

MICHIGAN STATE POLICE
RETIREMENT SYSTEM

PENSION PLAN REVIEW

April 17, 2008



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Chief Investment Officer, Bureau of Investments



- Mission, Goals, Objectives
- MSPRS Membership
- Markets and Economics
- Rates of Return
- Investment Holdings
- Diversification



Bureau of Investments
Mission Statement



The Bureau of Investments provides quality investment management services, professional expertise, and advice to the State Treasurer as fiduciary of the State of Michigan Retirement Systems and Michigan boards and agencies. The Bureau strives to provide consistent and cost-effective management of funds to achieve competitive investment returns that meet objectives within an acceptable level of risk for the benefit of employees, retirees, and citizens of the State of Michigan.



State of Michigan Retirement Systems Investment Goals

- *Meet or exceed actuarial assumption over the long term.*
- *Maintain sufficient liquidity to pay benefits.*
- *Achieve optimal rate of return possible with prudent levels of risk.*



State of Michigan Retirement Systems Investment Objectives

- *Diversify assets to preserve capital and avoid large losses.*
- *Perform in the top half of the public plan universe over the long term.*
- *Exceed individual asset class benchmarks over the long term.*
- *Operate in a cost-effective manner relative to peers.*



Member Information





Plan Membership

September 30, 2007

MEMBER TYPE	MSPRS
Retirees & Benef. Receiving Benefits	2,735
<i>One-Year Change</i>	24
Current Employees Vested	1,123
Current Employees Non-Vested	497
Active Members Total	1,620
<i>One-Year Change</i>	-58
Inactive Employees Entitled To, But Not Yet Receiving Benefits	163
Total MSPRS Members	4,518
<i>One-Year Change</i>	-12

Source: Pension Plans Component Unit Financial Reports Fiscal Year Ended September 30, 2007



Plan Membership Ratio

September 30, 2007

Ratio of Active/Retiree	MSPRS
Year 2007	.59:1
Year 2006	.62:1
Year 2005	.63:1
Year 2004	.70:1
Year 2003	.72:1

Source: Pension Plans Component Unit Financial Reports Fiscal Year Ended September 30, 2007



Funded Ratio

September 30, 2007

Year	Market Value of Assets*	Actuarial Value of Assets*	Actuarial Accrued Liability*	Funded Ratio Based on Actuarial Value
2007	\$1,345	\$1,259	\$1,452	86.7%
2006	\$1,204	\$1,114	\$1,386	80.4%
2005	\$1,120	\$1,090	\$1,300	83.8%
2004	\$1,043	\$1,118	\$1,256	89.0%
2003	\$ 977	\$1,139	\$1,186	96.0%
1980	\$ 101	\$ 101	\$ 173	58.4%

*(\$ in Millions)

Source: Pension Plans Component Unit Financial Reports and Actuarial Valuations



Markets and Economics





Stock Market Environment

Market	2007 Price Change	12/31/07
DJIA	+6.43%	13,265
S&P 500	+3.53%	1,468
NASDAQ	+9.81%	2,652
BMI-EPAC (Local)	+1.40%	254.3
BMI-EPAC (USD)	+8.63%	317.7



January - February Stock Market Update

Market	Thru 2/29/08 Price Change	2/29/08
DJIA	-7.11%	12,266
S&P 500	-9.05%	1,331
NASDAQ	-14.36%	2,271
BMI-EPAC (Local)	-11.48%	225.1
BMI-EPAC (USD)	-8.0%	292.4



Bond Market Environment

Market	2007 Yield Change	12/31/07
30-Year Treasury	-36 bp	4.45%
10-Year Treasury	-67 bp	4.03%
5-Year Treasury	-123 bp	3.46%
2-Year Treasury	-174 bp	3.07%
13-Week T. Bill	-188 bp	3.17%
Fed Funds	-100 bp	4.25%



January - February Bond Market Update

Market	Yield Change	thru 2/29/08 2/29/08
30-Year Treasury	-5 bp	4.40%
10-Year Treasury	-52 bp	3.51%
5-Year Treasury	-98 bp	2.48%
2-Year Treasury	-145 bp	1.62%
13-Week T. Bill	-132 bp	1.85%
Fed Funds	-125 bp	3.00%

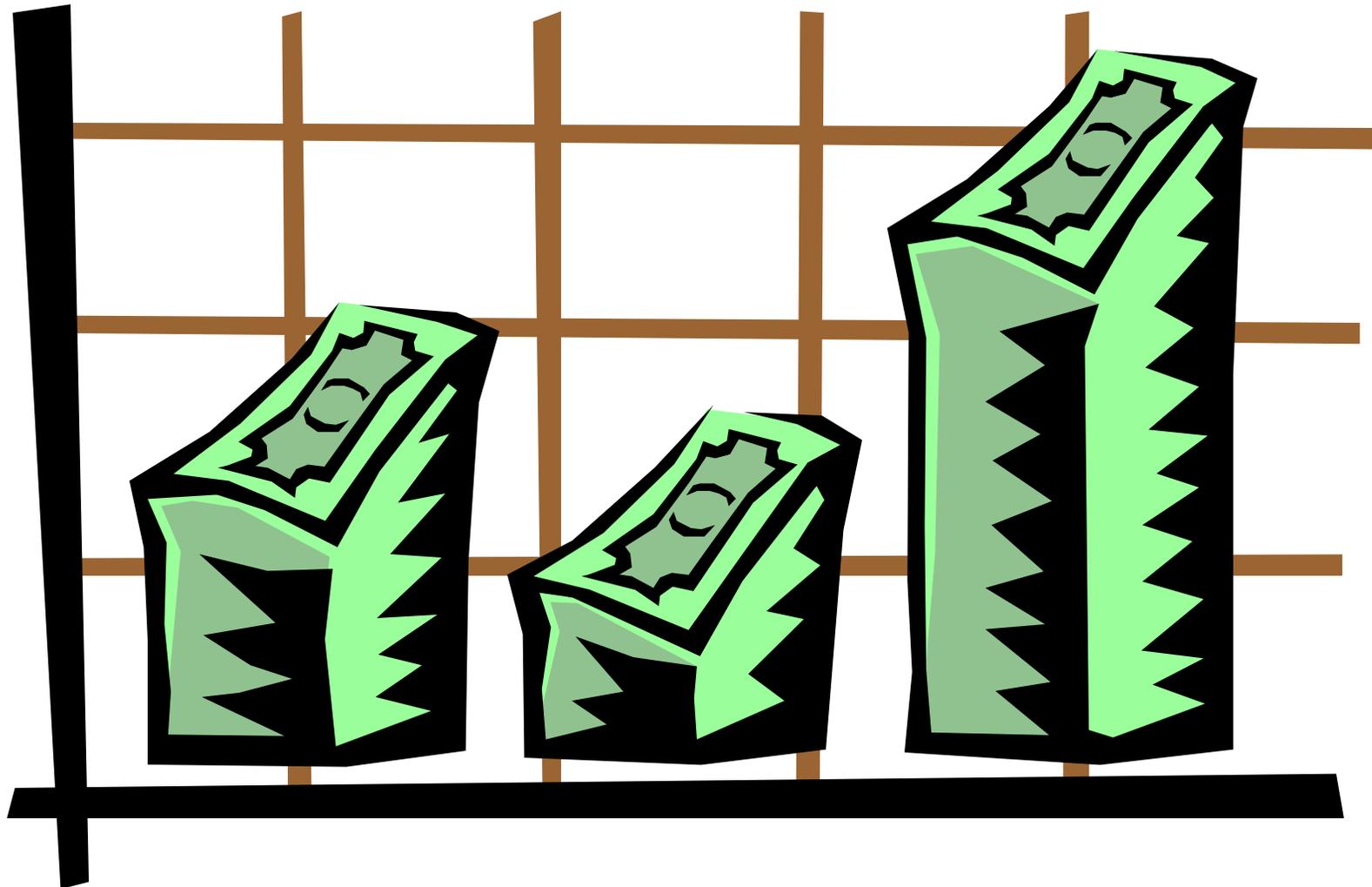


Economic Environment

- **Real GDP averaged 2.2 percent in 2007. Will slow for 2008.**
- **Inflation (CPI) of 3.7 percent.**
- **Job growth and employment remained low.**
- **Excluding the financial sector, corporate earnings & balance sheets remain strong.**
- **Federal Reserve has continued to ease.**
- **Merger & acquisition has slowed.**
- **\$100+ per barrel oil.**
- **Deflating housing market, subprime vs. prime mess?**



Return On Investments





Time-Weighted Rates of Return

Asset Class w/Benchmark	FY07		CY07	
	Rate	Rank	Rate	Rank
Total Plan	17.4%	27	11.2%	6
Median*	15.9%		8.6%	
Domestic Equities	16.7%		5.4%	
S&P 1500 Index	16.6%		5.5%	
International Equities	21.9%		9.2%	
S&P/CitiGroup BMI-EPAC**	19.8%		7.3%	
Private Equity	30.7%		34.0%	
S&P 500 + 300 b.p.	19.6%		8.7%	

*State Street Universe of Public Funds > \$1 Billion

**(1/2 USD & 1/2 LC)

Source: State Street Analytics



Time-Weighted Rates of Return

Asset Class w/Benchmark	FY07		CY07	
	Rate	Rank	Rate	Rank
Real Estate	20.5%		21.8%	
NCREIF (NPI minus 75 b.p.)	16.0%		14.5%	
Bonds	5.6%		7.4%	
Lehman Gov't/Credit	5.1%		7.2%	
Cash Equivalents	5.4%		5.3%	
30 Day T-Bill	4.9%		4.6%	

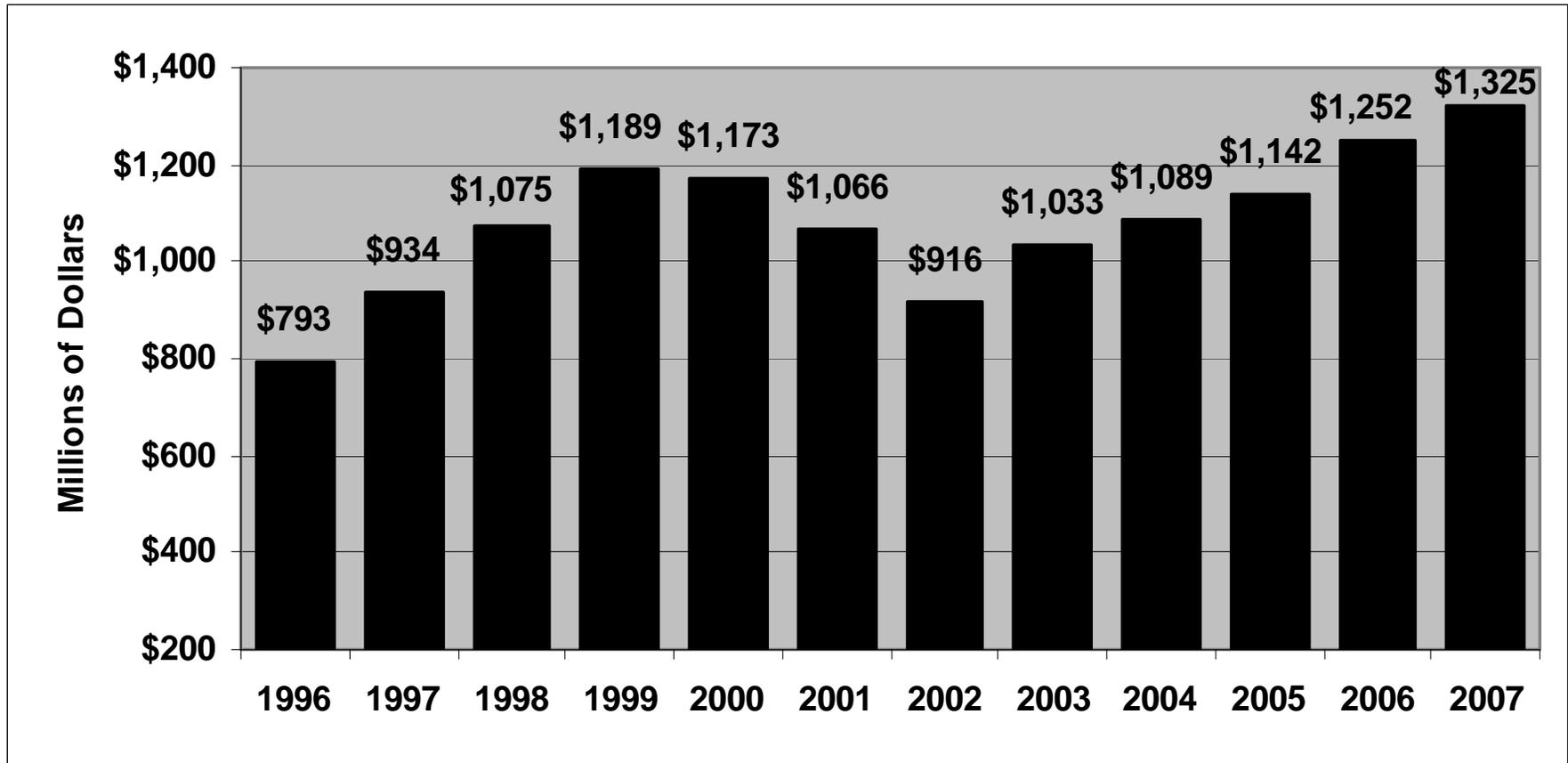
Fiscal Year – 10-Year Annualized Return

Rate: 8.1% - Rank: 53

Source: State Street Analytics



Market Value \$1,325 Million



Years Ending December 31



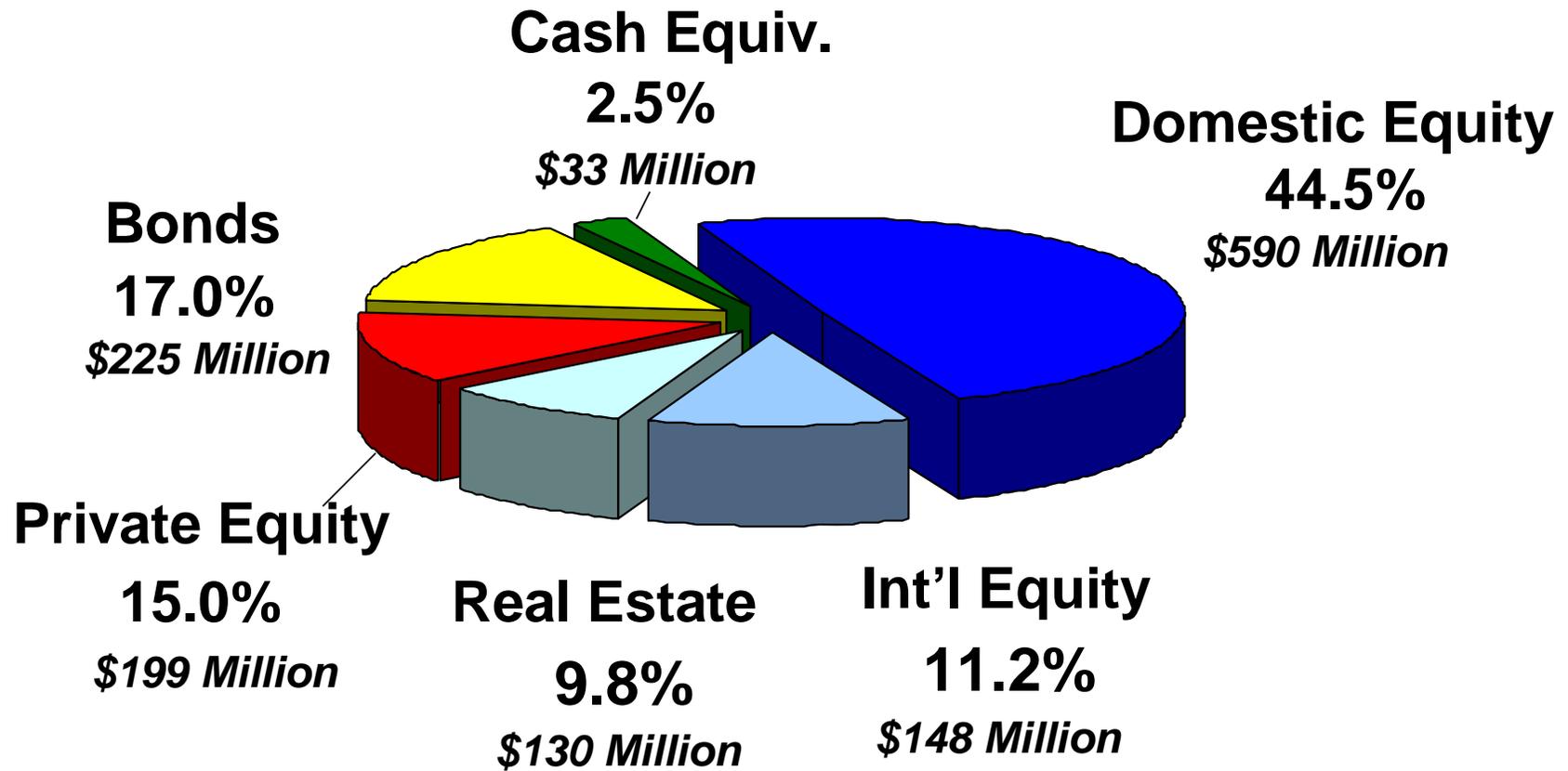
Investment Holdings





Asset Allocation

\$1,325 Million

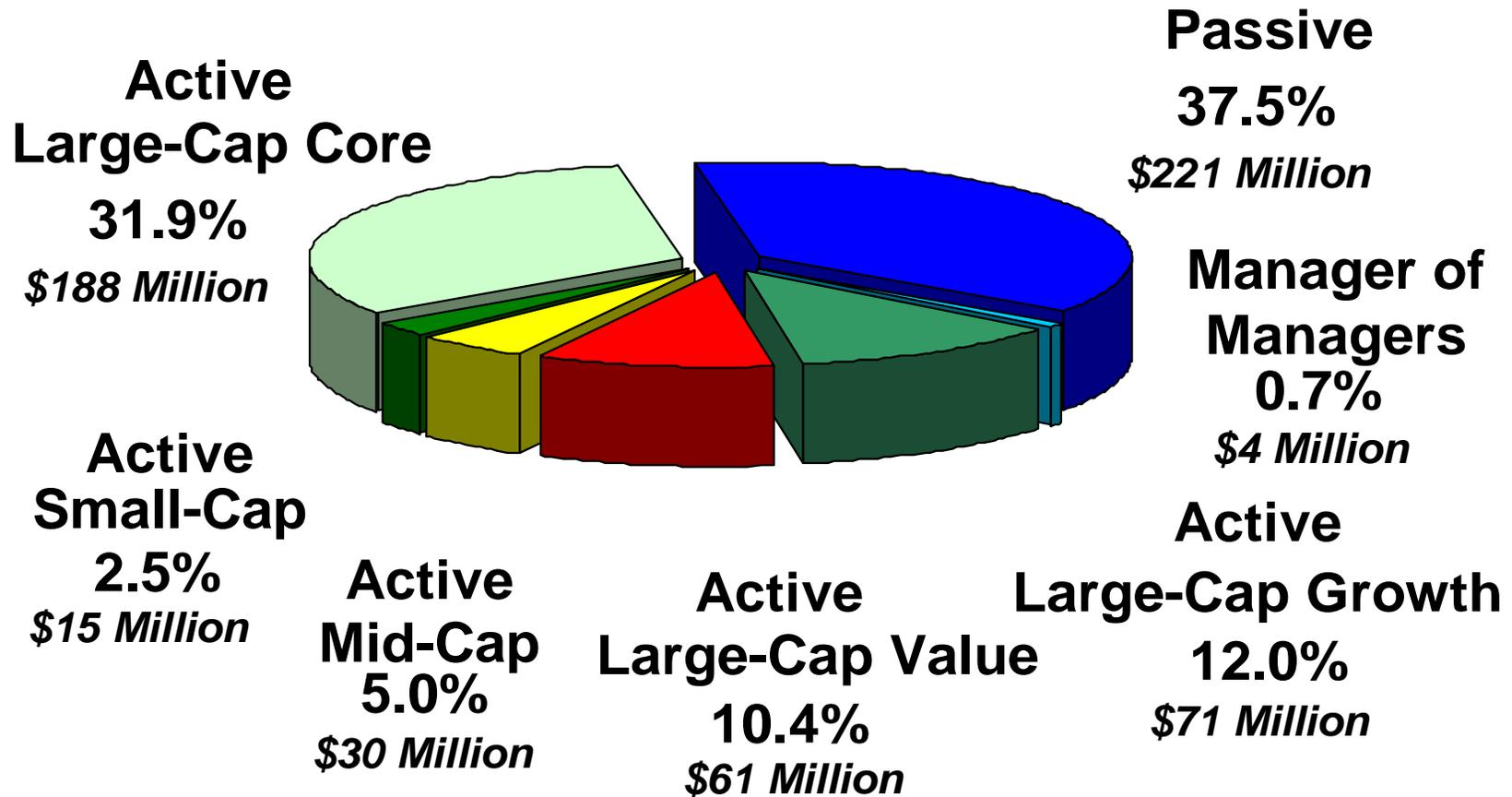


Market Value as of December 31, 2007



Domestic Equity

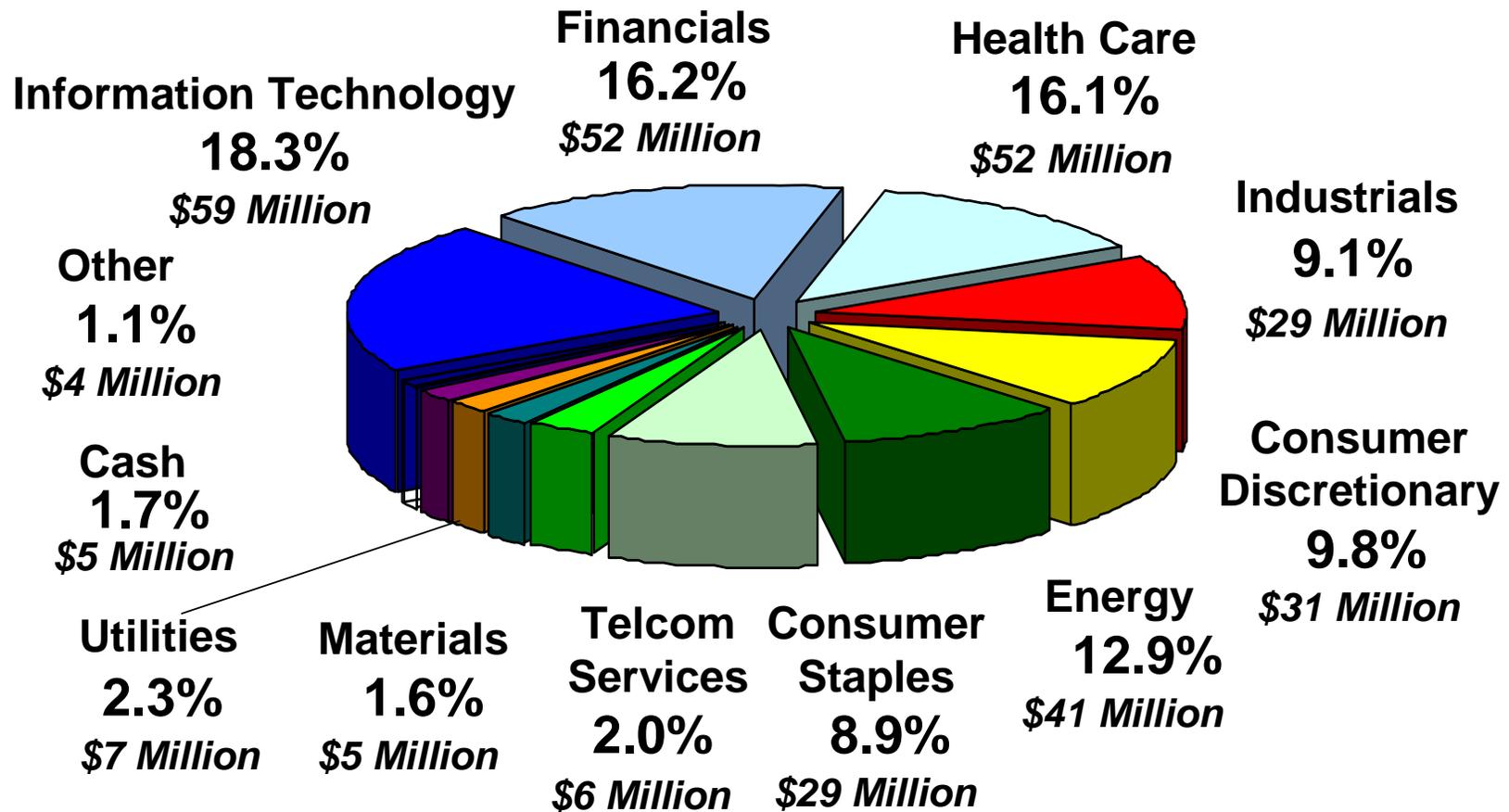
\$590 Million





Domestic Active Equity Large-Cap Investments

\$320 Million

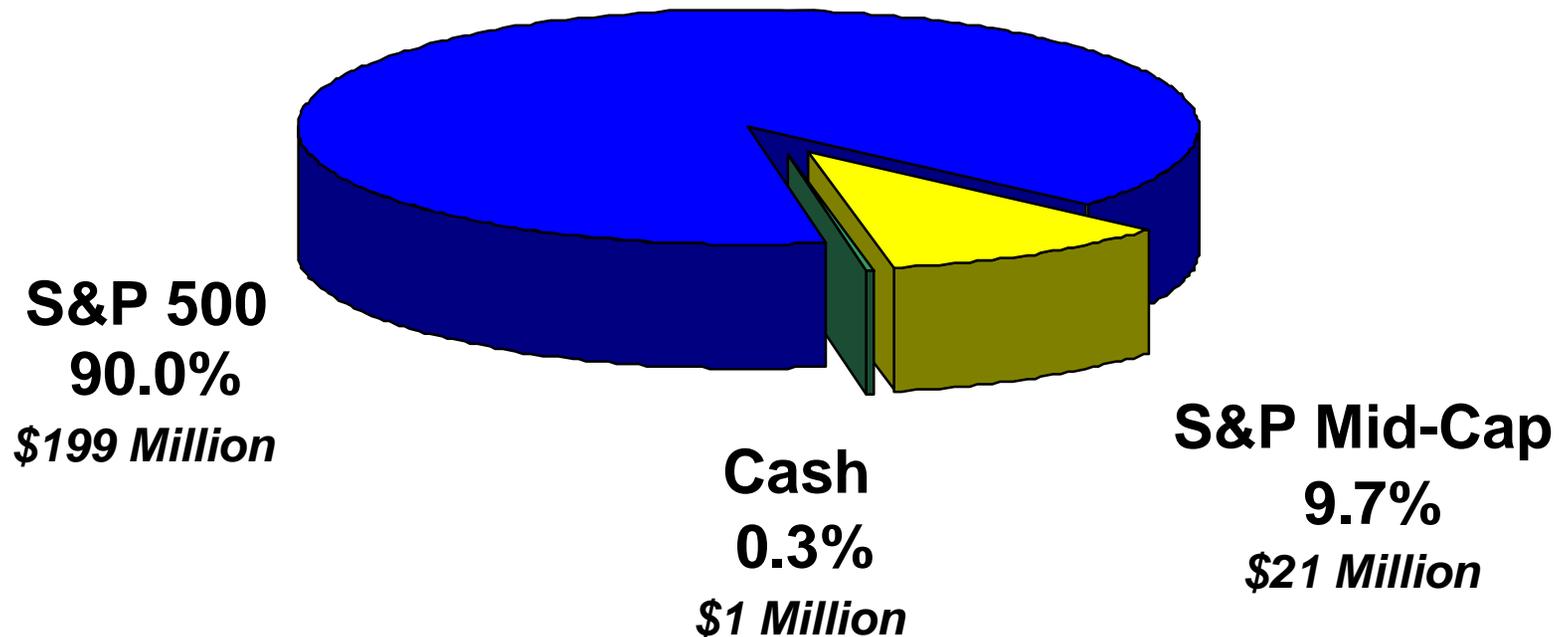


Market Value as of December 31, 2007



Domestic Passive Equity

\$221 Million



Market Value as of December 31, 2007



International Equity

\$148 Million

Active Funds

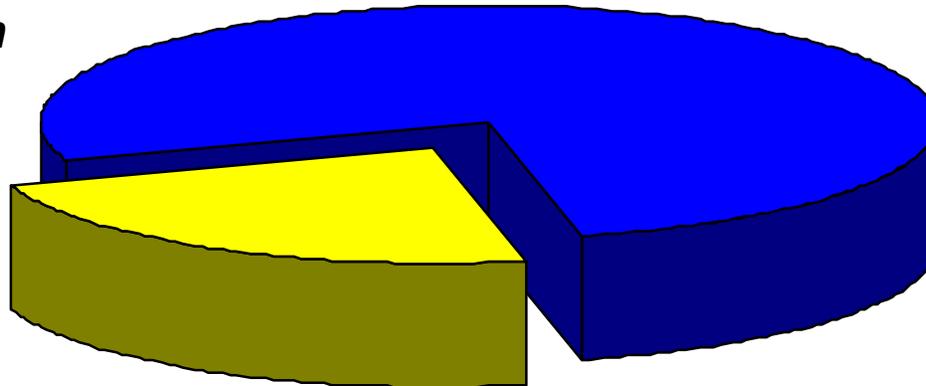
25.6%

\$38 Million

Passive

74.4%

\$110 Million

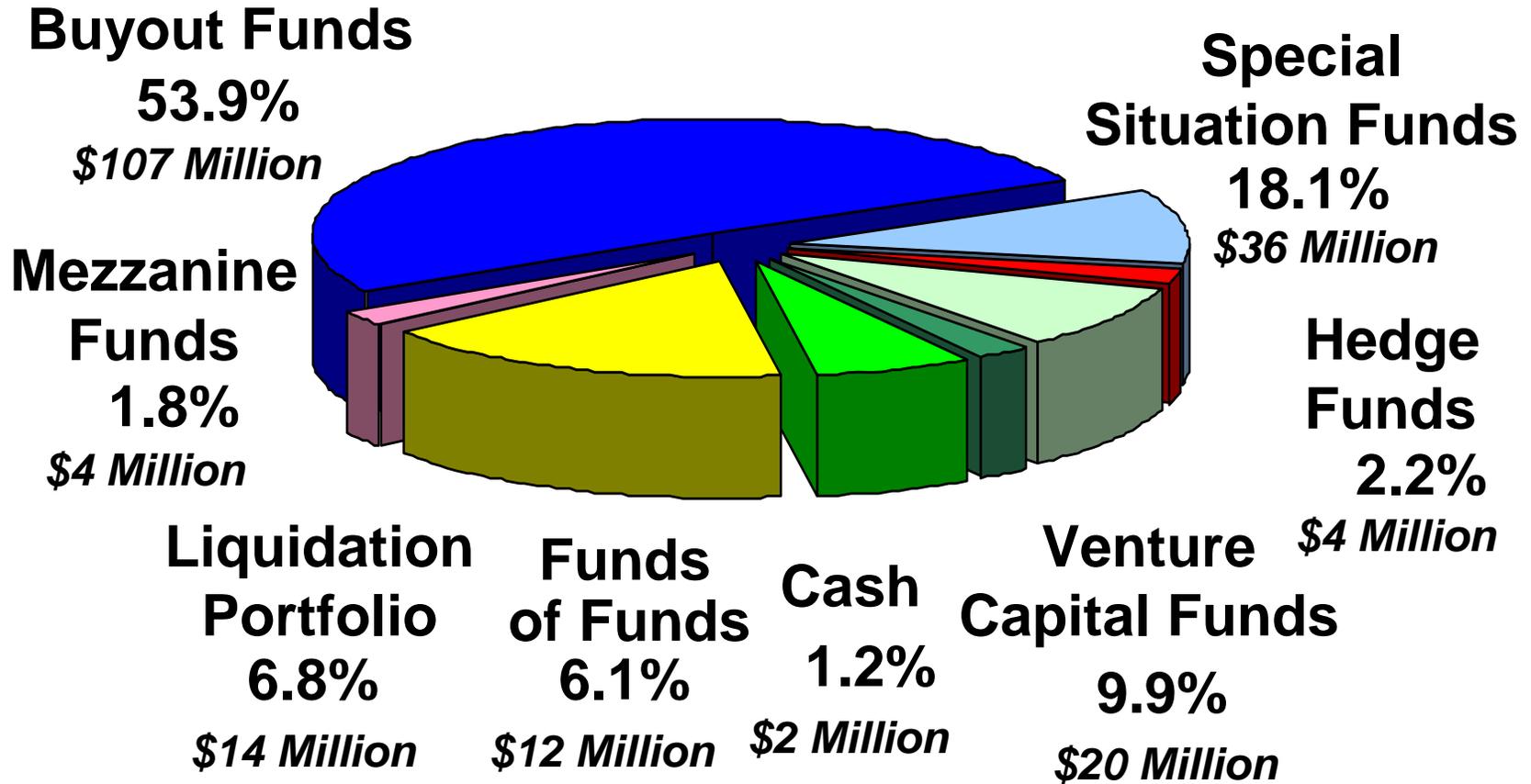


Market Value as of December 31, 2007



Private Equity

\$199 Million

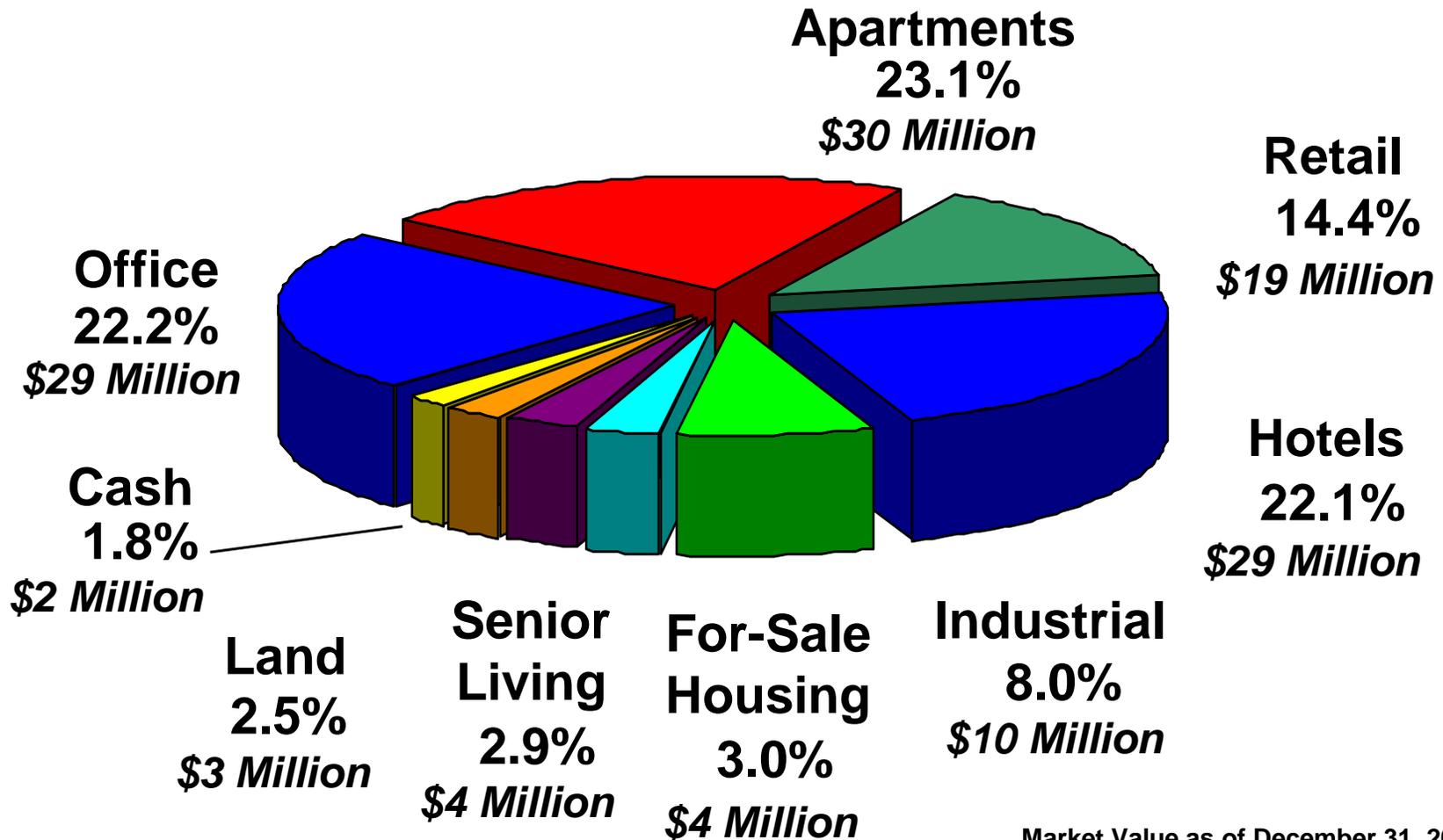


Market Value as of December 31, 2007



Real Estate

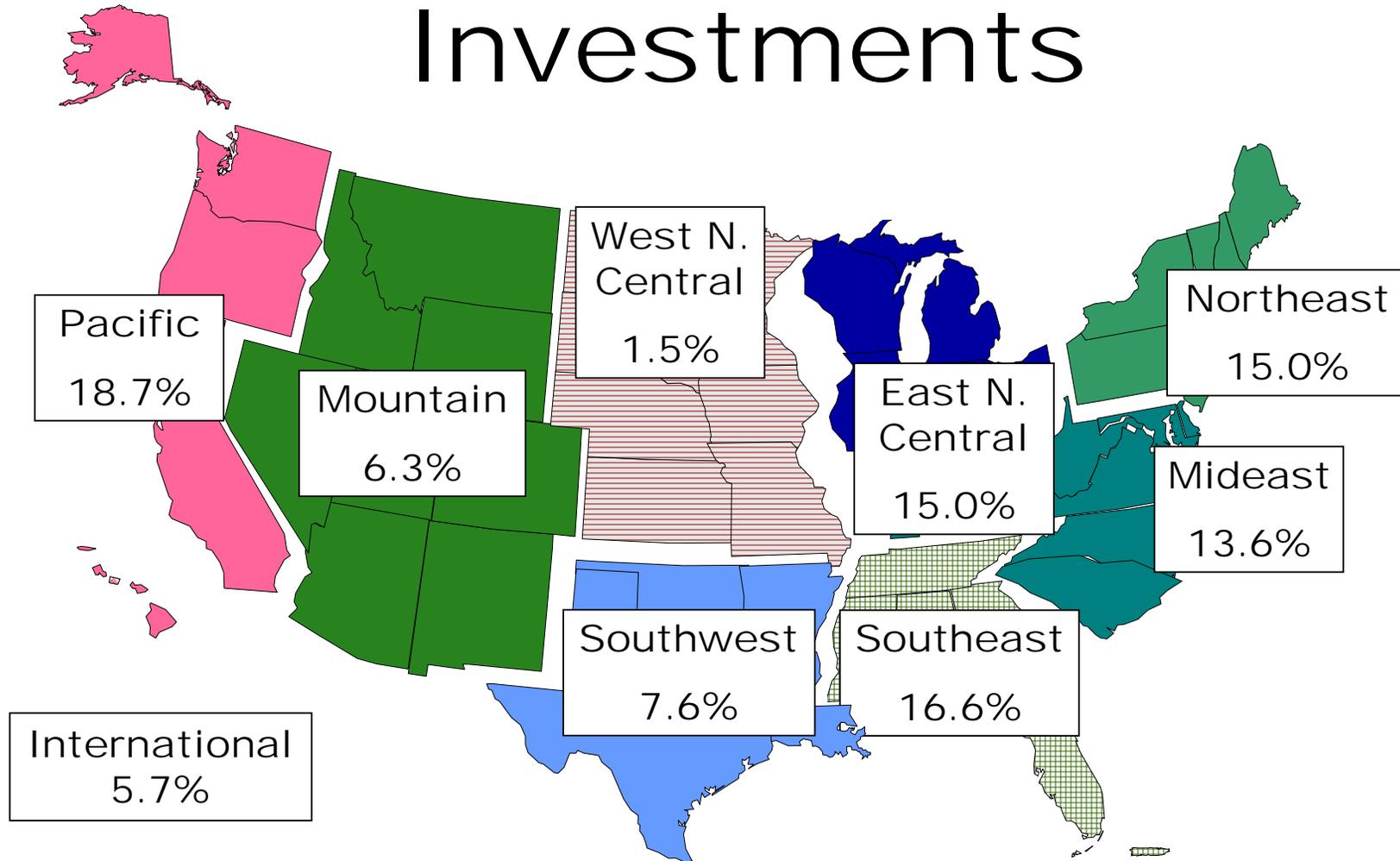
\$130 Million



Market Value as of December 31, 2007



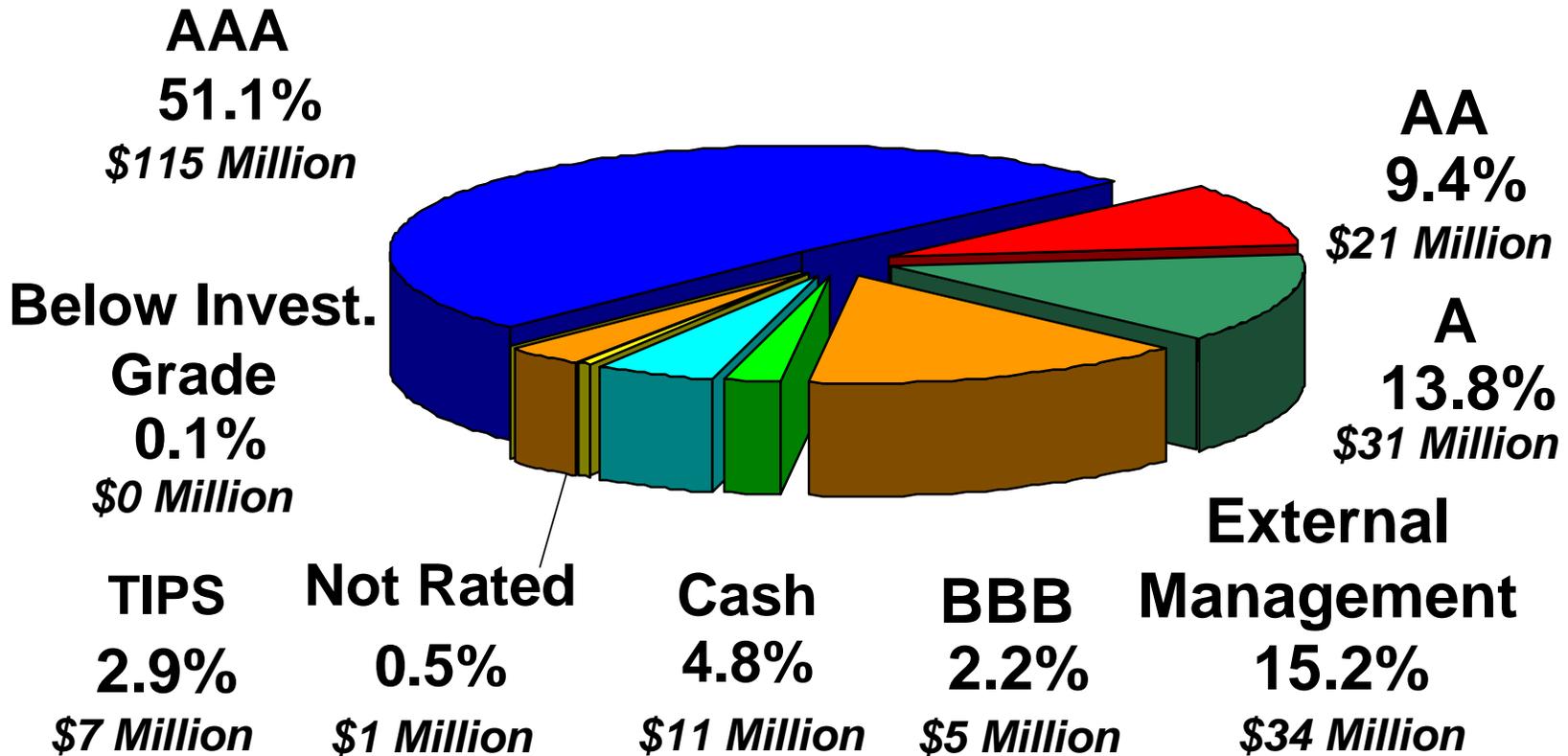
Real Estate Investments





Government and Corporate Bonds

\$225 Million



Market Value as of December 31, 2007



Benefits of Diversification





Annual Total Returns of Key Asset Classes 1987 - 2007

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
Best	Small Value Stocks 29.47%	Large Growth Stocks 36.40%	U.S. Bonds 8.96%	Small Growth Stocks 51.18%	Small Value Stocks 29.15%	Foreign Stocks 32.57%	Foreign Stocks 7.78%	Large Growth Stocks 38.13%	Large Growth Stocks 23.97%	Large Growth Stocks 36.52%	Large Growth Stocks 42.16%	Small Growth Stocks 43.09%	Small Value Stocks 22.83%	Small Value Stocks 14.02%	U.S. Bonds 10.26%	Small Growth Stocks 48.54%	Small Value Stocks 22.25%	Foreign Stocks 13.54%	Foreign Stocks 26.34%	Foreign Stocks 11.17%	Best
	Foreign Stocks 28.26%	Large Growth Stocks 31.69%	Cash 7.81%	Small Growth Stocks 46.05%	Small Value Stocks 18.42%	Small Value Stocks 23.86%	Cash 3.90%	Large Growth Stocks 37.58%	Large Growth Stocks 22.96%	Large Growth Stocks 33.36%	Large Growth Stocks 28.58%	Large Growth Stocks 28.25%	U.S. Bonds 11.63%	U.S. Bonds 8.44%	Cash 1.65%	Small Growth Stocks 47.25%	Foreign Stocks 20.25%	Large Value Stocks 6.33%	Small Value Stocks 23.48%	Large Growth Stocks 9.13%	
	Small Growth Stocks 24.89%	Large Value Stocks 26.13%	Large Growth Stocks 0.20%	Small Value Stocks 41.70%	Large Value Stocks 10.52%	Small Growth Stocks 18.89%	Large Growth Stocks 3.14%	Large Value Stocks 36.99%	Large Value Stocks 22.00%	Small Value Stocks 31.78%	Foreign Stocks 20.00%	Foreign Stocks 26.96%	Large Value Stocks 6.08%	Cash 3.83%	Small Value Stocks -11.42%	Small Value Stocks 46.03%	Small Growth Stocks 18.33%	Large Value Stocks 4.91%	Large Value Stocks 20.80%	Small Growth Stocks 7.05%	
	Large Value Stocks 21.67%	Small Growth Stocks 20.16%	Large Growth Stocks -3.11%	Large Growth Stocks 38.37%	Small Growth Stocks 7.77%	Large Value Stocks 18.61%	Large Growth Stocks 1.32%	Small Growth Stocks 31.04%	Small Value Stocks 21.37%	Large Value Stocks 29.98%	Large Value Stocks 14.69%	Small Growth Stocks 21.26%	Cash 5.89%	Small Growth Stocks 2.49%	Foreign Stocks -15.66%	Foreign Stocks 38.59%	Large Value Stocks 15.71%	Small Value Stocks 4.71%	Small Growth Stocks 18.37%	U.S. Bonds 6.97%	
	Small Growth Stocks 20.38%	Small Growth Stocks 16.25%	Large Value Stocks -6.85%	Large Growth Stocks 30.47%	Large Growth Stocks 7.62%	Small Growth Stocks 13.37%	Large Value Stocks -0.64%	Small Growth Stocks 28.44%	Small Growth Stocks 16.53%	Small Growth Stocks 22.36%	U.S. Bonds 8.70%	Large Growth Stocks 21.04%	Small Growth Stocks -3.02%	Small Growth Stocks -9.23%	Large Value Stocks -19.99%	Large Value Stocks 31.78%	Small Growth Stocks 14.31%	Small Growth Stocks 4.55%	Large Growth Stocks 15.80%	Large Growth Stocks 5.49%	
	Large Growth Stocks 16.61%	U.S. Bonds 14.53%	Small Growth Stocks -17.42%	Large Value Stocks 22.56%	U.S. Bonds 7.40%	Large Growth Stocks 10.08%	Small Value Stocks -1.55%	Small Value Stocks 25.75%	Small Growth Stocks 11.32%	Small Growth Stocks 12.93%	Cash 4.86%	Large Value Stocks 12.72%	Large Growth Stocks -9.11%	Large Value Stocks -11.69%	Small Growth Stocks -20.48%	Large Growth Stocks 28.68%	Large Growth Stocks 10.88%	Small Growth Stocks 4.15%	Small Growth Stocks 13.35%	Cash 4.74%	
	Large Growth Stocks 11.95%	Small Value Stocks 12.43%	Small Growth Stocks -19.50%	U.S. Bonds 16.00%	Large Growth Stocks 5.06%	U.S. Bonds 9.75%	Small Growth Stocks -1.81%	U.S. Bonds 18.46%	Foreign Stocks 6.05%	U.S. Bonds 9.64%	Small Growth Stocks 1.23%	Cash 4.68%	Foreign Stocks -13.96%	Large Growth Stocks -11.87%	Large Growth Stocks -21.26%	Large Growth Stocks 25.66%	Large Growth Stocks 6.13%	Large Growth Stocks 3.46%	Large Growth Stocks 11.01%	Large Value Stocks 1.99%	
	U.S. Bonds 7.89%	Foreign Stocks 10.53%	Small Value Stocks -21.77%	Foreign Stocks 12.14%	Cash 3.51%	Cash 2.90%	Small Growth Stocks -2.44%	Foreign Stocks 11.21%	Cash 5.21%	Cash 5.26%	Small Growth Stocks -2.55%	U.S. Bonds -0.82%	Large Growth Stocks -22.08%	Large Growth Stocks -12.75%	Large Growth Stocks -22.77%	U.S. Bonds 4.10%	U.S. Bonds 4.34%	Cash 2.98%	Cash 4.75%	Small Growth Stocks -1.57%	
Worst	Cash 6.35%	Cash 8.37%	Foreign Stocks -23.45%	Cash 5.60%	Foreign Stocks -12.18%	Large Growth Stocks 1.68%	U.S. Bonds -2.92%	Cash 5.60%	U.S. Bonds 3.64%	Foreign Stocks 1.78%	Small Value Stocks -6.46%	Small Value Stocks -1.48%	Small Growth Stocks -22.43%	Foreign Stocks -21.45%	Small Growth Stocks -30.26%	Cash 1.02%	Cash 1.20%	U.S. Bonds 2.43%	U.S. Bonds 4.33%	Small Value Stocks -9.78%	Worst

Source: Standard & Poor's Micropal. ■ Large Stocks are represented by the S&P 500; ■ Large Growth Stocks are represented by S&P 500 Growth Index; ■ Large Value Stocks are represented by the S&P 500 Value Index; ■ Small Stocks are represented by the Russell 2000 Index; ■ Small Growth Stocks are represented by the Russell 2000 Growth Index; ■ Small Value Stocks are represented by the Russell 2000 Value Index; ■ Foreign Stocks are represented by the MSCI EAFE Index; ■ U.S. Bonds are represented by the Lehman Brothers Aggregate Bond Index; and ■ Cash is represented by 30-day T-Bills.



Disclaimer



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