

State of Michigan Retirement Systems

ABSOLUTE AND REAL RETURN REVIEW

Investment Advisory Committee Meeting

March 9, 2017



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Short-Term, Absolute and Real Return Division

EXECUTIVE SUMMARY

Absolute Return

Performance

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Absolute Return	-0.2%	2.2%	5.2%	4.4%	N/A
HFRI FOF Conservative*	0.6%	1.8%	3.2%	2.6%	N/A

*One month lag on the index

- Total Absolute Return value was \$4.1 billion with a total one-year return of -0.2% and a total seven year annualized net return of 4.4%. The underperformance for the year was primarily due to an overweight in the equity long-short space which experienced the most challenged alpha environment in observed history.

Strategy Update

- The objective of the Absolute Return portfolio is to diversify the total plans' holdings, targeting returns above investment-grade fixed income with lower volatility than the equity portfolio. The portfolio utilizes a diverse mix of managers that invest both long and short to target specific exposures and hedge out unwanted risk.
- In terms of strategy allocations, we continue to remain cautious on taking material directional risks in the portfolio and continue to shift towards more diversifying, lower net exposures in fundamental and quantitative strategies. Given recent shifts in the broader macroeconomic landscape, we will continue to pursue opportunities across diversifying strategies bringing the allocation to equity strategies down.
- No new investments were made this quarter.

Market Environment

- Multi-Strategy/Event – The strategy performed positively for the quarter and ended the period as the second largest overall contributor to performance, marginally lagging credit, with most managers performing consistently over the three-month period. Positive performance was driven primarily by managers with exposure to select energy, financial, and technology names.
- Credit – Performance for credit managers was positive for the quarter, as the strategy closed out the period as the largest contributor to performance. Residential mortgage and distressed credit managers contributed more positively to performance than their fundamental credit and trading-oriented counterparts. RMBS-focused managers had a strong quarter, as robust collateral performance and upbeat market sentiment led to credit spread tightening across products.
- Equity – Performance for equity managers over the course of the quarter was mixed, with the overall strategy detracting from performance. Overall, trading managers fared better than fundamental managers. Looking at specific sectors, managers with net long exposure to select financials, technology, and healthcare names exhibited positive performance. Offsetting losses, particularly early on in the quarter, were observed in managers with select exposure to consumer-discretionary and materials, both on the long and short side.
- Diversifying – Performance for diversifying strategies was positive for the quarter, primarily driven by global macro managers who delivered consistent, strong returns throughout the period.

Real Return and Opportunistic

Performance

MPSERS Plan	1-Year	3-Years	5-Years	7-Years	10-Years
Real Return and Opport.	6.1%	12.2%	9.8%	N/A	N/A
Custom Benchmark	7.6%	7.1%	7.2%	N/A	N/A

- Total Real Return and Opportunistic value was \$5.3 billion with a total one-year return of 6.1%.

Strategy Update

- The objective of the Real Return & Opportunistic portfolio is to provide an inflation hedge or to gain exposure to attractive opportunities that may not fit in another plan portfolio.
- In terms of strategy allocations, we continue to favor private credit opportunities over equity in most situations due to the expected return for the level of risk.
- The Real Return & Opportunistic portfolio has approximately \$2.9 billion of unfunded commitments. New commitments closed during the quarter include:
 - \$100 million to TSSP Adjacent Opportunities Partners, L.P., a fund focused on opportunistic, special situations, and middle market direct lending.
 - \$50 million to TICP CLO Partners II, L.P., a fund focused on CLO risk retention.

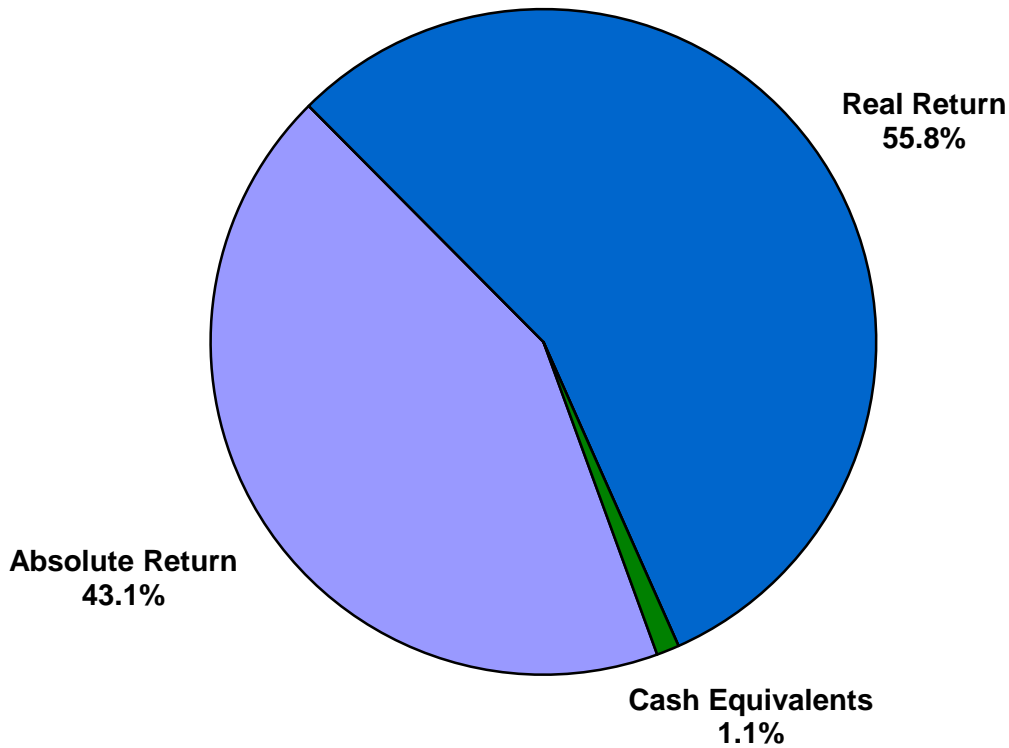
Market Environment

- Senior Secured Credit – We expect 2017 to be marked by increased volatility relative to prior years driven by new leadership in Washington, European elections, and central bank activities. While not immune to that volatility, we do believe that the loan asset class should continue to perform well from a fundamental and technical perspective. We expect defaults in the loan market to remain below trend given the lack of any material catalysts to drive a meaningful increase. Technically, loans should continue to benefit from solid demand given their floating rate nature and senior secured status.
- Direct Lending – Earlier in the year, volatility within the financial markets created uncertainty and forced firms who could typically access the public debt markets to seek out private solutions. After the election, the pipeline for new loans has slowed as many companies are now waiting to see the potential tax changes on the horizon.
- Energy Funds – For the quarter, spot WTI crude prices were up 11.4% with long-dated contracts relatively flat as the OPEC production cuts announced in November led market participants to bid up near-term contracts. Spot natural gas prices were up 29.7% for the quarter as natural gas production in the U.S. posted its first annual decline since 2015, while long-dated contracts were down 2 to 6% for the quarter as the market anticipates production to resume growth in the long-term. The STARR division was able to invest additional capital in the space during the quarter at attractive levels and on very advantageous terms. With only approximately 43% of our energy commitments presently invested, a substantial amount of uncalled capital remains ready to capitalize on the opportunities presented by lower oilfield services costs that persist as our managers drill the acreage they leased at distressed prices over the past 18 months.

SMRS

Absolute, Real Return and Opportunistic

12/31/16



Market Value in Millions				
	<u>12/31/16</u>		<u>9/30/16</u>	
Absolute Return	\$4,067	43.1%	\$3,967	42.3%
Real Return	5,271	55.8%	5,320	56.7%
Cash Equivalents	105	1.1%	88	1.0%
Total Investments	<u>\$9,443</u>	<u>100.0%</u>	<u>\$9,375</u>	<u>100.0%</u>

SMRS
Absolute Return
12/31/16

Net Market Values by Entity

	<u>Net Market Value</u>
Apollo Offshore Credit Strategies Fund Ltd.	155,509,540
Drawbridge Opportunities Fund	202,546,208
* EnTrust White Pine Partners L.P.	139,794,445
JM IV, LP	49,161,957
MP Securitized Credit Master Fund, L.P.	67,385,162
Spartan Partner LP	170,254
* Tahquamenon Fund L.P.	3,447,862,476
Visium Balanced Fund LP	4,308,453
Total Market Value	\$ 4,066,738,494

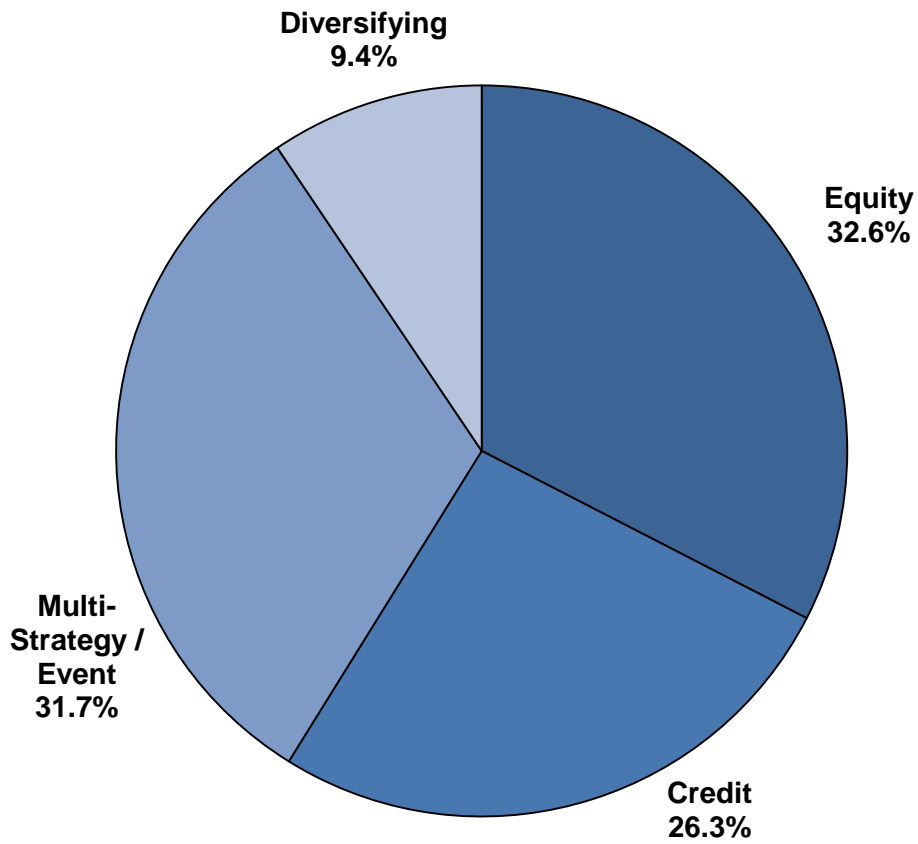
* Fund of Funds

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Absolute Return

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Investments By Strategy



Strategy Breakdown			
Underlying Funds:	86	Median Position Size:	0.4%
Strategies:	4	Average Position Size:	1.1%
Relationships:	8	Largest Position Size:	10.6%

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Real Return and Opportunistic

12/31/16

Net Market Value by Entity

	<u>Net Market Value</u>	<u>Unfunded Commitment</u>
* Abernathy Fund I, LLC	\$ 204,742,725	\$ 22,244,406
Apollo Credit Opportunities Fund III LP	66,843,595	19,385,383
Apollo European Principal Finance Fund II	52,239,058	10,205,781
Apollo Financial Credit Investments Fund II	382,801,812	103,932,814
Apollo Financial Credit Investments Fund III	-	300,000,000
Apollo HK TMS Investments Holdings LP	19,006,225	-
Apollo Offshore Credit Fund Ltd	258,013,760	-
Apollo Offshore Structured Credit Recovery Fund II	4,956,894	-
Apollo Offshore Structured Credit Recovery Fund III	136,567,931	87,397,774
Blackstone Strategic Capital Holdings LP	25,897,581	99,563,308
Blue Peninsula Fund LP	80,000,961	115,627,889
Carlyle Intl Energy Partners LP	13,258,439	43,188,974
Carlyle Energy Mezzanine Opportunity Fund	3,911,717	44,840,799
Centerbridge SCP III, LP	5,534,009	22,500,000
* Content Holdings LLC	480,066,366	50,656,767
Elegantree Fund SPC	71,475,621	4,735,264
Energy Recapitalization and Restructuring Fund LP	34,768,129	18,040,815
ERR Michigan Holdings LP	5,173,001	2,335,070
* Fairfield Settlement Partners, LLC	73,434,664	14,798,035
FCO MA MI LP	62,185,701	137,145,625
Fortress MSR Opportunities Fund I A LP	101,207,681	-
Fortress Transport	50,233,076	-
* Galaxie Ave. Partners, LLC	-	-
GSO Credit Alpha Fund LP	65,219,900	40,021,313
Highbridge Principal Strategies - Specialty Loan Fund III	105,021,278	22,543,037
Hopen Life Sciences Fund II	4,008,720	2,575,000
HPS Red Cedar Fund	29,963,981	222,765,296
Innocor	30,000,000	-
JP Morgan Global Maritime Investment Fund LP	62,687,875	12,145,157
KANG Fund LP	13,579,121	-
Kayne Anderson Energy Fund VII, LP	44,838,349	39,000,000
Kayne P.E. Income Fund	18,524,421	129,000,000
KKR EI&G Fund	26,918,591	33,187,405
KKR Lending Partners I LP	59,025,089	11,930,723
KKR Lending Partners II LP	64,687,219	36,508,261
Lakewater LLC, Series 1	142,007,354	3,475,593
Lakewater LLC, Series 2	260,544,019	13,224,217
Lakewater LLC, Series 3	319,130,674	-
Lakewater LLC, Series 4	67,141,534	12,151,364
Lakewater LLC, Series 5	75,513,695	167,371,513
Merit Energy Partners LP	25,774,734	9,201,857
MidCap FinCo Holdings LTD	304,167,263	-
Napier Park Aircraft Leasing Vehicle I, LLC	42,739,424	59,260,326
New Fortress Energy HLDGS	300,000,000	-
Orion Coinvest III LP	25,243,776	2,236,552

	<u>Net Market Value</u>	<u>Unfunded Commitment</u>
Orion Mine Finance Fund 1A LP	56,352,938	4,310,238
Orion Mine Finance Fund I LP	115,340,558	7,376,052
Orion Mine Finance II LP	18,968,889	31,587,256
Redding Ridge Holdings, LP	5,962,674	94,037,326
Renaissance Venture Cap Fund II LP	9,196,736	15,500,000
REOG Fund II Coinvest LP	19,794,227	9,475,056
Ridgewood Energy Oil & Gas II	94,551,308	30,101,889
Ridgewood Energy Oil & Gas III	17,368,186	205,103,902
RPEP Energy Opp Inst Partner	-	33,663,741
RPEP SMRS Holdings, LLC	64,993,789	1,876,850
SJC Direct Lending Fund I, LP	36,933,412	15,867,189
SJC Direct Lending Fund II, LP	227,923,925	38,261,315
SJC Direct Lending Fund III, LP	63,968,455	186,293,387
Square Inc.	19,391,401	-
* Social Network Holdings, LLC	150,603,079	25,028,376
Specialty Equity Strategy LP	1,792,024	17,897,000
Sprott PRL (M), LP	13,370,533	11,240,796
Sprott Private Resource Lending Fund (US), LP	5,159,498	94,840,502
Terra Co-Investment LLC	23,555,163	14,000,000
** TICP CLO Partners II, LP	9,498,538	40,277,732
** TSSP Adjacent Opp Partners, LP	21,451,135	77,364,033
Twitter Inc.	14,074,512	-
Varo Coinvestment LP	13,389,097	929,066
Warwick Energy Partners III	34,181,181	22,774,349
Warwick (SMRS) Co-Invest, L.P.	13,924,995	12,089,081
Income Accruals	(2)	
Total Market Value	\$ 5,270,802,215	\$ 2,903,091,453

* Fund of Funds

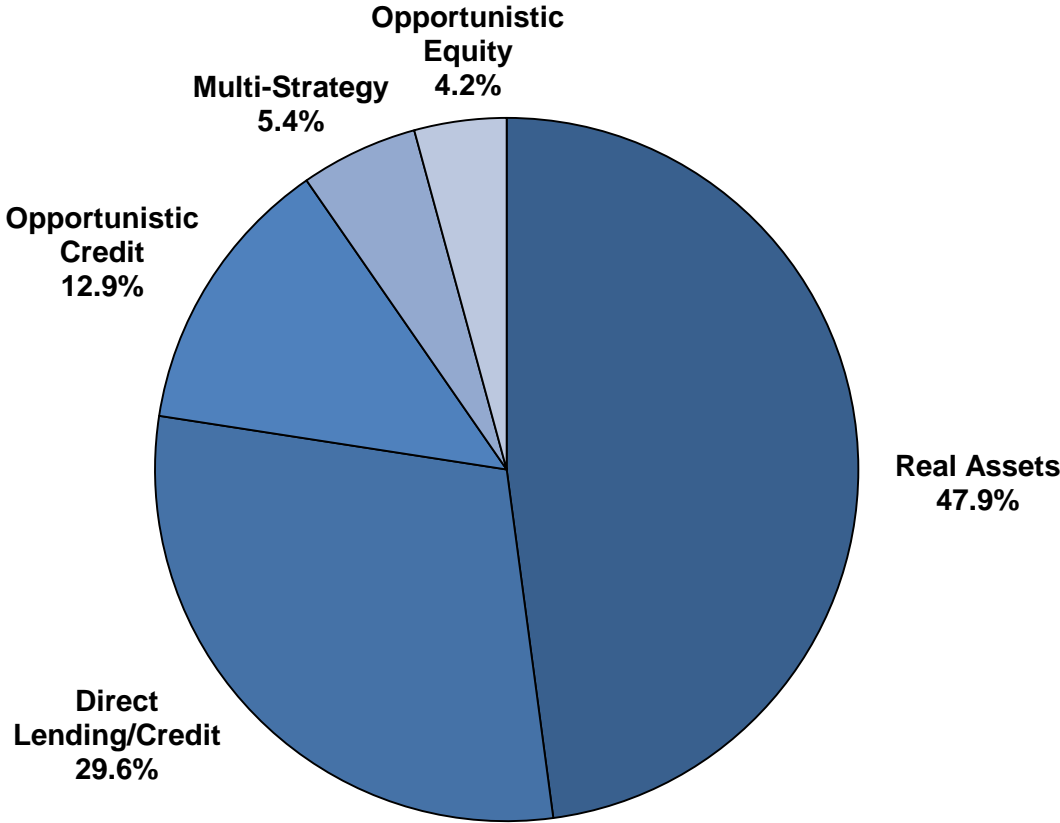
** **New Commitment**

SMRS

Real Return and Opportunistic

12/31/16

Investments By Strategy



Investment Strategy	
Real Assets	\$2,523,802,907
Direct Lending/Credit	\$1,557,924,760
Opportunistic Credit	\$681,158,835
Multi-Strategy	\$284,743,686
Opportunistic Equity	\$223,172,029