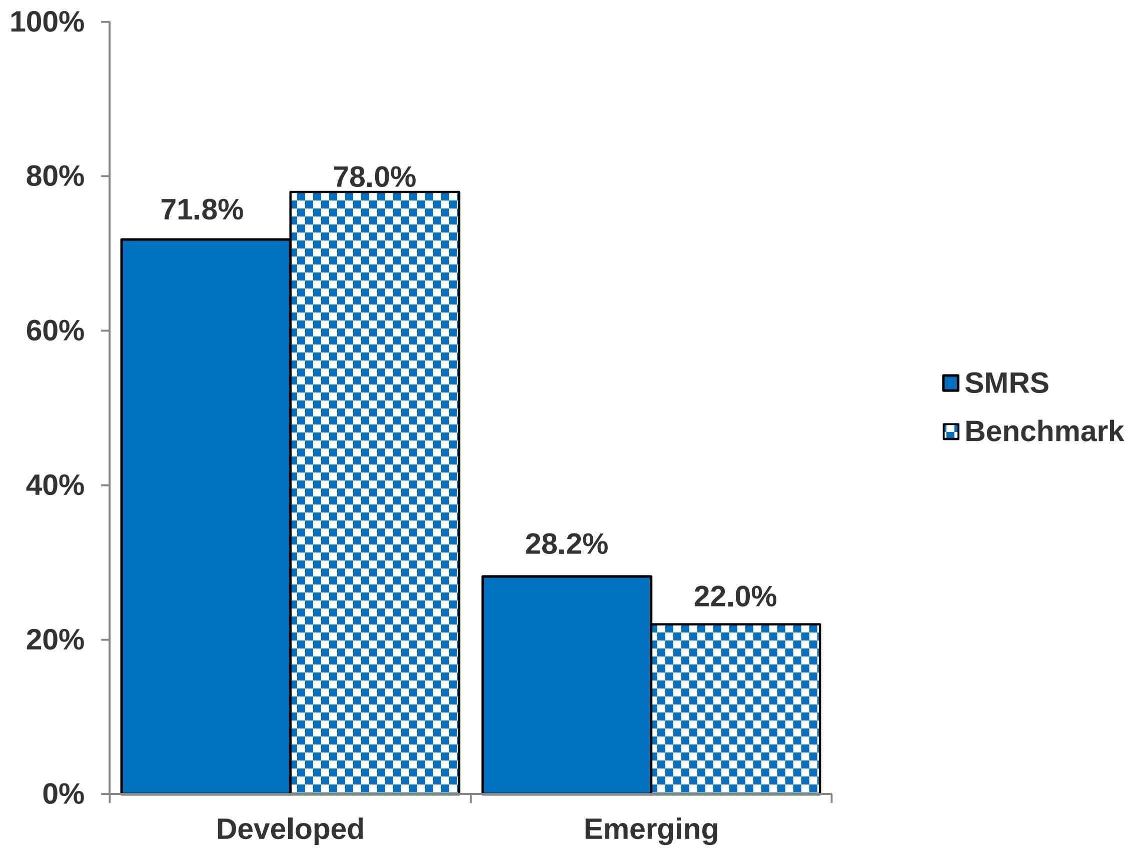
- Take advantage of attractive corporate spreads in Libor notes, and trade to improve yields when possible. Continue to prepare for derivative market changes by focusing on standardized structures and management of collateral balances and settlement requirements. Major regulatory clarification and compliance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

SMRS

International Equity Holding By Category

SMRS Versus Benchmark

6/30/13

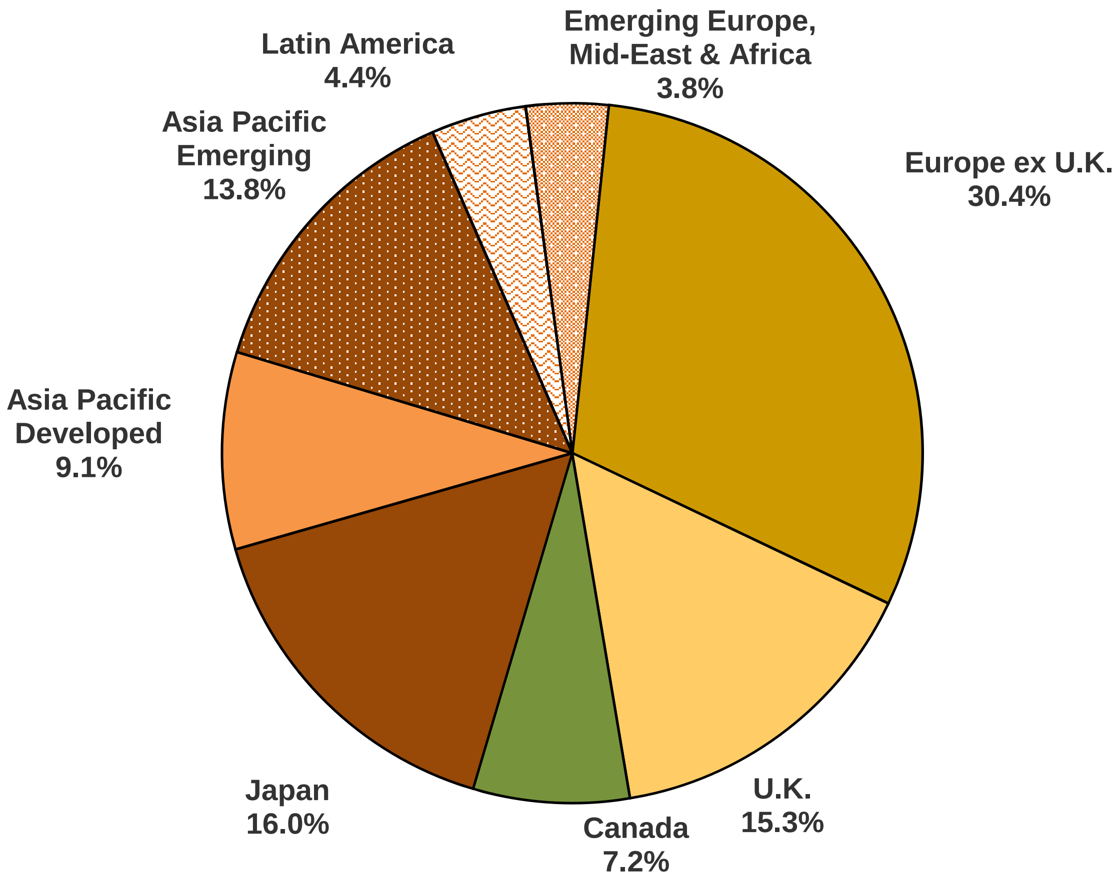


Investments by Region

	SMRS	MSCI ACWI ex USA
Developed	71.8%	78.0%
Emerging	28.2%	22.0%
Total	**100.0%**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
MSCI ACWI ex USA
6/30/13

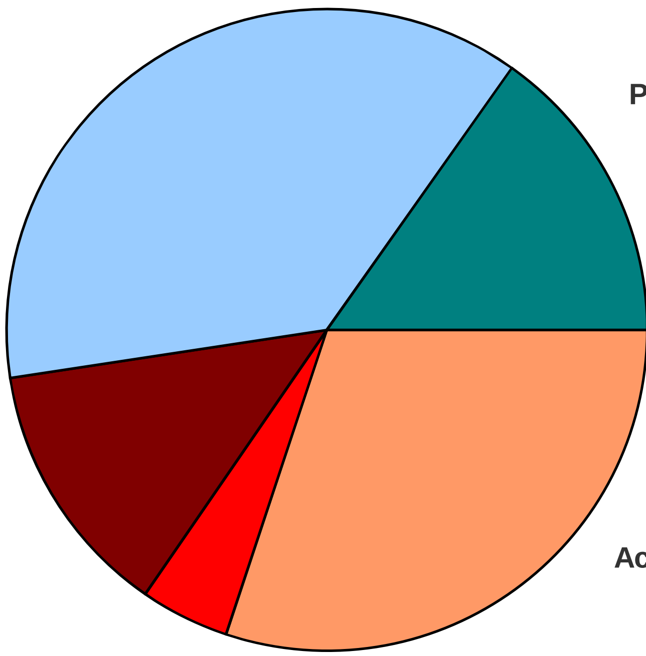


	Benchmark
Developed	
Europe ex U.K.	30.4%
U.K.	15.3%
Japan	16.0%
Asia Pacific Developed	9.1%
Canada	7.2%
Total Developed	78.0%
Emerging	
Asia Pacific Emerging	13.8%
Latin America	4.4%
Emerging Europe, Mid-East & Africa	3.8%
Total Emerging	22.0%
Total	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS

International Equity Holdings By Category
6/30/13



Market Value in Millions

	6/30/13		3/31/13	
Active				
Developed Large	$2,247	30.1%	$2,284	29.5%
Developed Small	340	4.5%	344	4.4%
Emerging	970	13.0%	1,080	13.9%
Total Active Equity	3,557	47.6%	3,708	47.8%
Passive				
Developed	$2,775	37.2%	$2,801	36.2%
Emerging	1,133	15.2%	1,236	16.0%
Total Passive Equity	3,908	52.4%	4,037	52.2%
Total International Equity	**$7,465**	**100.0%**	**$7,745**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

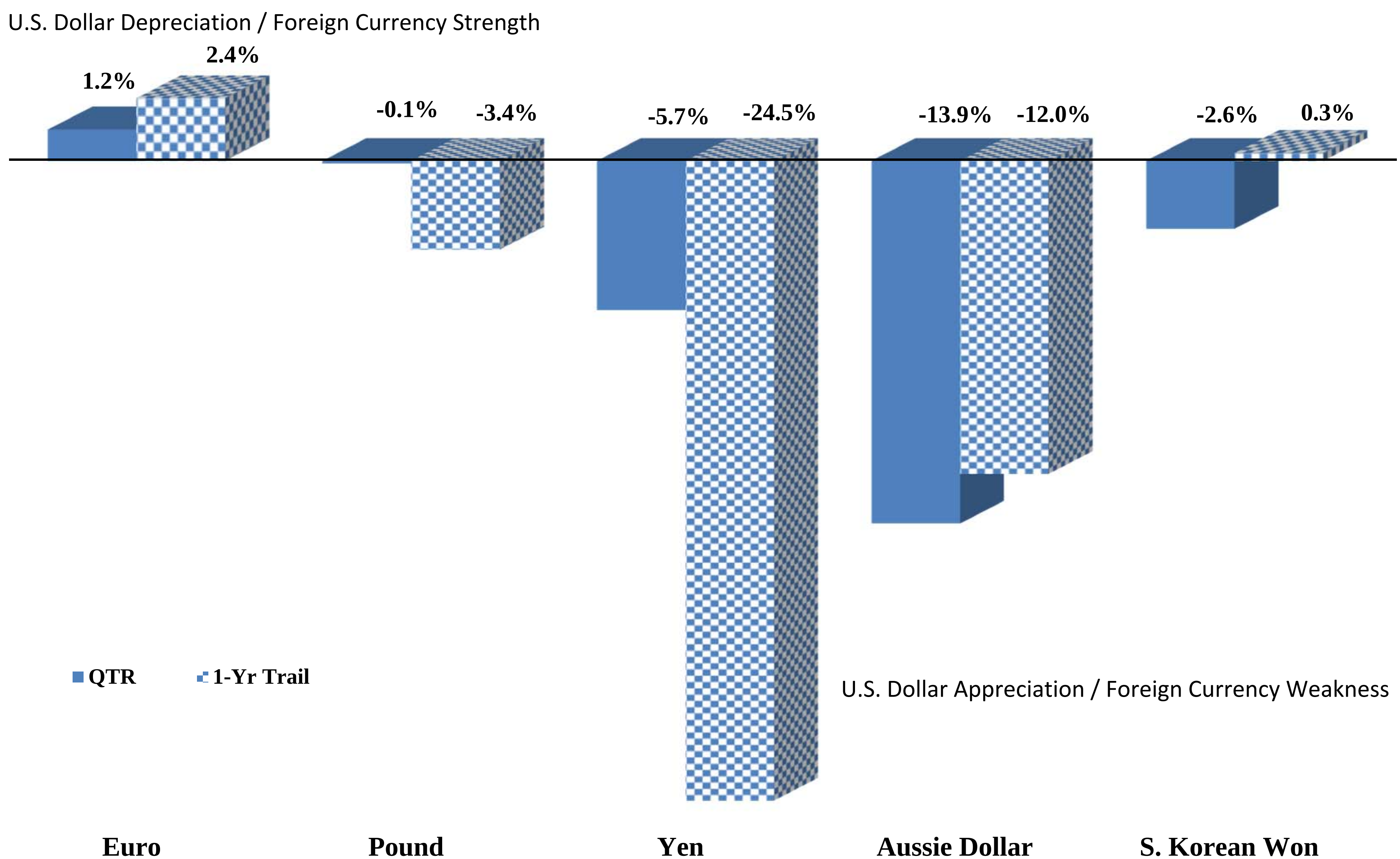
SMRS

International Equities

6/30/13

	INDEXED	ACTIVE	TOTAL	Percent
Developed Markets - Large/Mid Capitalization				
Internal Stock Plus Combination	$1,241,534		$1,241,534	
SSgA PMI Fund	531,166		531,166	
Vanguard Developed Markets Fund	488,182		488,182	
SSgA International Alpha Select BMI Fund		$460,789	460,789	
Wellington International Research Equity Fund		452,248	452,248	
PIMCO Stock Plus Fund		778,143	778,143	
Marathon-London EAFE Fund		289,202	289,202	
Baillie Gifford ACWI Ex US Alpha Fund		266,771	266,771	
Sub-Total Developed Large/Mid Cap	$2,260,882	$2,247,153	**$4,508,035**	60.4%
Developed Markets - Small Capitalization				
SSgA EMI Fund	$513,617		$513,617	
SSgA International Small Cap Alpha Fund		$99,933	99,933	
MFS International Small Cap Fund		114,660	114,660	
Franklin Templeton Int'l Small Cap Fund		125,456	125,456	
Sub-Total Developed Small Cap	$513,617	$340,049	853,667	11.4%
Total Developed Markets	$2,774,499	$2,587,202	**$5,361,702**	71.8%
Emerging Markets - All Capitalization				
Vanguard Emerging Mkt Stock Index Fund	$1,088,656		$1,088,656	
LACM Emerging Market Fund		$237,579	237,579	
PIMCO Emerging Market Fund		569,562	569,562	
Wellington Emerging Market Fund		163,205	163,205	
Equity Emerging Market Fund	43,923		43,923	
Total Emerging	$1,132,579	$970,346	**$2,102,925**	28.2%
TOTAL	$3,907,079	$3,557,549	**$7,464,627**	100%
Percent	52.3%	47.7%		

Currency Performance vs. the U.S. Dollar



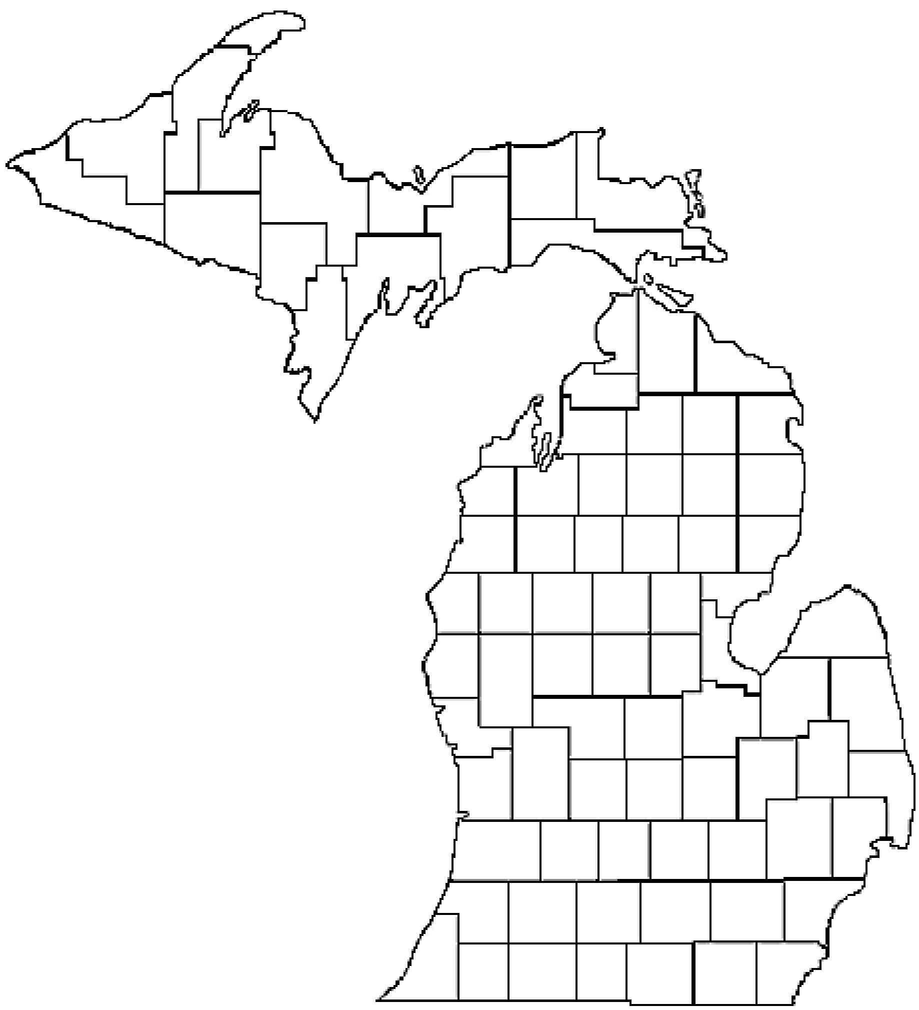
In percentage terms

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ABSOLUTE AND REAL RETURN REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 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	11.6%	5.5%	-0.7%	NA	NA
HFRI FOF Conservative*	7.8%	3.0%	-0.4%	1.2%	2.8%

*One month lag on the index

Portfolio Performance

- The portfolio outperformed the HFRI Fund of Funds Conservative Index by 81 basis points (bps) for the first quarter and 388 bps for the year.

Strategy Overview

- Arbitrage – Most event-driven managers generated gains during the quarter, driven primarily by event-oriented equities and distressed credit. Merger arbitrage had modest gains for the quarter as deal activity remained relatively low. Fixed income arbitrage managers had mixed results in the quarter, with arbitrage opportunities in structured credit providing the greatest contribution to returns. This is 33.5% of the Absolute Return Portfolio.

- Credit/Distressed - Distressed credit managers focused on managing legacy positions as few new restructurings or defaults happened in the quarter. Lehman Brothers continued to pay distributions and cleared several procedural hurdles to accelerate the timing of future payments. Restructurings in the media and home building sectors continued to perform well as management teams prepared the companies to be relisted or sold. Non-agency RMBS generated gains during the quarter on favorable housing data and settlement news related to mortgage insurers. This is 37.1% of the Absolute Return Portfolio.

- Long/Short Equity - Equity managers performed well during the quarter, with gains from long positions in airline related companies, media, and financials. Short positions were mixed during the quarter, as the consumer sector positions performed well, while the alternative energy sector struggled. This is 25.1% of the Absolute Return Portfolio.

- During the quarter, Fortress Drawbridge Special Opportunities Fund was funded for $100 million. The strategy is focused on undervalued and distressed credit globally.

Real Return and Opportunistic

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Real Return and Opport.	4.6%	7.1%	NA	NA	NA
Custom Benchmark	7.4%	7.7%	NA	NA	NA

- Senior Secured Credit - Performing non-investment grade credit managers delivered gains as the market ended the quarter with increased volatility. During the second quarter, the S&P/LSTA Leveraged Loan and Merrill Lynch U.S. High Yield Master II returned 0.22% and -1.35%, respectively. Demand in the leveraged loan market remained strong, with $7.2 billion of new CLO issuance in June, and $6.8 billion of inflows to retail loan funds. For the year, inflows to loan mutual funds totaled $33.6 billion and CLO formation totaled $42.3 billion. This is 15.9% of Real Return & Opportunistic Portfolio.

- Direct Lending - Direct lending managers had a pickup in activity during the quarter, as concerns over Fed tightening brought borrowers to the market. Managers continue of have a healthy pipeline of opportunities and expect transactions to remain steady as we move through the year. Middle market lending spreads widened for the first time in several quarters. This is 12.9% of Real Return & Opportunistic Portfolio.

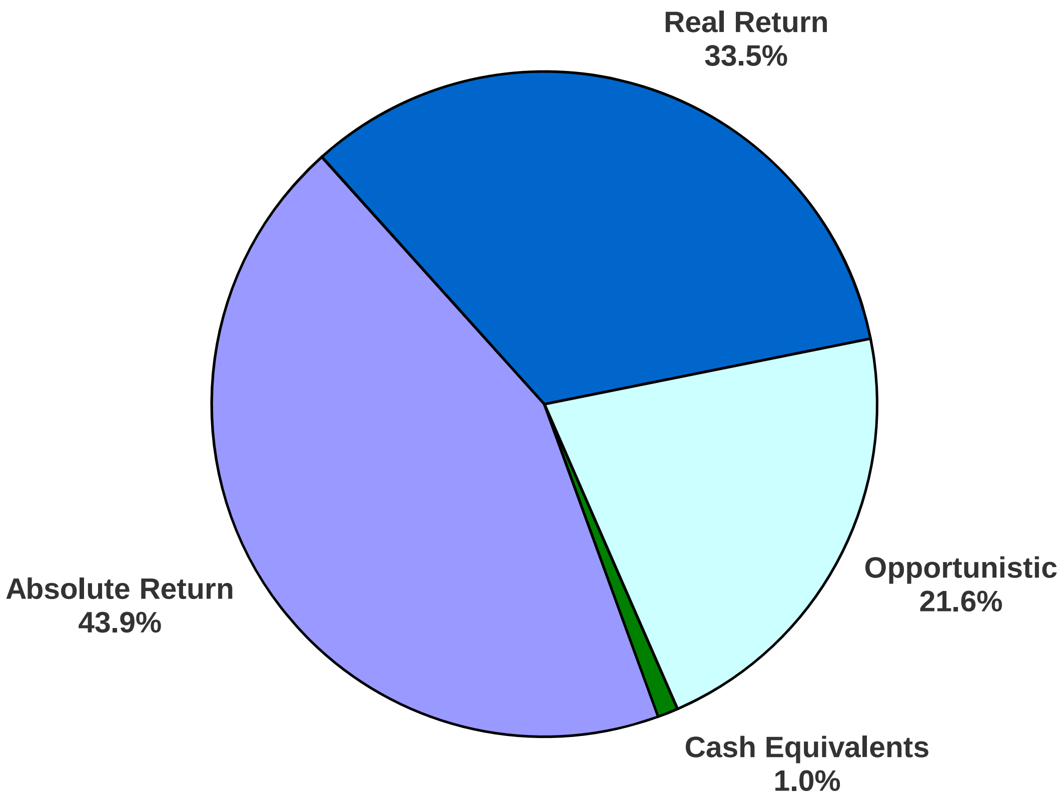
Commodities

MPSERS Plan	**1-Year**	**3-Years**	**5-Years**	**7-Years**	**10-Years**
Commodities	-4.4%	0.8%	NA	NA	NA
DJUBS Commodity TR	-8.0%	-0.3%	-7.1%	-3.4%	2.4%

- The commodity portfolio outperformed the Dow Jones UBS Commodity Total Return Index by 112 bps for the second quarter. The portfolio outperformance was driven mainly by underweight positions in natural gas, corn and live cattle relative to the Dow Jones UBS Commodity Total Return Index.

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

SMRS
Absolute, Real Return and Opportunistic
6/30/13



Market Value in Millions

	6/30/13		3/31/13	
Absolute Return	$2,294	43.9%	$2,099	41.8%
Real Return	1,752	33.5%	1,677	33.4%
Opportunistic	1,131	21.6%	1,099	21.9%
Cash Equivalents	52	1.0%	143	2.9%
Total Investments	**$5,229**	**100.0%**	**$5,018**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

SMRS
Absolute Return
6/30/13

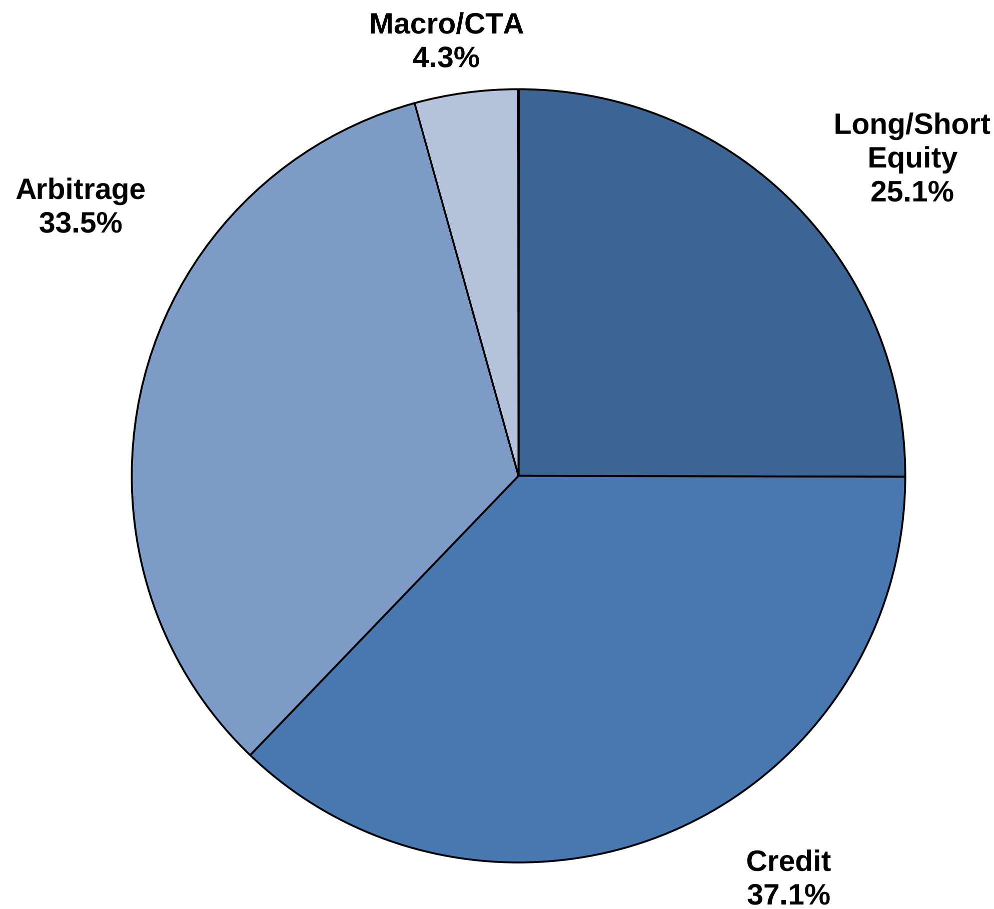
Net Market Values by Entity

		Net Market Value
	Absolute Return Capital Partners, L.P.	$52,162,689
	Apollo Offshore Credit Strategies Fund Ltd.	129,576,954
	Brevan Howard Multi-Strategy Fund, L.P.	108,503,195
**	**Drawbridge Opportunities Fund**	**100,000,000**
	Elliott International Limited	10,956,019
*	EnTrust White Pine Partners L.P.	291,501,795
	FrontPoint Multi-Strategy Fund Series A, L.P.	4,432,484
	MP Securitized Credit Master Fund, L.P.	55,381,511
*	Sand Hill, LLC	1,169,721,058
	Spartan Partners L.P.	34,234,826
*	Tahquamenon Fund L.P.	337,362,951
	Total Market Value	**$2,293,833,483**

* Fund of Funds.
** New commitment made during quarter reported.

SMRS
Absolute Return
6/30/13

Investments By Strategy



Strategy Breakdown			
Underlying Funds:	111	Median Position Size:	0.4%
Strategies:	4	Average Position Size:	0.9%
Relationships:	11	Largest Position Size:	5.7%

SMRS
Real Return and Opportunistic
6/30/13

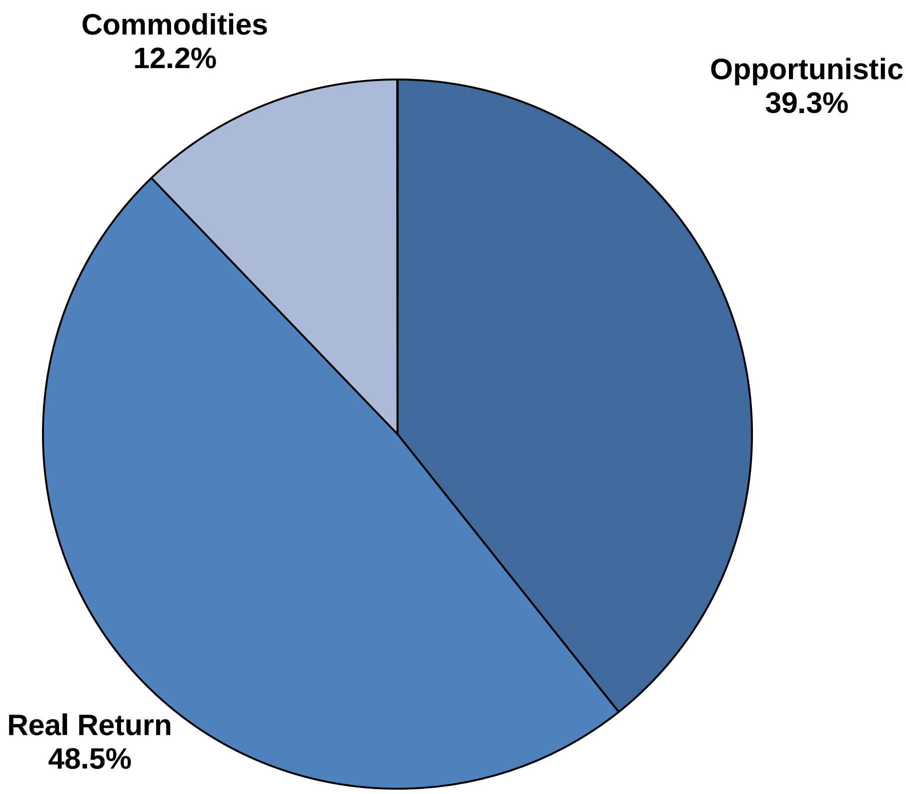
Net Market Value by Entity

		Net Market Value	Unfunded Commitment
*	Abernathy Fund I, LLC	$296,399,687	$71,950,354
	Apollo European Principal Finance Fund II	8,757,076	40,847,400
	Apollo Offshore Credit Fund Ltd	457,944,201	
	Apollo Offshore Structured Credit Recovery Fund II	57,839,448	
	Commodity Holdings	351,666,175	
	Emerald	30,777,752	
	Energy Recapitalization and Restructuring Fund LP	43,893,062	81,391,013
*	Fairfield Settlement Partners, LLC	79,534,508	52,547,108
	Fortress MSR Opportunities Fund I A LP	82,387,921	115,222,039
	Galaxie Ave. Partners, LLC	100,197,779	
	Highbridge Principal Strategies - Senior Loan Fund II	104,988,775	
	Highbridge Principal Strategies - Specialty Loan Fund III	38,221,788	114,845,902
	Hopen Life Sciences Fund II	2,742,582	7,300,000
	JP Morgan Global Maritime Investment Fund LP	8,671,500	102,763,368
	KKR Lending Partners LP	59,747,887	44,778,558
	Lakewater LLC, Series 1	188,395,623	5,530,616
	Lakewater LLC, Series 2	131,504,411	122,511,394
	Lakewater LLC, Series 3	69,823,475	
	Renaissance Venture Cap Fund II LP	601,565	24,250,000
	Ridgewood Energy Oil & Gas II	9,555,567	115,444,433
	RK Mine Finance (Master) Fund II LP	29,539,351	90,613,792
	SJC Direct Lending Fund I, LP	136,355,956	
	SJC Direct Lending Fund II, LP	33,220,729	217,951,206
*	Social Network Holdings, LLC	560,763,935	
	Total Market Value	**$2,883,530,753**	**$1,207,947,184**

* Fund of Funds.

SMRS
Real Return and Opportunistic
6/30/13

Investments By Strategy



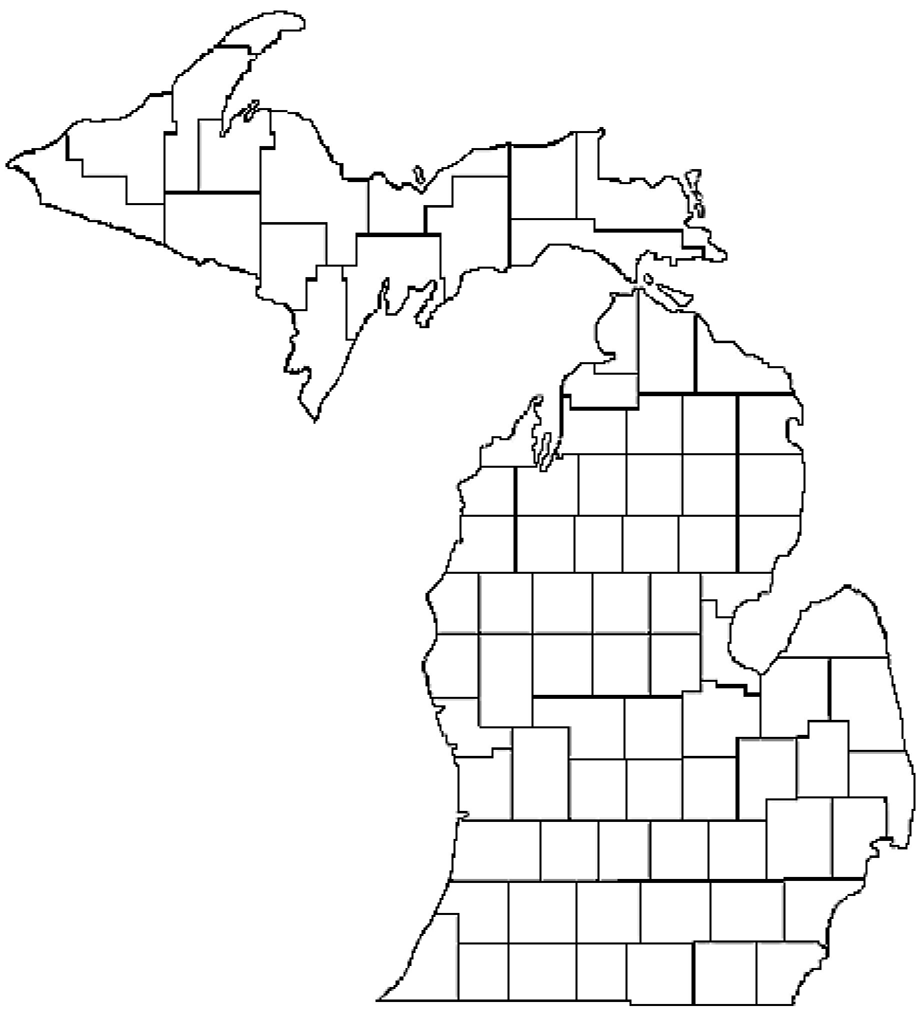
Investment Strategy	
Commodities:	$351,666,175
Opportunistic:	$1,133,976,831
Real Return:	$1,400,479,525

STATE OF MICHIGAN
RETIREMENT SYSTEMS

FIXED INCOME REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 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	1.3%	4.4%	6.3%	6.5%	5.3%
Barclays Aggregate	-0.7%	3.5%	5.2%	5.6%	4.5%
Peer Median Return	1.1%	5.4%	6.2%	6.1%	5.3%
Rank vs. Peers	42	85	39	34	46

- Long-Term Fixed Income returns exceeded Barclays Aggregate Bond Index by focusing on Baa and A rated corporates and concentrating on maturities of ten years or less.

Strategy Update

- Long-Term Fixed will soon add high yield investments. We are currently in contract negotiation with several managers.

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

Market Environment and Outlook

- While 10-year Treasury Bonds yields have approached two year highs, a rate of 2.5% is still closer to sixty-year lows raising a note of caution regarding the purchase of long maturities.

- On a real yield basis, the 10-year Treasury note provides less than 1% while 91-day Treasury Bills provide a -1%.

- With 30-year Treasury Bonds yielding 3.5%, there is little reason to focus on long bonds in the current environment. Instead in a rising rate market, a laddered structure with some use of floating rate issues seems appropriate.

Conclusion

- In an attempt to raise rates of return, it appears timely to employ external professionals to manage the below investment grade portion of the portfolio given their existing experience. The internally managed portion will continue to focus on a ten-year ladder with some use of floating rate issues. The goal is to provide positive return and reduce interest rate risk.

SMRS
LONG-TERM FIXED INCOME
6/30/13

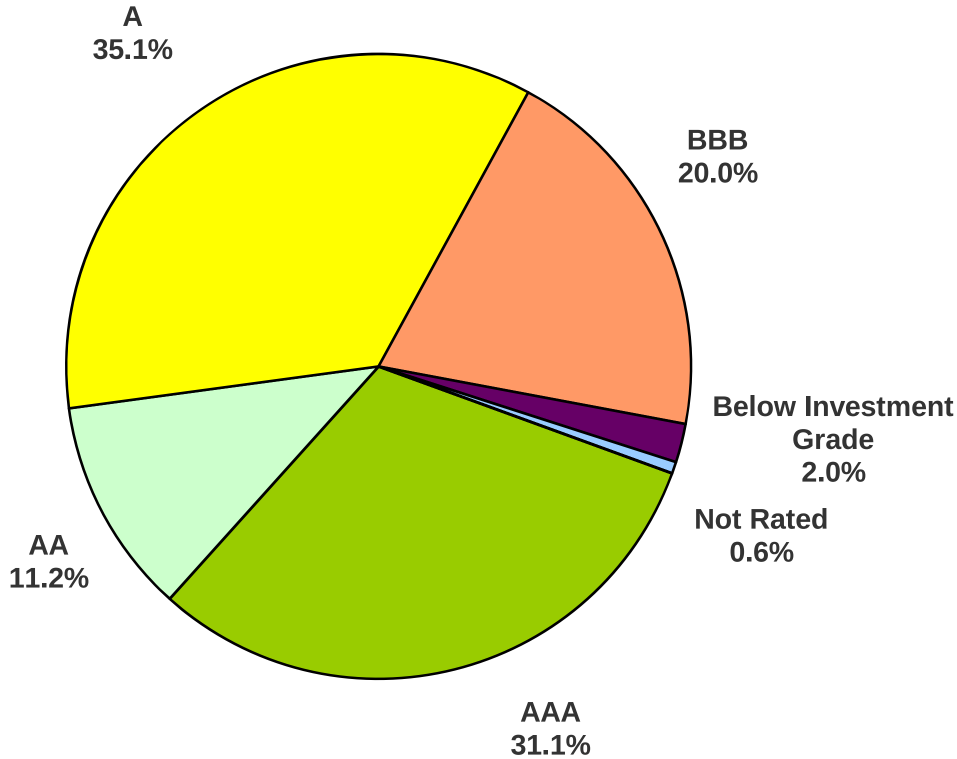
	Amount	% of Total
Core		
LTFID Internal	$4,975,481	74.6%
Ambassador Capital Management	54,192	0.8%
Dodge & Cox	226,953	3.4%
Pyramis	246,896	3.7%
Metropolitan West	268,868	4.0%
Sub Total	**$5,772,390**	86.5%
Credit		
Alliance Bernstein	$193,312	2.9%
Prudential	419,883	6.3%
Sub Total	**$613,195**	9.2%
Securitized Debt		
Principal Global	**$286,349**	4.3%
Sub Total	**$286,349**	4.3%
TOTAL	**$6,671,934**	100.0%

SMRS

Fixed Income By Rating

Total U.S. Long-Term Fixed Income

6/30/13



Market Value in Millions

	6/30/13			3/31/13	
	Assets	**Percent**	**Benchmark**	**Assets**	**Percent**
AAA	$2,074	31.1%	35.4%	$2,017	29.6%
AA	747	11.2%	6.6%	795	11.7%
A	2,343	35.1%	26.9%	2,305	33.9%
BBB	1,333	20.0%	30.8%	1,468	21.6%
Not Rated	40	0.6%	0.2%	92	1.3%
Below Investment Grade	135	2.0%	0.1%	129	1.9%
Total Investments	**$6,672**	**100.0%**	**100.0%**	**$6,806**	**100.0%**

Michigan Department of Treasury, Bureau of Investments

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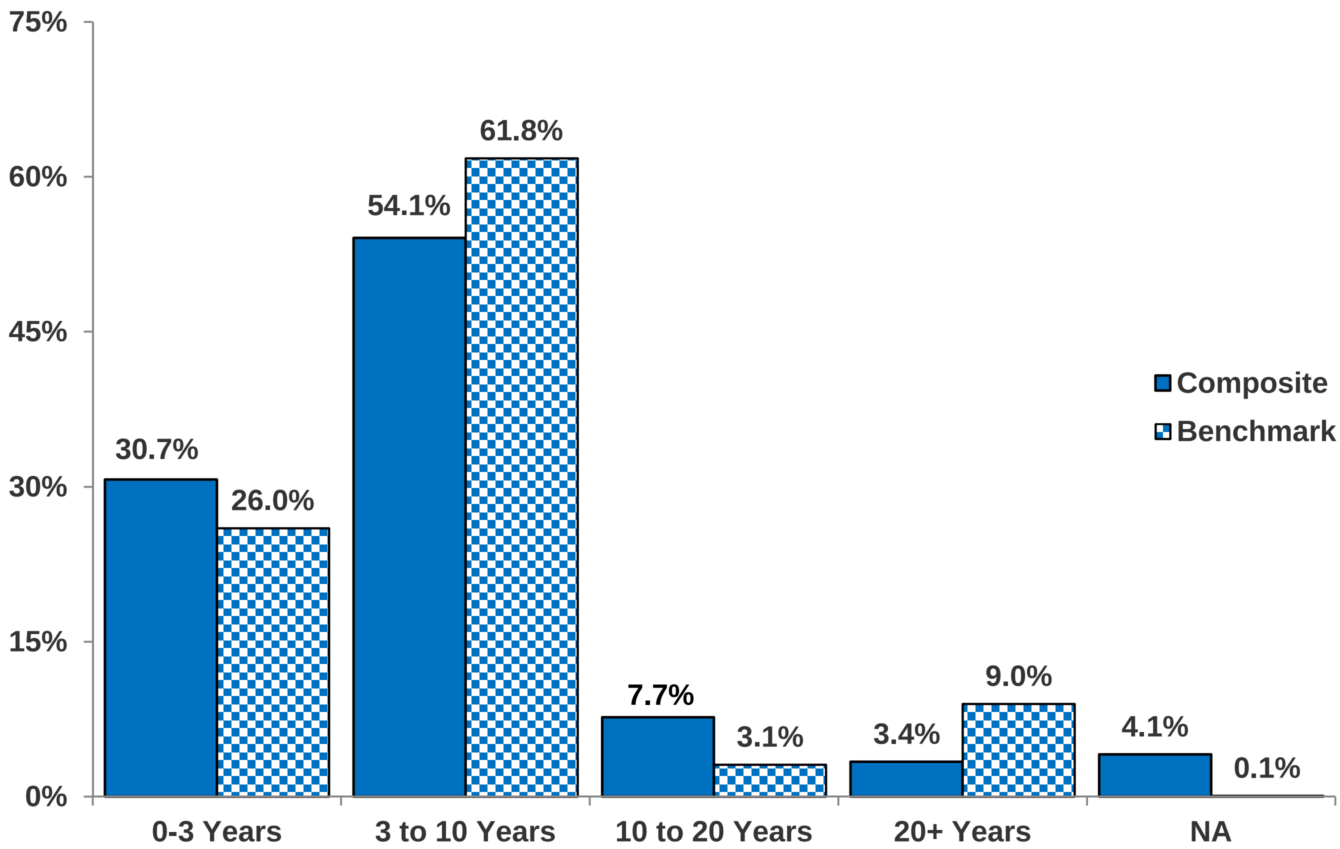
Average Life Distribution

Fixed Income Composite Versus Benchmark
6/30/13

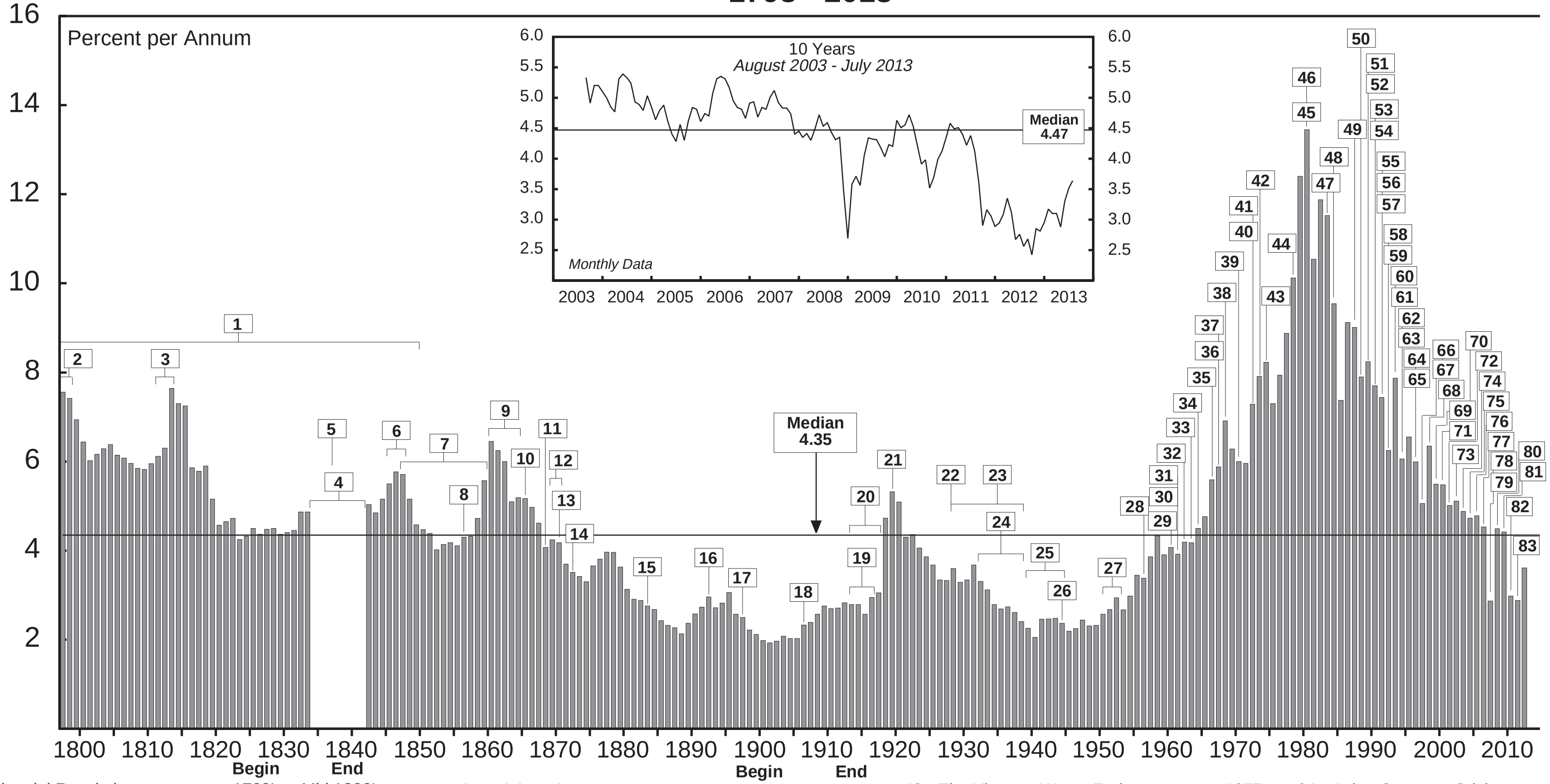


Source: Factset

Market Value in Millions

	Assets	Percent	Benchmark Weight
0-3 Years	$2,048	30.7%	26.0%
3 to 10 Years	3,606	54.1%	61.8%
10 to 20 Years	516	7.7%	3.1%
20+ Years	229	3.4%	9.0%
NA	273	4.1%	0.1%
Total	**$6,672**	**100.0%**	**100.0%**

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

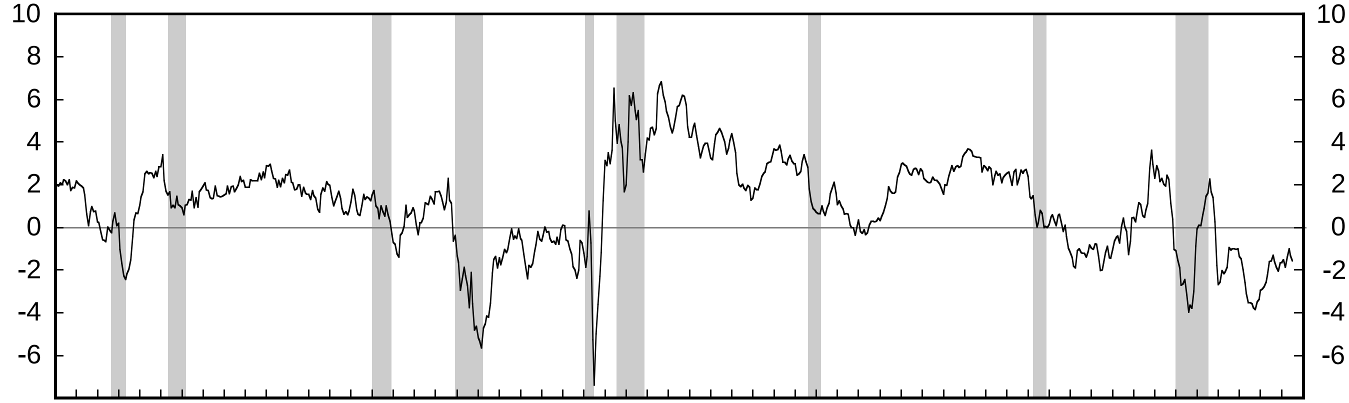


		Begin	End
1	The Industrial Revolution	1700's	Mid 1800's
2	The French Revolution	1789	1799
3	The War of 1812	1812	1814
4	Period Without Federal Debt	1835	1842
5	Depression	1837	
6	The Mexican War	1846	1848
7	The California Gold Rush	1848	1860
8	Financial Panic	1857	
9	The Civil War	1861	1865
10	The Prussian-Austrian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

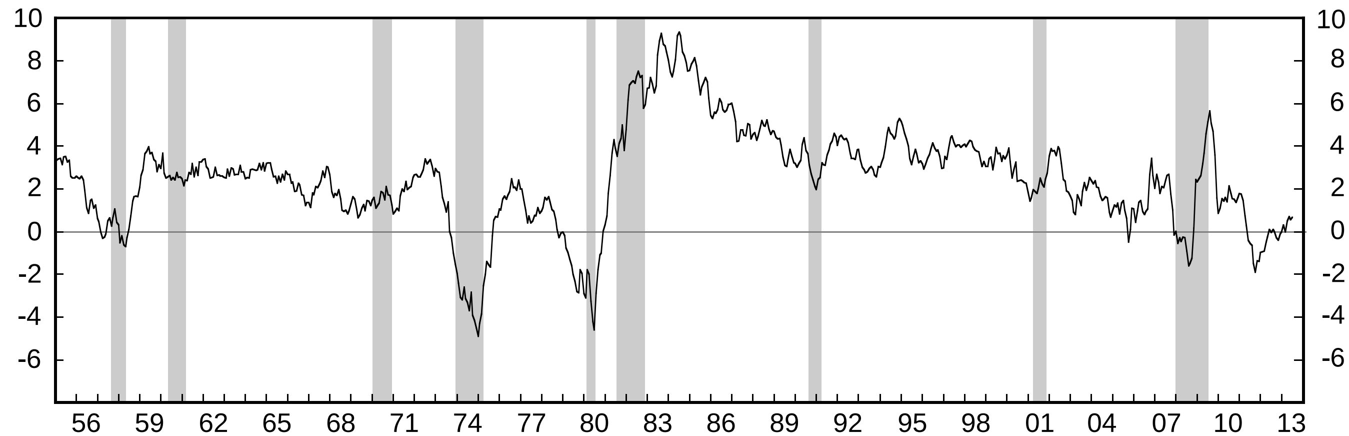
*Last Observation July 2013

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

Real Interest Rates: Short & Long Term



91 Day Treasury Bill Rate Less Consumer Price Index*

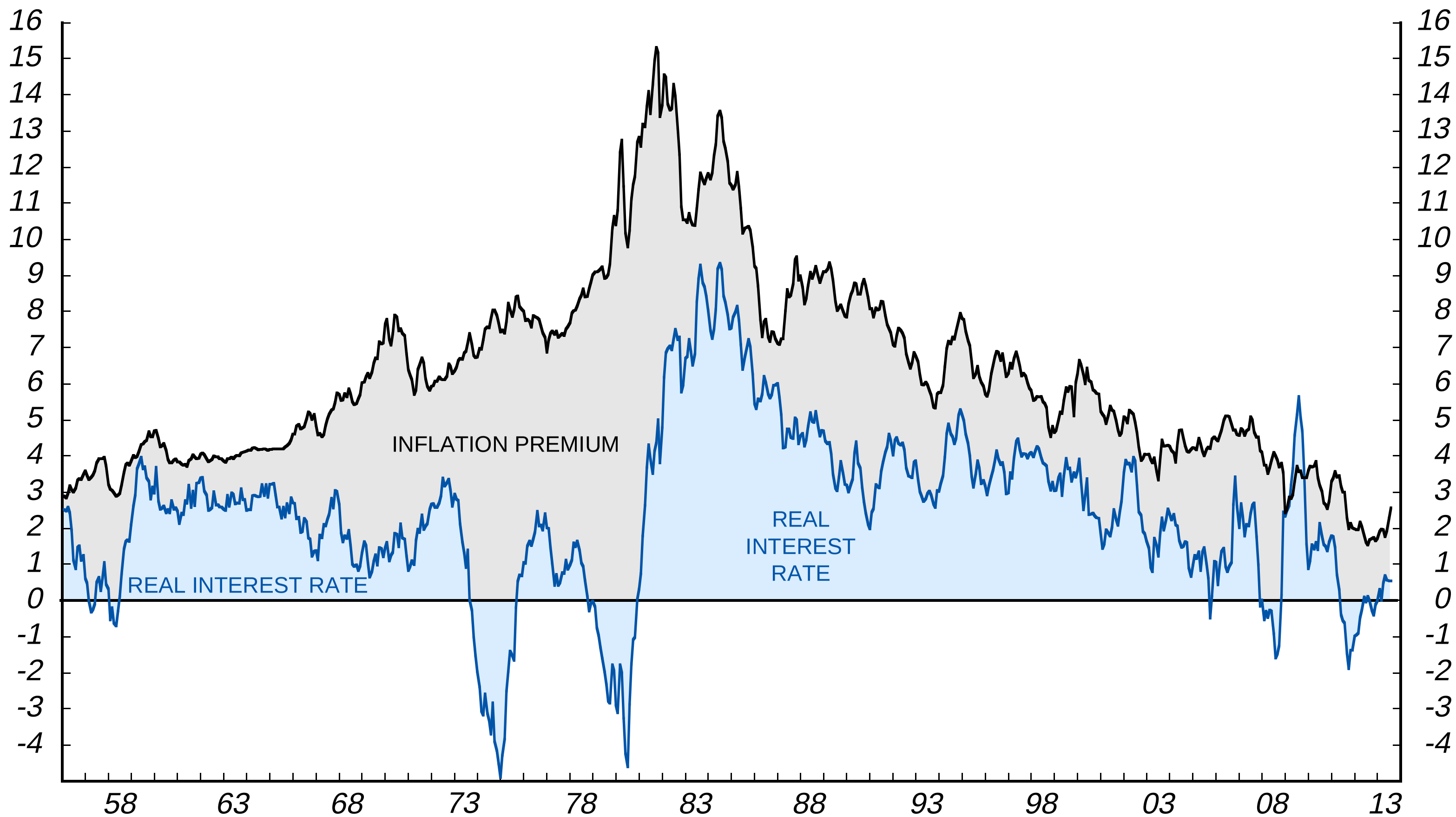


10 Year Government Yields Less Consumer Price Index*

*CPI data for June 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

Real Interest Rates 10 Year Government Yields - C.P.I. (Annual Growth Rate)

Last Observation July 2013

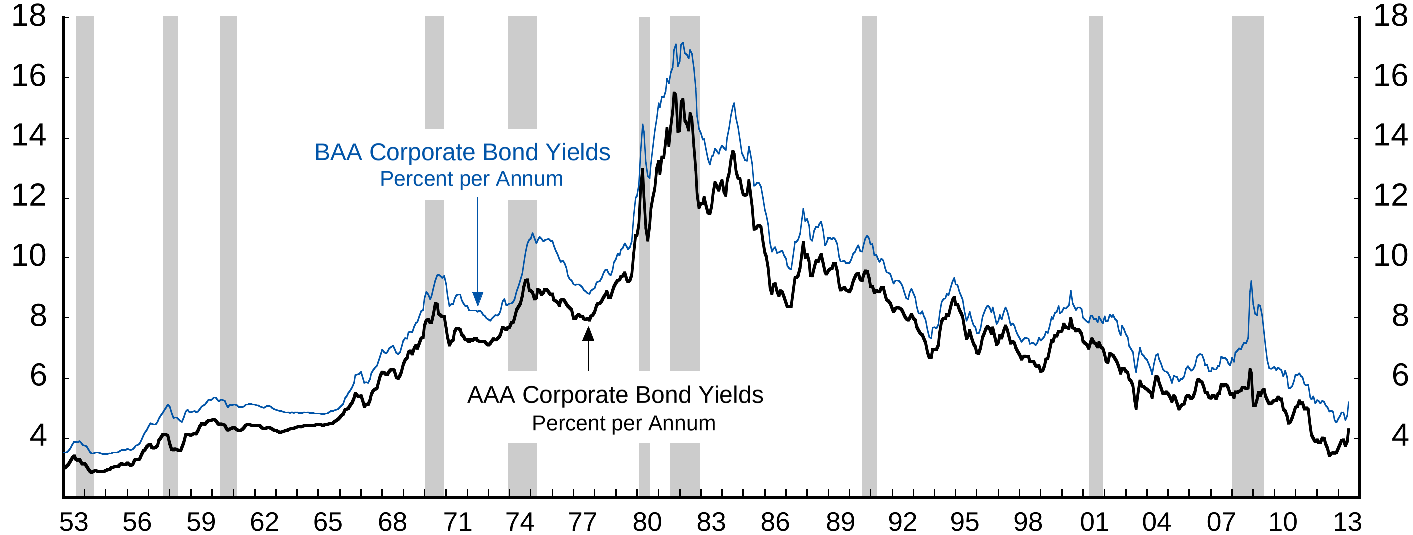
Last Observation July 2013*

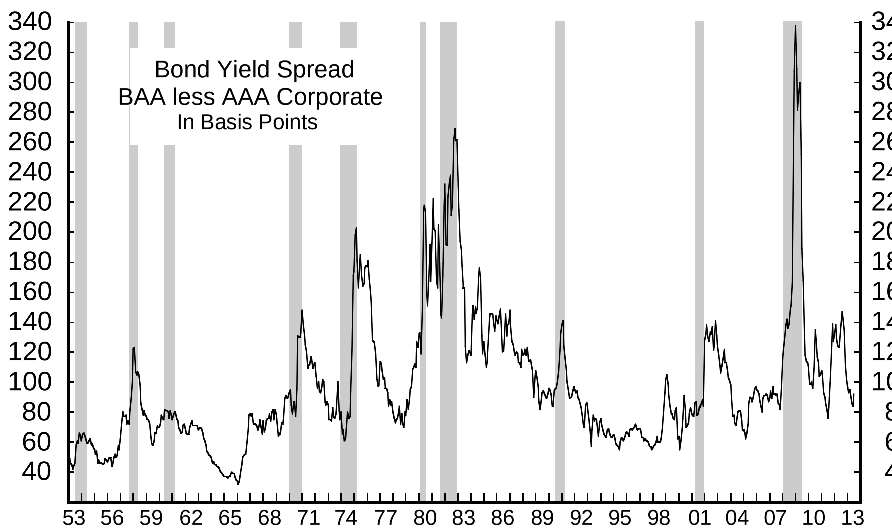
***CPI data for July 2013 is preliminary.**

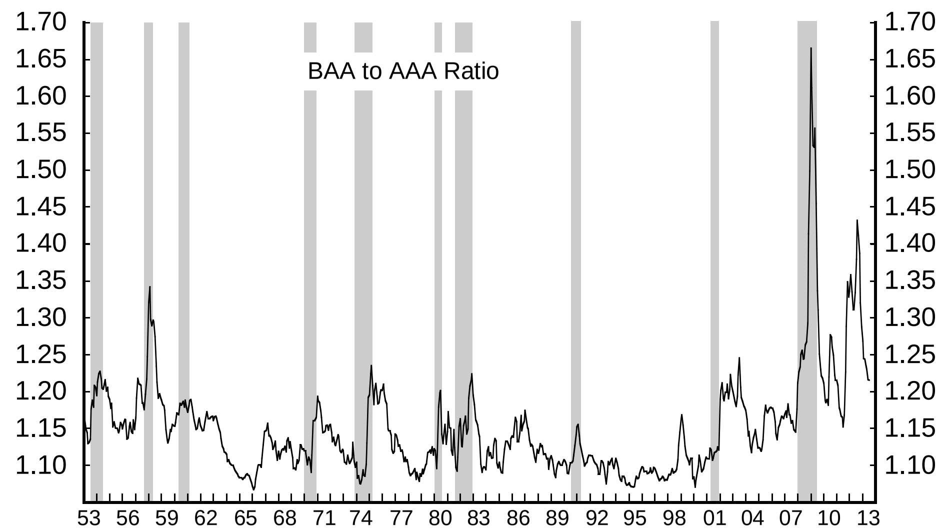
Sources: Federal Reserve Board; Bureau of Labor Statistics •

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

6/30/13

Name	Market Value	Rating*	% of Total Portfolio
U.S. Government	$203,993,057	Aaa/AA+	3.06%
General Electric Co.	$202,563,258	A1/AA+	3.04%
Toyota Motor Corp.	$122,601,750	A2/A	1.84%
Federal Home Loan Banks	$117,787,813	Aaa/AA+	1.77%
Emerson Electric Co.	$113,663,095	A2/A	1.70%
Royal Dutch Shelll PLC	$113,188,132	Aa1/AA	1.70%
Eaton Corporation PLC	$94,730,453	Baa1/A-	1.42%
Wal-Mart Stores Inc.	$90,001,600	Aa2/AA	1.35%
Eli Lilly & Co.	$89,235,105	A2/AA-	1.34%
Private Export Funding Corp.	$85,125,804	Aaa/AA+	1.28%
TOTAL	$1,232,890,066		18.48%

*Moodys/Standard & Poor's

SMRS

Domestic Fixed Income Internal Holdings

Portfolio Characteristics

Benchmark: Barclays Aggregate

	6/30/2013			3/31/2013		
Characteristic	*Portfolio*	*Benchmark*	*Relative (%)*	*Portfolio*	*Benchmark*	*Relative (%)*
Maturity (Yrs)	5.0	7.5	66.7	4.5	7.5	60.0
Maturity (Yrs) w/Cash Equiv.	4.8	7.5	64.0	4.3	7.5	57.3
Duration (Yrs)	4.0	5.5	72.7	3.7	5.5	67.3
Duration (Yrs) w/Cash Equiv.	3.8	5.5	69.1	3.5	5.5	63.6
Coupon (%)	4.3	3.3	130.3	4.4	3.4	129.4
Yield to Maturity (%)	2.2	2.0	110.0	1.7	1.6	106.3
Moody's Quality	A-1	AA-2		A-1	AA-3	
S&P Quality	A+	AA-		A+	AA-	

STATE OF MICHIGAN
RETIREMENT SYSTEMS

ALTERNATIVE INVESTMENTS REVIEW

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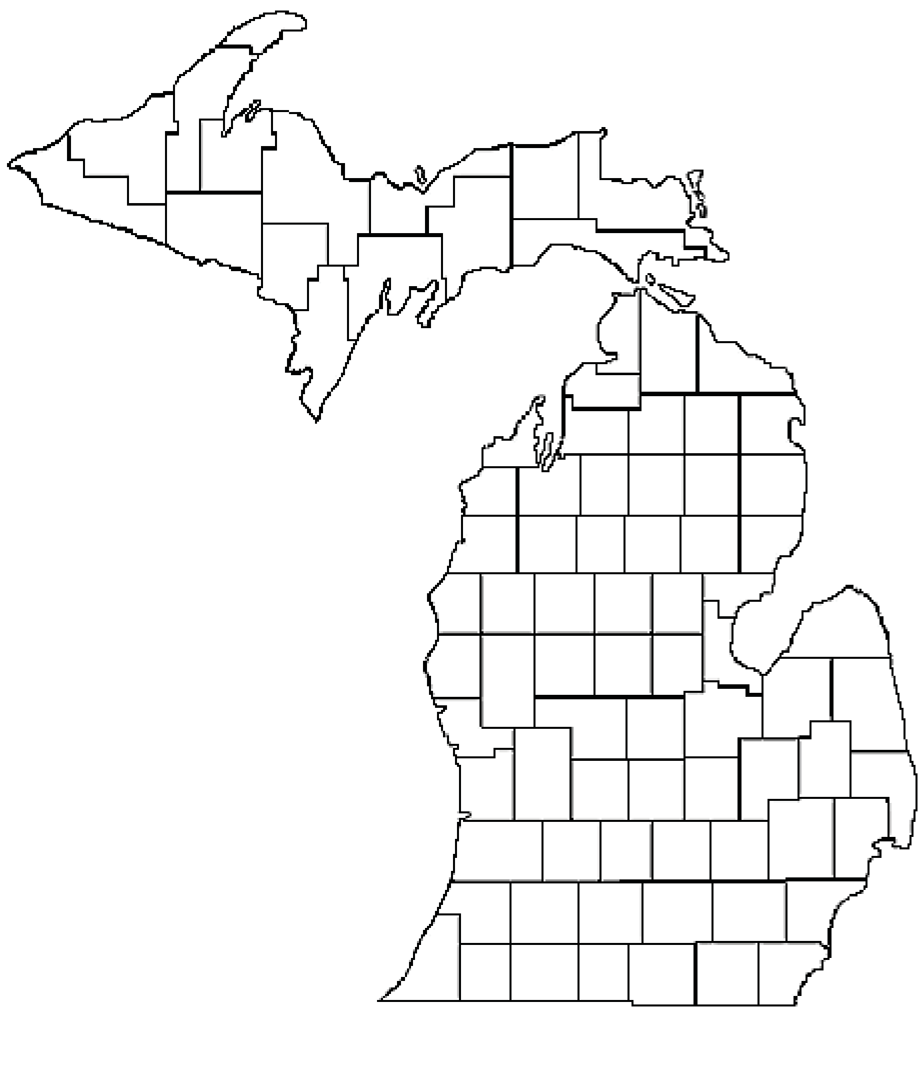


Peter A. Woodford, Administrator
Alternative Investments Division

EXECUTIVE SUMMARY

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Annualized Returns	11.8%	14.8%	6.8%	10.8%	14.5%
Benchmark Return	17.0%	24.4%	11.8%	10.6%	11.3%
Peer Median Return	12.2%	12.4%	5.5%	8.7%	11.4%
Rank vs. Peers	54	24	33	21	26

General Overview

- Global financial markets were volatile in the second quarter, which culminated in losses for most equity and debt markets. An across-the-board increase in bond yields made debt financing more expensive for financial sponsors, although rates remain at historically attractive levels. The IPO and M&A markets for private equity-backed companies were strong during the second quarter, helping to offset a relatively slow start to the year.

- Global IPO issuance totaled $38.7 billion in the second quarter, twice the amount of the prior quarter and the highest quarterly total since the second quarter of 2011. Global M&A exit activity for private equity-backed companies total $68.6 billion in the second quarter – nearly twice the value of exits in the first quarter.

- Volatility and economic uncertainty, due in part to concerns about the timing and potential impact of a reduction in the U.S. Federal Reserve's asset purchase program, continues to adversely impact market sentiment and overall deal-making activity. Global M&A activity totaled just $498 billion in the second quarter – flat from the prior quarter and a 24.2% decline from the second quarter of 2012. Private equity investment activity declined 11.7% in the second quarter of 2013 versus the second quarter of 2012.

- Buyout firms announced $23.8 billion in investments in U.S.-based companies in the second quarter, a 66.6% decline from the prior quarter and a 29.7% decline from the same period in 2012, according to Thomson Reuters. This was the first quarterly decline in U.S. based transaction activity in the past five quarters. The drop in transaction activity comes despite access to cheap and plentiful debt, notwithstanding the tightening of credit markets in the latter half of the second quarter. Buyout firms have plenty of cash, but appear reluctant to spend it.

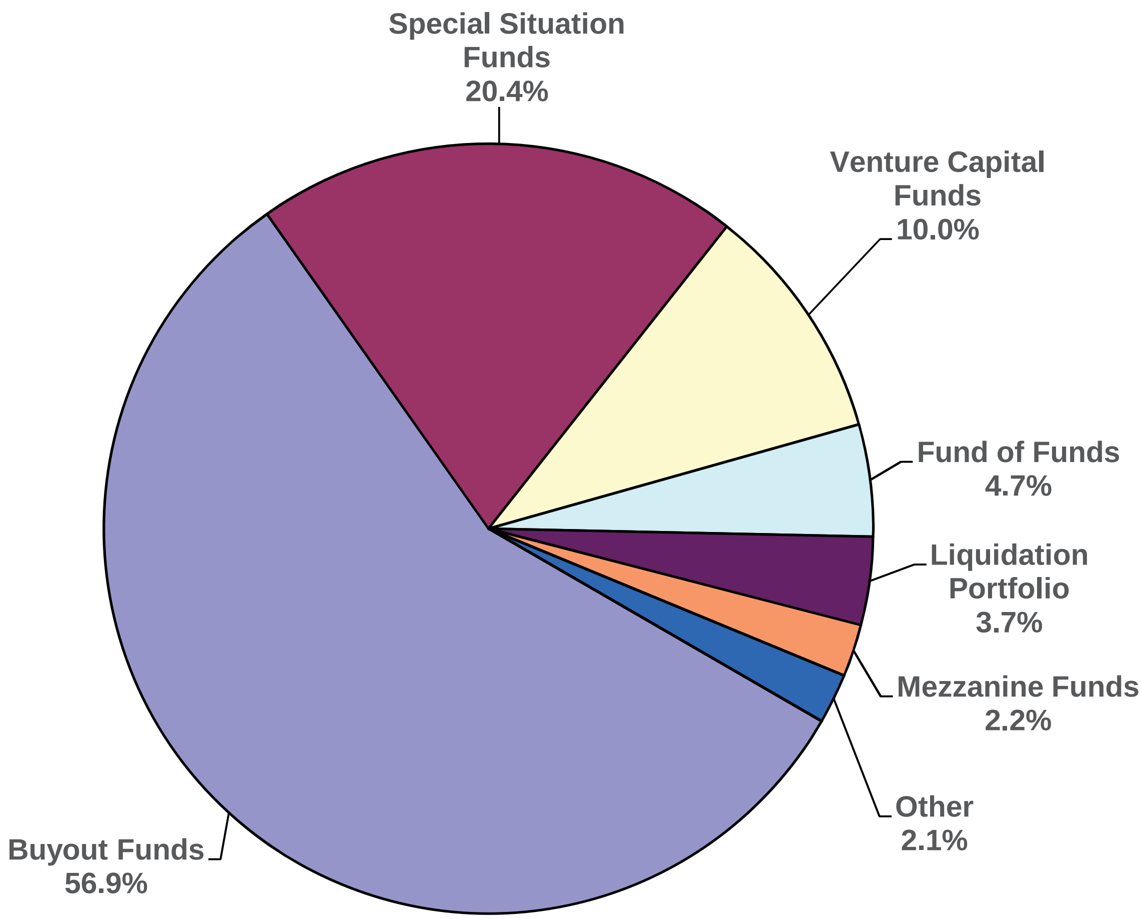
- The average purchase price to EBITDA multiple (across all size ranges) declined to 7.8x in the second quarter. The average debt to EBITDA multiple was 5.3x.

- Fundraising remains highly competitive. Private equity firms worldwide raised $67.9 billion in the second quarter of 2013, a 27% increase over the $53.3 billion raised in the first quarter, but an 11% decrease from the second quarter of 2012.

- 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 $235 million across 41 deals through 6/30/2013.
  - MGCP I - $136 million invested across 29 deals, net IRR 12%, MOIC 1.3x
  - GCMOF - $82 million invested across 8 deals, net IRR 7%, MOIC 1.1x
  - MGCP II - $17 million invested across 4 deals (fund in J-curve)

- During the quarter, five new commitments were closed: Apollo Fund VIII $100 million (buyout/distressed); CCMP Fund III $50 million (buyout); Dover Street Fund VIII $67.5 million (secondary); RCAF VI $75 million (buyout); and Trilantic Capital Partners V $50 million (buyout).

SMRS
Alternative Investments
6/30/13



Market Value in Millions

	6/30/13		3/31/13	
Buyout Funds	$5,835	56.9%	$5,908	56.6%
Special Situation Funds	2,091	20.4%	2,124	20.4%
Venture Capital Funds	1,023	10.0%	1,042	10.0%
Fund of Funds	481	4.7%	486	4.7%
Liquidation Portfolio	379	3.7%	390	3.7%
Mezzanine Funds	222	2.2%	236	2.2%
Other	223	2.1%	243	2.4%
Total	**$10,254**	**100.0%**	**$10,429**	**100.0%**

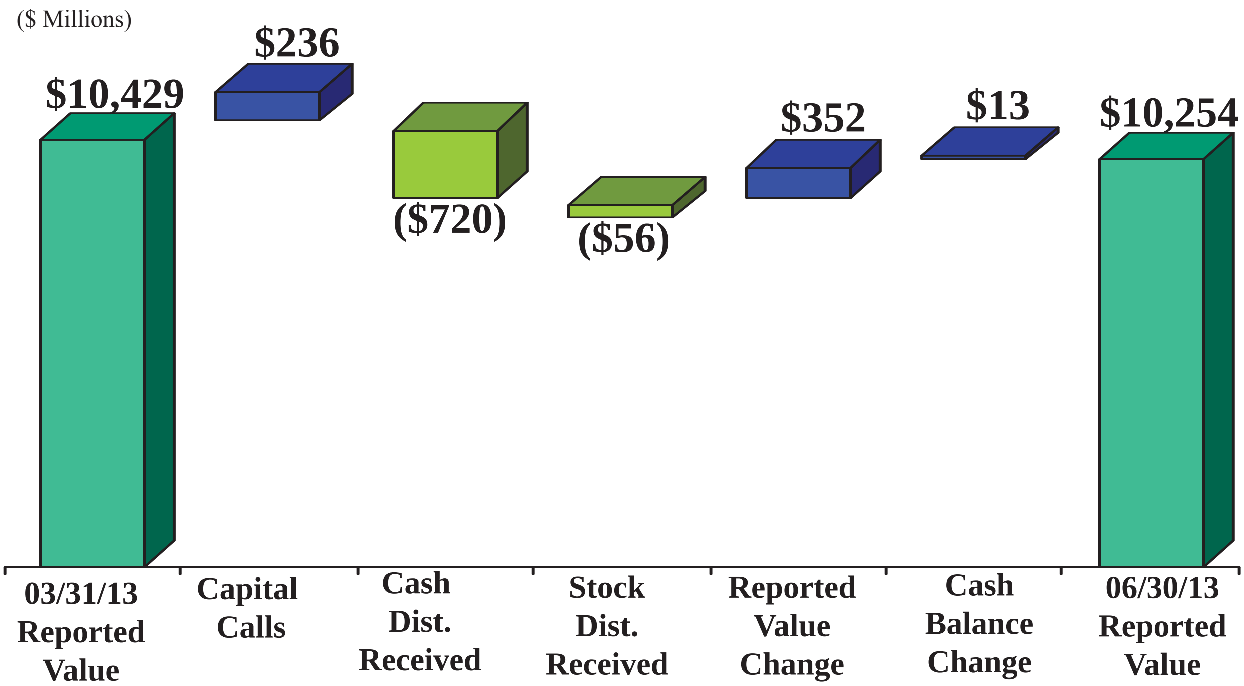
Michigan Department of Treasury, Bureau of Investments

SMRS

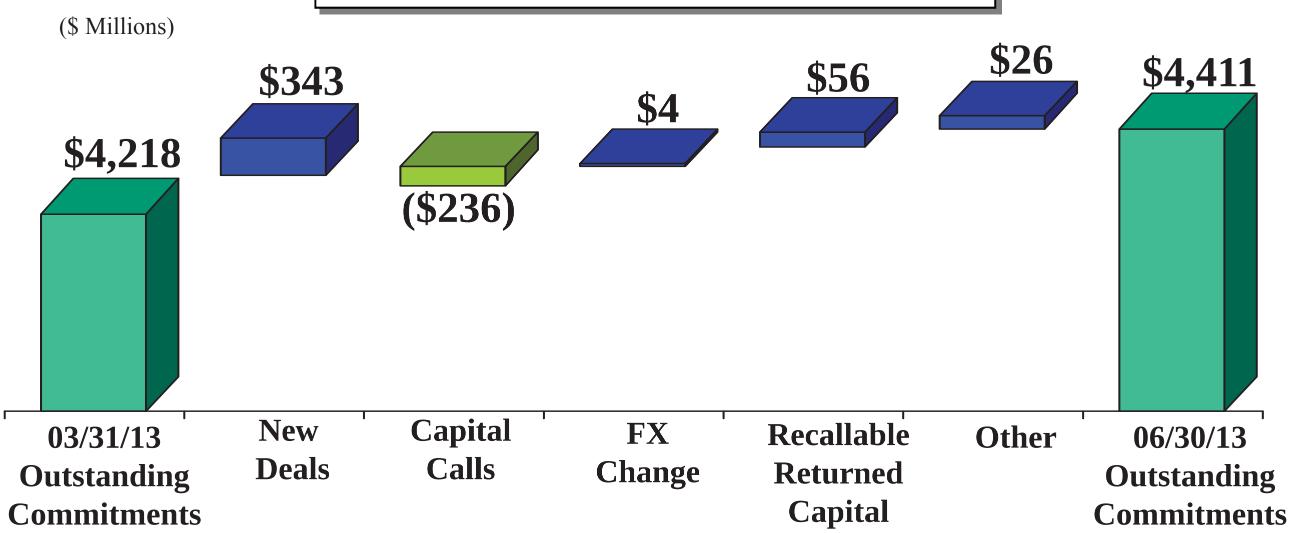
Alternative Investments

6/30/13

Invested Commitments

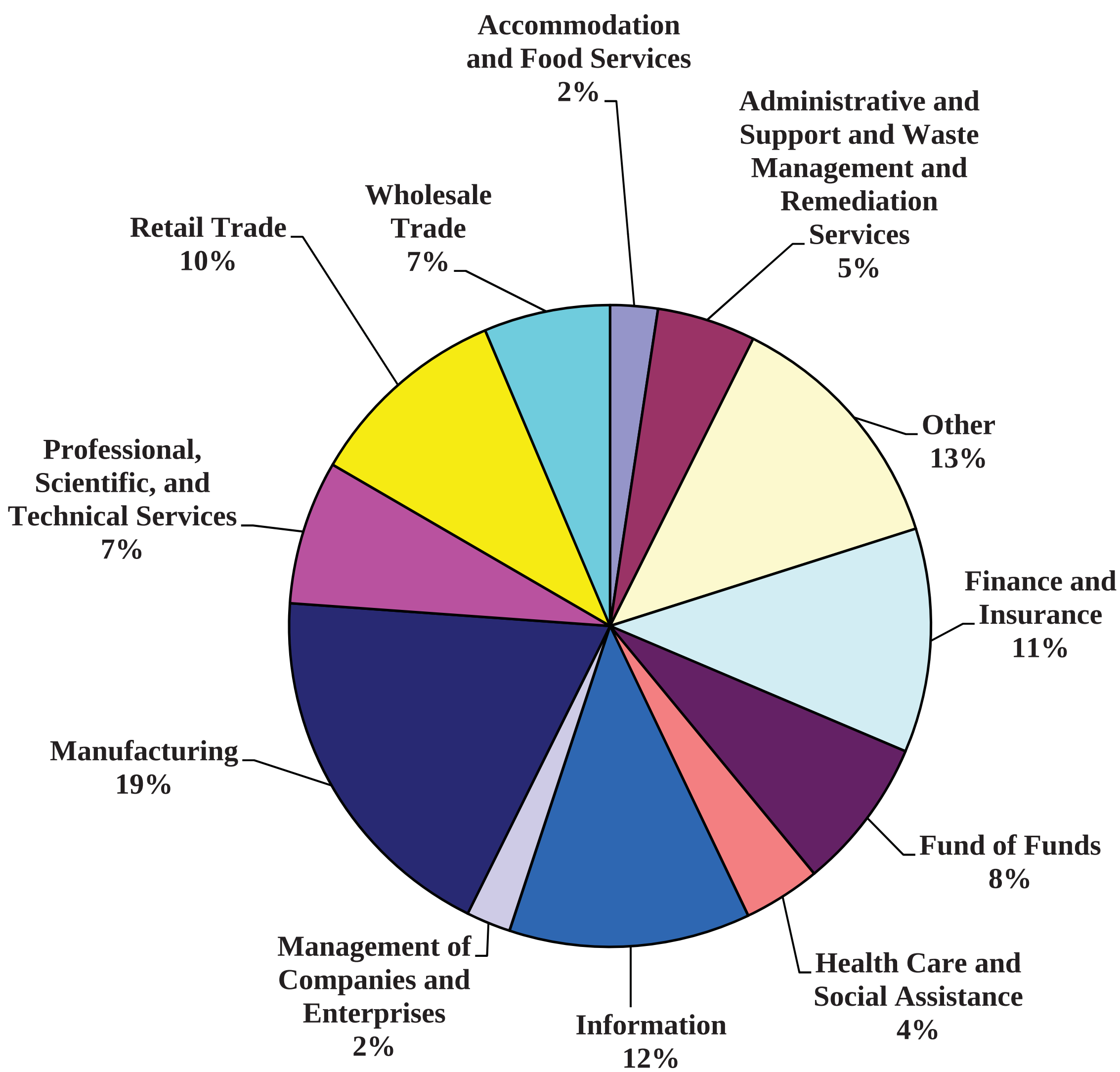


Outstanding Commitments



SMRS
Alternative Investments
6/30/13

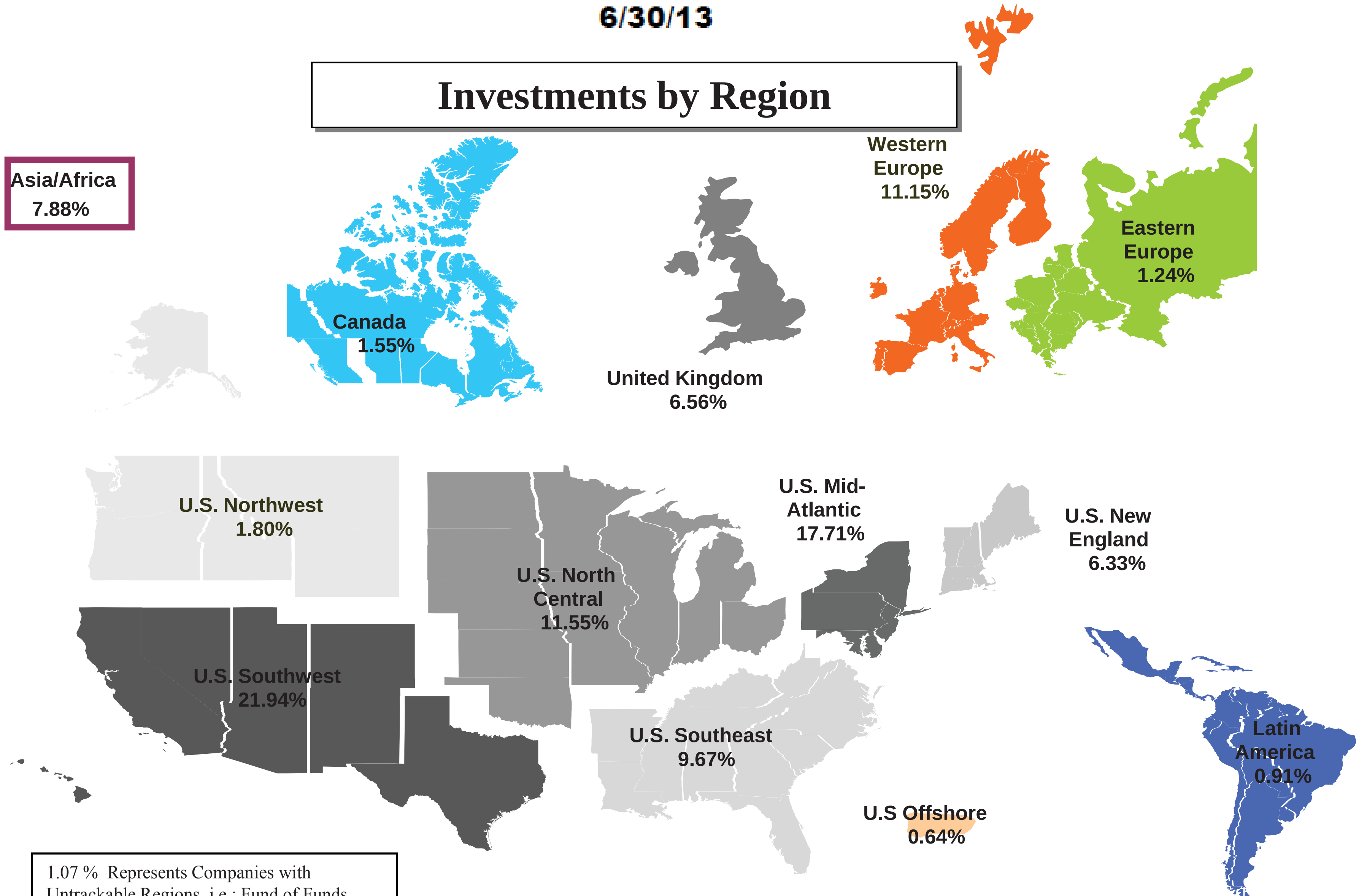
Investments by Industry



These numbers are based on the most recent available General Partner Data; primarily 03/31/13 and are subject to change.

SMRS
Alternative Investments
6/30/13

Investments by Region



1.07 % Represents Companies with Untrackable Regions, i.e.; Fund of Funds

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

SMRS

Alternative Investments

6/30/13

Portfolio by Asset Strategy

($ Millions)

Investment Fund Types	Reported Value	Outstanding Commitment	Total	Percent
Large Buyout	$ 3,550	$ 1,588	$ 5,138	35%
Small Middle Market Buyout	2,285	1,125	3,410	23%
Buyout Total	**$ 5,835**	**$ 2,713**	**$ 8,548**	**58%**
Early Stage Venture Capital	$ 434	$ 94	$ 528	4%
Late-Stage Venture Capital	150	64	214	1%
Multi-Stage Venture Capital	439	55	494	3%
Venture Capital Total	**$ 1,023**	**$ 213**	**$ 1,236**	**8%**
Co-Investment Funds	$ 432	$ 6	$ 438	3%
Global Opportunity Funds	627	26	653	4%
Secondary Funds	185	214	399	3%
Distressed	308	183	491	3%
Special Situations	438	540	978	7%
Natural Resources	-	-	-	0%
Special Situations Total	**$ 1,990**	**$ 969**	**$ 2,959**	**20%**
Fund of Funds	**$ 481**	**$ 193**	**$ 674**	**5%**
Hedge Funds – Equity	**$ 1**	**$ -**	**$ 1**	**0%**
Liquidation Portfolio	**$ 380**	**$ 23**	**$ 403**	**3%**
Active Small Cap - Stock Dist.	**$ 16**	**$ -**	**$ 16**	**0%**
Total Alternative Equities	**$ 9,726**	**$ 4,111**	**$ 13,837**	**94%**
Mezzanine Debt	**$ 222**	**$ 216**	**$ 438**	**3%**
Special Situations	**100**	**84**	**184**	**1%**
Hedge Funds – Fixed Income	**64**	**-**	**64**	**1%**
Cash	**142**	**-**	**142**	**1%**
Total Alternative Fixed Income	**$ 528**	**$ 300**	**$ 828**	**6%**
Total Alternative Investments	**$ 10,254**	**$ 4,411**	**$ 14,665**	**100%**

SMRS
Alternative Investments
6/30/13

Top 10 Sponsors

($ Millions)

Asset Type	Reported Value	Outstanding Commitment	Total
Kohlberg Kravis & Roberts	$ 741	$ 274	$ 1,015
Credit Suisse Group	787	172	959
Carlyle Group	499	284	783
Blackstone Capital Partners	427	276	703
Warburg Pincus Capital	537	165	702
Glencoe Capital	554	69	623
TPG Group	468	118	586
Advent International	349	178	527
Green Equity Investors	357	149	506
Apax Partners, Inc.	300	109	409
Top 10 Total Value	**$ 5,019**	**$ 1,794**	**$ 6,813**

Cash Weighted Rates of Return*

(Net IRR)	Current Qtr.	1 Year	3 Year	5 Year	10 Year
Buyout	3.06%	11.51%	14.67%	6.44%	19.15%
Venture Capital	2.85%	5.21%	17.76%	8.00%	9.58%
Special Situations	3.22%	10.93%	12.71%	6.27%	10.93%
Fund of Funds	-0.42%	7.62%	11.04%	4.02%	10.01%
Hedge Funds	6.47%	0.42%	1.88%	2.65%	4.73%
Mezzanine Debt	6.55%	13.65%	14.18%	14.39%	14.62%

*These numbers are based on most recent available General Partner reported data; primarily 03/31/13 and are subject to change.

SMRS

Alternative Investments

6/30/13

Portfolio by Vintage Year

($ Millions)

Asset Vintage	Reported Value	Outstanding Commitment	Total Exposure
1986-93	$ 1	$ 1	$ 2
1994	1	-	1
1995	2	-	2
1996	-	2	2
1997	8	3	11
1998	71	18	89
1999	126	43	169
2000	207	44	251
2001	344	52	396
2002	680	22	702
2003	242	23	265
2004	460	60	520
2005	1,000	109	1,109
2006*	2,980	459	3,439
2007	1,683	272	1,955
2008	1,560	693	2,253
2009	164	48	212
2010	158	133	291
2011	198	505	703
2012	207	1,403	1,610
2013	4	521	525
Cash	142	-	142
Act. Small Cap - Stock Dist	16	-	16
Total	**$ 10,254**	**$ 4,411**	**$ 14,665**

** Liquidation portfolio is 2006 vintage*

FX Exposure

	Reported Value	Oustanding Commitment	Total Exposure	Total (USD)
Euro ($1.29985/ €)	€ 852	€ 212	€ 1,064	1,383
Pound ($1.5167/ £)	£8	£3	£11	17
Yen ($0.0100669/ ¥)	¥0	¥0	¥0	0

SMRS

Alternative Investments

6/30/13

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
Accel Europe I, L.P.	$ 16,042,682	$ 1
Accel Europe II	18,835,823	3,300,000
Accel Growth Fund II, L.P.	5,358,306	6,300,000
Accel IX, L.P.	12,905,139	3,000,000
Accel VI, L.P.	3,066,493	-
Accel VII, L.P.	2,499,692	5,000,000
Accel VIII, L.P.	3,674,411	4,782,499
Accel VI-S	4,728,829	652,611
Accel X, L.P.	14,941,181	2,050,000
Accel XI, L.P.	3,208,506	4,800,000
Advent Global Private Equity III	410,970	20
Advent Global Private Equity IV	1,835,334	-
Advent Global Private Equity V	101,646,977	10,500,000
Advent International GPE VI-A LP	203,868,214	10,199,980
Advent International GPE VII-B, L.P.	41,247,010	157,000,000
Affinity Asia Pacific Fund II, L.P.	639,013	5,288,237
Affinity Asia Pacific Fund III, L.P.	207,952,290	32,452,428
Affinity Asia Pacific Fund IV, L.P.	-	124,248,438
APA Excelsior IV, L.P.	479,673	-
APA Excelsior V	539,712	545,625
Apax Europe Fund VI	85,796,809	803,812
Apax Europe V, L.P.	5,925,789	-
Apax Europe VII, L.P.	147,263,285	13,373,577
Apax Excelsior VI	7,936,184	1,614,434
Apax US VII	44,085,034	491,302
Apax VIII - A, L.P.	7,745,221	92,000,000
** **Apollo Investment Fund VIII, L.P.**	-	100,000,000
Arboretum Ventures II	3,769,842	880,096
Arboretum Ventures III, L.P.	5,915,708	8,040,000
Ares Corporate Opportunities Fund II	43,758,197	12,118,272
Ares Corporate Opportunities Fund III, LP	74,276,552	21,552,741
Ares Corporate Opportunities Fund IV, L.P.	3,517,985	95,783,457
ARGUS Capital Partners	137,050	2,813,672
Austin Ventures VIII, L.P.	13,891,897	-
Avenue International Ltd	64,017,891	-
Avenue Special Situations Fund IV, L.P.	2,242,044	-
Avenue Special Situations Fund V, L.P.	4,301,687	-
Avenue Special Situations Fund VI (B), L.P.	54,946,917	-
Axiom Asia Private Capital Fund III, L.P.	1,221,679	33,504,751
Banc Fund VI	17,485,571	-
Banc Fund VII	30,094,092	-
Banc Fund VIII	18,976,179	3,800,000
Battery Ventures V, L.P.	68,507	-
Battery Ventures VI, L.P.	6,152,800	-
Battery Ventures VII, L.P.	9,735,285	377,778

Net Market Values by Ownership Entity

		ARV	Unfunded Commitment
	Battery Ventures VIII	25,415,663	701,800
	BC European Capital IX	32,876,945	66,137,145
	BC European Capital VII, L.P.	2,301,337	-
	BC European Capital VIII, L.P.	151,580,883	13,479,444
	Berkshire Fund IV, L.P.	52,783	1,898,016
	Berkshire Fund V, L.P.	1,118,973	1,900,578
	Berkshire Fund VI, L.P.	42,892,415	5,408,231
	Berkshire Fund VII, L.P.	114,364,799	10,734,751
	Berkshire Fund VIII, L.P.	33,416,818	88,985,464
	Blackstone Capital Partners IV	94,640,723	5,713,813
	Blackstone Capital Partners V	226,835,306	24,395,095
	Blackstone Capital Partners VI, LP	81,180,507	230,936,227
	Blackstone Capital Partners V-S	22,448,990	712,401
	Blackstone Mezzanine Partners	2,254,242	14,141,621
	Blackstone Partners III, L.P.	1	-
	Bridgepoint Europe IV	56,854,044	17,814,054
	Brockway Moran & Partners Fund III	9,762,461	4,580,030
	Carlyle Asia Fund	5,002,960	1,067,064
	Carlyle Europe Partners	193,642	441,156
	Carlyle Europe Partners II	27,514,136	4,824,860
	Carlyle Europe Partners III	103,743,391	25,771,273
	Carlyle Partners II, L.P.	906,323	-
	Carlyle Partners III, L.P.	368,056	3,031,427
	Carlyle Partners IV, L.P.	122,518,542	16,009,296
	Carlyle Partners V L.P.	239,183,609	58,052,441
	Carlyle Partners VI, L.P.	-	175,000,000
	Castle Harlan Partners IV	12,948,218	5,647,298
	Castle Harlan Partners V	16,782,187	48,882,345
	CCMP Capital Investors II	139,333,267	9,646,399
**	**CCMP Capital Investors III, L.P.**	-	50,000,000
	Clarus Life Sciences II, L.P.	26,240,975	15,340,000
	Clarus Lifesciences I	24,081,297	4,079,460
	Clearstone Venture Partners II (idealab)	3,847,000	-
	Clearstone Venture Partners III	23,772,963	1,612,000
	CM Liquidity Fund, L.P.	-	25,000,000
	CMEA Ventures VI	11,542,366	1,950,000
	CMEA Ventures VII, L.P.	19,154,366	6,400,000
	Coller International Partners III, L.P.	694,130	-
	Coller International Partners IV	23,895,528	9,000,000
	Coller International Partners V, L.P.	124,861,155	43,600,000
	Coller International Partners VI, L.P.	31,154,037	74,566,482
	Crescent Mezzanine Partners VI, L.P.	13,622,393	61,290,602
	CSFB Fund Co-Investment Program	113,889	-
	CSG / DLJ Fund Program II	91,647,111	20,415,855
	CSG Fund Investment Program III - 2004	107,228,240	9,738,125
	CSG Fund Investment Program III - 2006	107,437,660	35,071,431

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
CSG Fund Investment Program V, L.P.	68,267,738	48,911,572
CSG Fund Investment Program VI, L.P.	1,925,551	33,000,000
CSG Seasoned Primary Fund Investment Program	379,474,639	23,161,847
DLJ Fund Investment Program I	30,694,633	1,689,659
DLJ Investment Partners II	1,228,860	0
DLJ Investment Partners III	24,738,434	75,884,993
DLJ Merchant Banking Partners III, L.P.	18,735,794	2,950,719
DLJ Merchant Banking Ptrs II, L.P.	1,685,443	1,856,746
Doughty Hanson & Co IV	78,454,918	3,120,718
Doughty Hanson & Co V	110,044,458	36,759,163
Doughty Hanson Co. III L.P.	16,083,369	3,102,822
** **Dover Street VIII, L.P.**	4,243,710	61,762,500
EDF Ventures III	4,331,535	164,738
Essex Woodlands Health IV	2,541,125	-
Essex Woodlands Health V	8,847,542	-
Essex Woodlands Health Ventures Fund VIII	52,987,756	18,000,000
Essex Woodlands Health VI	13,090,697	1,312,500
Essex Woodlands Health VII	49,920,152	1,000,000
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	21,114,638	-
Flagship Ventures Fund 2007, L.P.	49,953,100	1,275,000
Flagship Ventures Fund IV, L.P.	11,289,169	8,775,000
Fox Paine Capital Fund II, LP	20,966,404	16,227,680
Frontenac VIII	4,729,442	1,800,000
Glencoe Capital Michigan Opportunities Fund, LP	103,993,460	56,438,847
Glencoe Capital Partners II	7,986,893	355,381
Glencoe Capital Partners III	10,324,606	6,170,138
Glencoe Stockwell Fund	297,784,535	-
Glencoe Stockwell Fund II, L.P.	134,168,790	6,515,363
Globespan Capital Partners IV (Jafco)	16,326,350	475,000
Globespan Capital Partners V, LP	81,767,615	6,937,500
Green Equity Investors III	9,298,675	9,112,215
Green Equity Investors IV	96,025,245	1,136,036
Green Equity Investors V	240,371,288	25,966,435
Green Equity Investors VI, L.P.	11,233,009	112,960,297
Grotech Partners V	403,113	-
Grotech Partners VI	11,315,267	-
GSO Capital Opportunities Fund II, L.P.	8,095,172	32,485,922
H.I.G. Bayside Debt & LBO Fund II, LP	8,017,577	8,893,557
H.I.G. Brightpoint Capital Partners II	596,876	-
H.I.G. Capital Partners IV, L.P.	23,457,761	3,374,167
H.I.G. Europe Capital Partners L.P.	24,370,512	5,726,910
HarbourVest Int'l III Direct	5,234,500	1,000,000
HarbourVest Int'l III Partnership	6,281,526	1,200,000
HarbourVest IV Partnership Fund LP	217,944	600,000
HarbourVest Partners V - Direct Fund LP	239,643	-
HarbourVest V Partnership	1,434,280	300,000
HarbourVest VI - Direct Fund LP	7,360,824	750,000

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
HarbourVest VI Partnership	31,006,176	2,250,000
Healthcare Venture V	1,180,227	-
Healthcare Venture VI	1,059,783	-
Healthcare Venture VII	4,520,606	487,500
Healthcare Venture VIII	21,556,536	6,900,000
InterWest Partners IX	12,801,500	3,200,000
JAFCO America Technology Fund III	1,153,498	-
JP Morgan Chase 1998 Pool Participation Fund	3,327,470	1,604,605
JP Morgan Chase 1999/2000 Pool Participation Fund	3,343,601	4,017,243
JP Morgan Partners Global Investors	33,068,433	3,113,676
JPMorgan Global Investors Selldown	27,125,643	5,538,204
Kelso Investment Associates VII	58,790,674	4,970,176
Kelso Investment Associates VIII	103,893,726	35,356,136
Khosla Ventures III, L.P.	60,199,572	9,500,000
Khosla Ventures IV, L.P.	17,993,614	31,250,000
KKR 2006 Fund, L.P.	226,473,118	20,375,444
KKR Asia	105,516,501	6,085,287
KKR Asian Fund II, L.P.	-	50,000,000
KKR China Growth Fund	16,737,512	33,103,197
KKR E2 Investors (Annex) Fund	14,536,838	18,145,079
KKR European Fund II	123,476,505	-
KKR European Fund III	95,975,446	31,075,334
KKR European Fund LP 1	4,044,618	307,605
KKR Millennium Fund	143,996,790	-
KKR North America Fund XI, L.P.	10,654,975	114,809,362
Lightspeed Venture Partners VI	10,779,581	3,299,089
Lightspeed Venture Partners VII	37,363,556	1,385,436
Lion Capital Fund I (HME II)	1,836,052	13,167,030
Lion Capital Fund II	47,172,889	5,467,475
Lion Capital Fund III, L.P.	44,873,005	34,810,704
Long Point Capital Fund	18,463	41,415
Long Point Capital Fund II	14,427,748	1,203,076
Matlin Patterson Global Opportunities Partners	36,896	-
MatlinPatterson Global Opportunities Partners II	2,951,853	92,719
MatlinPatterson Global Opportunities Partners III	68,866,079	16,624,681
Menlo Ventures IX, L.P.	13,192,167	-
Menlo Ventures VIII	2,315,121	-
Menlo Ventures X, L.P.	21,753,075	6,000,000
Menlo Ventures XI, L.P.	8,166,291	11,000,000
MeriTech Capital Partners II, L.P.	5,045,157	1,850,000
Meritech Capital Partners III, L.P.	46,872,877	1,200,000
Meritech Capital Partners IV, L.P.	13,656,397	7,400,000
MeriTech Capital Partners, L.P.	442,532	6,187,500
Michigan Growth Capital Partners II, L.P.	19,712,220	159,426,414
Michigan Growth Capital Partners, LP	157,822,897	32,413,097
MPM BioVentures III	6,249,815	-
New Leaf Ventures II, L.P.	21,830,360	6,300,000
Nordic Capital VI, L.P.	43,143,630	-
Nordic Capital VII	63,559,246	13,474,780
Nordic Capital VIII, L.P. (Alpha)	5,594,486	46,435,647

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
North Castle Partners III	3,561,540	473,486
NV Partners II	148,059	43,053
Oak Investment Partners X, L.P.	17,553,632	-
Oak Investments Partners IX, L.P.	2,684,372	-
OCM Opportunities Fund IX, L.P.	7,500,000	67,500,000
OCM Opportunities Fund VII (B), L.P.	14,466,449	25,178,847
OCM Opportunities Fund VII, L.P.	11,704,972	-
OCM Opportunities Fund VIII B, L.P.	36,670,069	3,750,000
OCM Opportunities Fund VIII, L.P.	35,782,423	-
OCM Principal Opportunities Fund IV	32,783,099	5,002,377
One Liberty Fund III	1,045,999	-
One Liberty Fund IV	1,935,112	-
One Liberty Ventures 2000	13,250,599	-
Paine & Partners Capital Fund III, LP	112,372,804	17,414,497
Parthenon Investors II	13,803,493	3,279,179
Parthenon Investors III	58,657,034	8,416,458
Parthenon Investors IV, L.P.	5,937,068	33,058,622
Peninsula Capital Fund III	2,042,292	1,400,000
Peninsula Capital Fund IV	17,865,755	2,201,026
Permira Europe III LP	5,581,112	278,818
Permira Europe IV	113,754,198	8,319,040
Phoenix Equity Partners IV	12,240,430	4,386,798
Primus Capital Fund IV	5,262	500,000
Primus Capital Fund V	14,443,210	712,500
Providence Equity Partners V, L.P.	58,873,679	13,264,586
Providence Equity Partners VI, L.P.	263,244,380	34,225,331
Questor Partners Fund II	14,845,473	5,794,612
RFE Investment Partners VII, LP	23,483,127	843,332
RFE Investment Partners VIII, L.P.	6,378,049	22,231,539
RFE IV Venture	442,309	-
** **Riverside Capital Appreciation Fund VI, LP**	-	75,000,000
Riverside Micro Cap Fund I, LP	63,703,558	3,968,335
Riverside Micro-Cap Fund II, L.P.	21,066,583	14,142,624
Silver Lake Partners II	15,015,575	3,531,586
Silver Lake Partners III	74,609,696	34,086,787
Silver Lake Partners IV, L.P.	-	50,000,000
Sprout Capital IX	1,991,600	-
Sprout Capital VIII, L.P.	128,616	-
TCW Shared Op Fund III	2,756,989	-
TCW Shared Op Fund IV	10,580,352	4,603,325
TCW Shared Op Fund V	22,606,344	11,654,234
TCW/Crescent Mezzanine	1	-
TCW/Crescent Mezzanine II	1	-
TCW/Crescent Mezzanine Partners III, L.P.	5,826,249	4,552,763
TCW/Crescent Mezzanine Partners IV, L.P.	40,668,300	6,316,434
TCW/Crescent Mezzanine Partners V, LLC	105,362,150	17,449,738
The Huron Fund III, L.P.	27,526,956	8,672,500
The Huron Fund IV, L.P.	-	35,000,000
The Shansby Group 4	38,059,535	520,829
The Shansby Group 5 (TSG5)	114,866,886	14,016,423

Net Market Values by Ownership Entity

	ARV	Unfunded Commitment
TPG IV (Texas Pacific Group IV)	26,661,903	3,685,948
TPG Partners III, LP	34,913,737	2,087,002
TPG Partners VI, L.P.	204,907,909	71,358,435
TPG V (Texas Pacific Group V)	201,332,648	40,374,046
** **Trilantic Capital Partners V (North America) Fund A, L.P.**	-	50,000,000
TSG6, L.P.	26,295,919	99,187,148
Tullis - Dickerson Capital II	5,787,835	-
Tullis - Dickerson Capital III	9,603,635	-
Unitas Asia Opportunity Fund	418,132	-
Unitas Asia Opportunity Fund II	45,506,968	26,604,144
Unitas Asia Opportunity Fund III	39,350,730	49,111,317
Warburg Pincus Equity Partners, L.P.	11,005,363	-
Warburg Pincus International Partners	26,597,481	-
Warburg Pincus Private Equity IX	123,233,883	-
Warburg Pincus Private Equity VIII, L.P	50,182,295	-
Warburg Pincus Private Equity X, L.P.	286,645,594	2,250,000
Warburg Pincus Private Equity XI, L.P.	38,542,262	163,000,000
Warburg Pincus Ventures Int'l	505,120	-
Weiss, Peck & Greer V (adm: Opus Capital)	3,988,118	386,240
WestAm COREplus Private Equity QP	11,631,125	2,110,761
WestAm Special Private Equity Partners	9,478,454	2,317,427
Wind Point Partners III	2,623,494	-
Wind Point Partners IV	492,873	1,541,518
Wind Point Partners V, L.P.	9,954,693	455,013
Wind Point Partners VI	45,769,611	7,011,140
Wind Point Partners VII	53,165,188	20,917,410
Total Alternative Investments *	**$ 10,095,920,101**	**$ 4,410,691,863**
Cash	115,667,068	-
Active Small Cap Cash	25,875,363	-
Active Small Cap	16,186,795	-
Grand Total	**$ 10,253,649,327**	**$ 4,410,691,863**

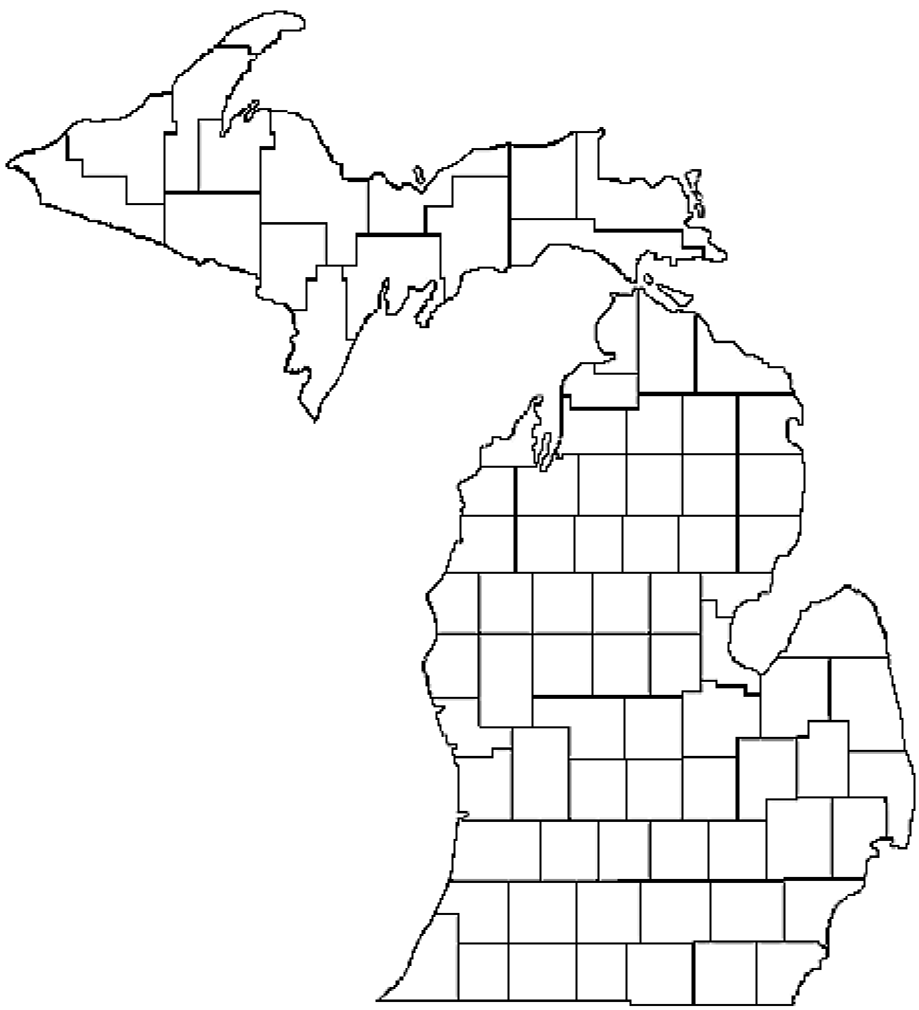
* Total Alternative Investment amounts do not include Cash and Active Small Cap
** New commitment made during quarter reported

STATE OF MICHIGAN
RETIREMENT SYSTEMS

BASKET CLAUSE REVIEW

INVESTMENT ADVISORY COMMITTEE MEETING

SEPTEMBER 5, 2013



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

SMRS

Basket Clause Investments

6/30/13

The basket clause investments at June 30, 2013, were $4.50 billion fair market value ("FMV") or 8.6% of the total portfolio market value of $52.56 billion.

	FMV	
Total Absolute and Real Return	$4,261,589,978	8.1%
Total International Equity	237,579,057	0.5%
Total investments to date	**$4,499,169,035**	**8.6%**

SMRS

Section 20D Investment Holding

6/30/13

ABSOLUTE AND REAL RETURN	FAIR MARKET VALUE
Aetos - Sand Hill	$1,169,721,058.02
Apollo Credit Fund	457,944,201.19
Apollo Credit Strategies Fund	129,576,954.10
Apollo European Principal Finance Fund II	8,757,076.32
Apollo Structured Credit Recovery Fund II	57,839,448.33
Bain Absolute Return Capital	52,162,689.00
Blackstone - Tahquamenon	337,362,951.00
Brevan Howard Multi-Strategy Fund	108,503,195.44
Domain - Abernathy Fund I, LLC	296,399,686.71
Domain - Fairfield Settlement Partners, LLC	79,534,508.00
Domain - Galaxie Ave.,Partners LLC	100,197,779.00
Drawbridge Special Opp Fund LP	100,000,000.00
Elliott International	10,956,019.32
Emerald Co-invest	30,777,751.92
Energy Recapitalization and Restructuring Fund	43,893,061.84
EnTrust - White Pine	291,501,795.00
Fortress MSR Opportunities	82,387,921.39
FrontPoint Multi-Strategy Fund	4,432,484.00
Highbridge Princ Str Irish Senior Loan Fund II	33,066,288.00
HPS Senior Loan Fund II	71,922,487.00
Highbridge Princ Str Speciality Loan Fund III	38,221,788.00
JP Morgan Global Maritime Fund	8,671,499.63
KKR Lending Partners	59,747,886.98
Lakewater Fund I, LLC	188,395,623.00
Lakewater Fund II, LLC	131,504,411.24
Lakewater Fund III, LLC	69,823,475.00
MP Securitized Credit Fund	55,381,510.99
PSAM - Spartan Fund	34,234,826.00
Red Kite Mining Fund	29,539,350.59
Ridgewood Energy Oil & Gas II	9,555,567.00
SJC Direct Lending Fund I	136,355,956.00
SJC Direct Lending Fund II	33,220,728.60
TOTAL ABSOLUTE AND REAL RETURN	**$4,261,589,978.61**

INTERNATIONAL EQUITY	
LACM Emerging Markets Fund	**$237,579,056.69**
GRAND TOTAL 20D INVESTMENTS	**$4,499,169,035.30**
as % of TOTAL PORTFOLIO (MKT)	
$52,561 million	**8.6%**

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.