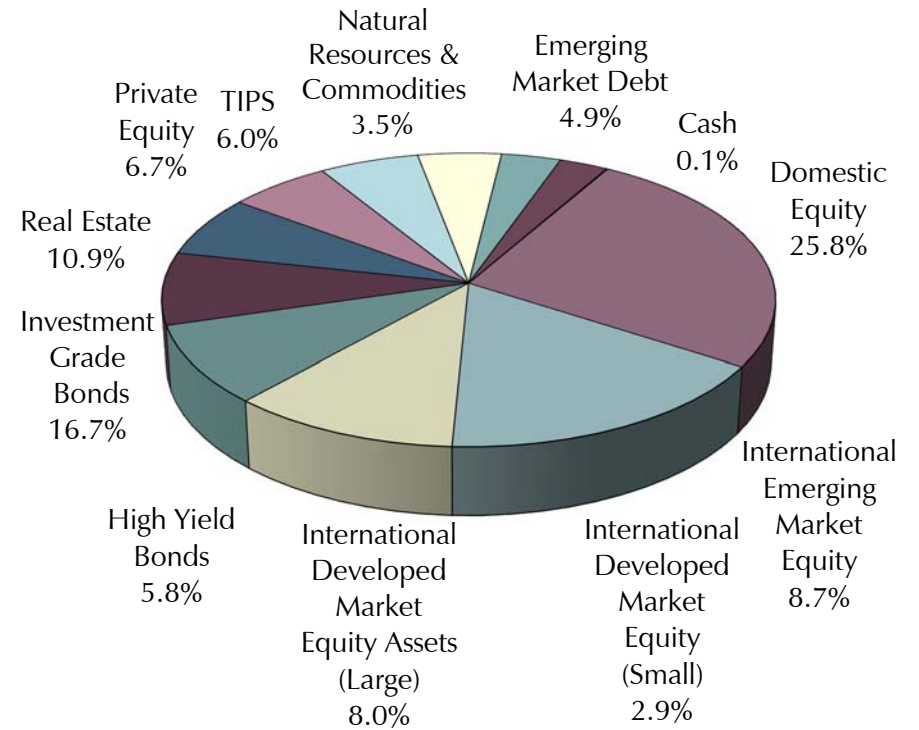
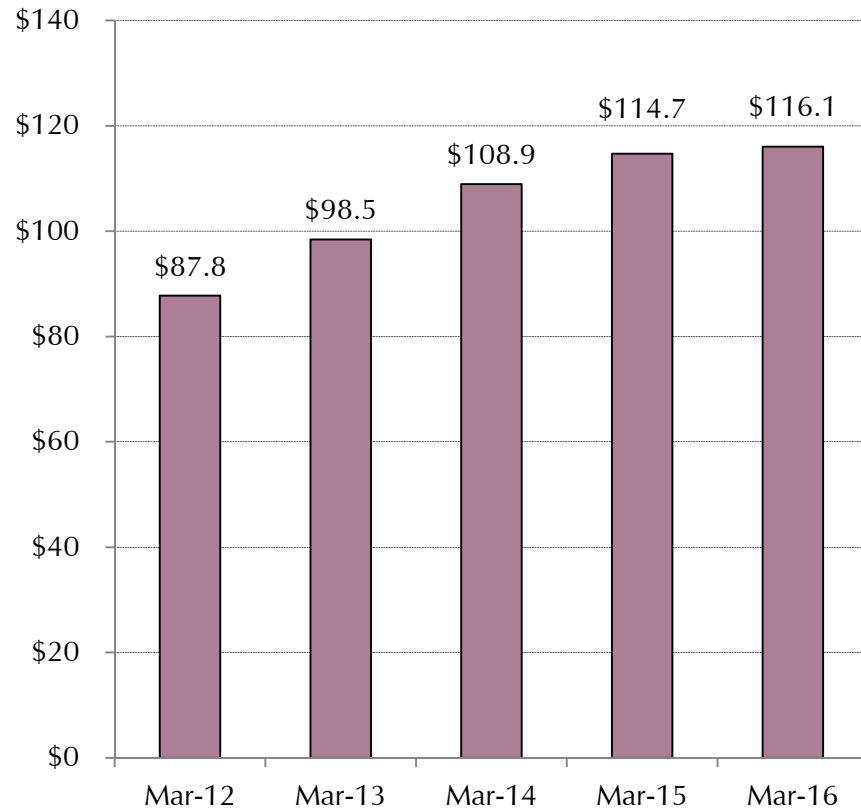


System Summary
As of March 31, 2016

Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
as of 3/31/16



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Asset Summary as of 3/31/16

	Market Value 3/31/16 (\$ mm)	% of Retirement System	Target Allocation (%)	Target Range (%)	Market Value 12/31/15 (\$ mm)
Total Retirement System	116.1	100	NA	NA	114.1
Domestic Equity Assets	29.9	26	25	20-30	29.6
International Developed Market Equity (Large) Assets	9.3	8	7	4-10	9.6
International Developed Market Equity (Small) Assets	3.3	3	3	2-4	3.3
International Emerging Market Equity Assets	10.1	9	10	6-14	9.6
Investment Grade Bond Assets	19.3	17	15	12-18	19.6
High Yield Bond Assets	6.8	6	6	3-9	6.6
TIPS Assets	7.0	6	6	4-8	6.7
Emerging Market Debt Assets	5.7	5	5	3-7	5.1
Real Estate Assets	12.7	11	10	7-13	12.5
Private Equity Assets	7.8	7	8	5-11	7.7
Natural Resources & Commodities Assets	4.0	3	5	3-7	3.5
Cash	0.1	< 1	0	< 5	0.1



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Portfolio Roster as of 3/31/16

	Market Value 3/31/16 (\$ mm)	% of Asset Class	% of Retirement System	Target Allocation (%)	Target Range (%)	Market Value 12/31/15 (\$ mm)
Aggregate Assets	116.1	NA	100	NA	NA	114.1
Domestic Equity Assets	29.9	100	26	25	20-30	29.6
SSgA Russell 1000 Value Index-NL	13.7	46	12			13.5
SSgA Russell 1000 Growth Index-NL	13.8	46	12			13.7
SSgA Russell 2000 Index-NL	2.4	8	2			2.5
International Developed Market Equity (Large) Assets	9.3	100	8	7	4-10	9.6
SSgA MSCI EAFE Index-NL	9.3	100	8			9.6
International Developed Market Equity (Small) Assets	3.3	100	3	3	2-4	3.3
SSgA MSCI EAFE Small Cap Index-NL	3.3	100	3			3.3
International Emerging Market Equity Assets	10.1	100	9	10	6-14	9.6
Dimensional Emerging Markets Value	1.9	19	2			3.9
KB Investors Emerging Markets Equity	4.3	43	4			2.0
LMCG Emerging Markets	3.9	38	3			3.7
Investment Grade Bond Assets	19.3	100	17	15	12-18	19.6
McDonnell Core Aggregate Bond	19.3	100	17			19.6



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Portfolio Roster as of 3/31/16

	Market Value 3/31/16 (\$ mm)	% of Asset Class	% of Retirement System	Target Allocation (%)	Target Range (%)	Market Value 12/31/15 (\$ mm)
High Yield Bond Assets	6.8	100	6	6	3-9	6.6
Columbia Institutional High Yield	6.8	100	6			6.6
TIPS Assets	7.0	100	6	6	4-8	6.7
SSgA TIPS Index-NL	7.0	100	6			6.7
Emerging Market Debt Assets	5.7	100	5	5	3-7	5.1
Stone Harbor Emerging Markets Local Currency Debt	5.7	100	5			5.1
Real Estate Assets	12.7	100	11	10	7-13	12.5
Intercontinental U.S. REIF	3.6	28	3			3.6
AEW Core Property Trust	3.5	27	3			3.4
TA Associates Realty Fund IX ¹	2.4	19	2			2.4
TA Associates Realty Fund X ¹	3.2	25	3			3.1
AG Core Plus Realty Fund ¹	< 0.1	< 1	< 1			< 0.1

¹ Based on December 31, 2015, fair market value, adjusted for subsequent period cash flows, unless noted otherwise.



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Portfolio Roster as of 3/31/16

	Market Value 3/31/16 (\$ mm)	% of Asset Class	% of Retirement System	Target Allocation (%)	Target Range (%)	Market Value 12/31/15 (\$ mm)
Private Equity Assets	7.8	100	7	8	5-11	7.7
HarbourVest Partners IX ¹	2.6	33	2			2.4
HarbourVest Partners VIII ¹	1.5	19	1			1.5
Goldman Sachs Private Equity Partners 2005 ¹	1.4	17	1			1.5
Ascent Venture Partners V ¹	1.1	14	1			1.1
Ironsides Partnership Fund III ¹	0.7	8	1			0.6
Ascent Venture Partners IV ¹	0.3	4	< 1			0.4
Ascent Venture Partners VI ¹	0.2	3	< 1			0.1
Ascent Venture Partners III ¹	0.1	1	< 1			0.1
Ascent Venture Partners II ¹	0.1	1	< 1			0.1
Natural Resources & Commodities Assets	4.0	100	3	5	3-7	3.5
RS Global Natural Resources	4.0	100	3			3.5
Cash	0.1	100	< 1	0	< 5	0.1
Cash STIF	0.1	100	< 1			0.1

¹ Based on December 31, 2015 fair market value, adjusted for subsequent period cash flows.



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Performance as of 3/31/16

	1Q16 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Inception Date	Since Inception (%)
Total Retirement System	2.7	-1.5	3.6	5.1	4.4	7/1/01	4.9
<i>CPI (inflation)</i>	0.7	0.9	0.8	1.3	1.8		2.0
<i>60% MSCI ACWI / 40% Barclays Global Aggregate</i>	2.6	-0.6	3.8	4.0	4.5		5.5
Domestic Equity	1.0	-0.4	11.0	10.9	6.4	7/1/01	5.8
<i>Russell 3000</i>	1.0	-0.3	11.1	11.0	6.9		6.0
International Developed Market Equity	-2.3	-5.3	3.7	3.4	3.3	7/1/01	5.6
<i>MSCI EAFE</i>	-3.0	-8.3	2.2	2.3	1.8		4.5
International Emerging Market Equity	6.3	-12.7	-6.9	-6.8	NA	7/1/07	-1.6
<i>MSCI Emerging Markets</i>	5.7	-12.0	-4.5	-4.1	3.0		-0.3
Investment Grade Bonds	3.0	2.0	2.4	3.8	5.1	7/1/01	5.1
<i>Barclays Aggregate</i>	3.0	2.0	2.5	3.8	4.9		5.0
High Yield Bonds	3.0	-0.2	3.5	5.8	6.5	2/1/05	6.3
<i>CSFB High Yield</i>	3.1	-4.5	1.4	4.6	6.5		6.3
TIPS	4.5	1.5	-0.7	3.0	NA	7/1/07	4.8
<i>Barclays U.S. TIPS</i>	4.5	1.5	-0.7	3.0	4.6		4.8
Emerging Market Debt	10.5	-3.3	-9.0	NA	NA	3/1/13	-9.0
<i>JPM GBI-EM Global Diversified</i>	11.0	-1.6	-6.7	-2.0	5.0		-6.7
Total Real Estate	2.2	13.8	12.1	12.4	4.4	4/1/05	5.4
<i>NCREIF ODCE</i>	2.2	13.7	13.6	13.3	6.4		7.6
Private Equity	0.8	0.8	7.1	7.6	7.5	10/1/03	4.5
<i>Russell 3000 + 3%</i>	1.7	2.6	14.4	14.3	10.0		11.6
Natural Resources & Commodities	14.4	-26.8	-19.5	NA	NA	7/1/11	-12.9
<i>S&P Global Natural Resources</i>	9.3	-14.7	-8.2	-8.2	0.7		-7.8



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Performance as of 3/31/16

	1Q16 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Inception Date	Since Inception (%)
Total Retirement System	2.7	-1.5	3.6	5.1	4.4	7/1/01	4.9
<i>CPI (inflation)</i>	0.7	0.9	0.8	1.3	1.8		2.0
<i>60% MSCI ACWI / 40% Barclays Global Aggregate</i>	2.6	-0.6	3.8	4.0	4.5		5.5
Domestic Equity	1.0	-0.4	11.0	10.9	6.4	7/1/01	5.8
SSgA Russell 1000 Value Index-NL	1.7	-1.4	9.5	10.3	5.8	1/1/05	6.3
<i>Russell 1000 Value</i>	1.6	-1.5	9.4	10.2	5.7		6.2
SSgA Russell 1000 Growth Index-NL	0.8	2.5	13.6	12.4	NA	7/1/07	7.9
<i>Russell 1000 Growth</i>	0.7	2.5	13.6	12.4	8.3		7.9
SSgA Russell 2000 Index-NL	-1.4	-9.7	6.9	7.3	NA	8/1/10	11.5
<i>Russell 2000</i>	-1.5	-9.8	6.8	7.2	5.3		11.5
International Developed Market Equity	-2.3	-5.3	3.7	3.4	3.3	7/1/01	5.6
SSgA MSCI EAFE Index-NL	-2.9	-8.0	2.5	2.6	NA	8/1/10	5.2
<i>MSCI EAFE</i>	-3.0	-8.3	2.2	2.3	1.8		4.9
SSgA MSCI EAFE Small Cap Index-NL	-0.5	3.4	7.5	5.9	NA	8/1/10	9.4
<i>MSCI EAFE Small Cap</i>	-0.6	3.2	7.3	5.6	3.4		9.0

Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Performance as of 3/31/16

	1Q16 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Inception Date	Since Inception (%)
International Emerging Market Equity	6.3	-12.7	-6.9	-6.8	NA	7/1/07	-1.6
Dimensional Emerging Markets Value	8.9	-11.4	-6.4	-6.5	NA	7/1/07	-1.4
<i>MSCI Emerging Markets Value</i>	7.8	-12.6	-6.5	-5.9	3.0		-0.5
KB Investors Emerging Markets Equity	6.6	NA	NA	NA	NA	10/1/15	4.5
<i>MSCI Emerging Markets</i>	5.7	-12.0	-4.5	-4.1	3.0		6.4
LMCG Emerging Markets	4.2	NA	NA	NA	NA	8/1/15	-6.3
<i>MSCI Emerging Markets</i>	5.7	-12.0	-4.5	-4.1	3.0		-6.1
Investment Grade Bonds	3.0	2.0	2.4	3.8	5.1	7/1/01	5.1
McDonnell Core Aggregate Bond	3.0	2.0	2.4	3.8	5.1	7/1/01	5.1
<i>Barclays Aggregate</i>	3.0	2.0	2.5	3.8	4.9		5.0
High Yield Bonds	3.0	-0.2	3.5	5.8	6.5	2/1/05	6.3
Columbia Institutional High Yield	3.0	-0.2	3.5	NA	NA	3/1/12	5.5
<i>Barclays High Yield</i>	3.4	-3.7	1.8	4.9	7.0		4.4
TIPS	4.5	1.5	-0.7	3.0	NA	7/1/07	4.8
SSgA TIPS Index-NL	4.5	1.5	-0.7	3.0	NA	7/1/07	4.8
<i>Barclays U.S. TIPS</i>	4.5	1.5	-0.7	3.0	4.6		4.8



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Performance as of 3/31/16

	1Q16 (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Inception Date	Since Inception (%)
Emerging Market Debt	10.5	-3.3	-9.0	NA	NA	3/1/13	-9.0
Stone Harbor Emerging Markets Local Currency Debt	10.5	-3.3	-9.0	NA	NA	3/1/13	-9.0
JPM GBI-EM Global Diversified	11.0	-1.6	-6.7	-2.0	5.0		-6.7
Core Real Estate	1.3	12.3	12.0	12.2	4.5	4/1/05	5.7
Intercontinental U.S. REIF	0.9	12.4	NA	NA	NA	10/1/14	12.6
NCREIF ODCE (net)	2.0	12.6	12.6	12.2	5.4		12.7
NCREIF Property	2.2	11.8	11.9	12.0	7.6		12.5
AEW Core Property Trust	1.8	12.5	NA	NA	NA	10/1/14	12.6
NCREIF ODCE (net)	2.0	12.6	12.6	12.2	5.4		12.7
NCREIF Property	2.2	11.8	11.9	12.0	7.6		12.5
Private Equity	0.8	0.8	7.1	7.6	7.5	10/1/03	4.5
Russell 3000 + 3%	1.7	2.6	14.4	14.3	10.0		11.6
Natural Resources & Commodities	14.4	-26.8	-19.5	NA	NA	7/1/11	-12.9
RS Global Natural Resources	14.4	-26.8	-19.5	NA	NA	7/1/11	-12.9
S&P Global Natural Resources	9.3	-14.7	-8.2	-8.2	0.7		-7.8



**Massachusetts Housing Finance Agency
Retirement System**

**Aggregate Assets
Calendar Year Performance**

	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)	2006 (%)
Total Retirement System	-2.7	4.3	10.9	12.2	2.3	12.5	17.6	-24.7	7.9	11.6
<i>CPI (inflation)</i>	0.7	0.8	1.5	1.7	3.0	1.5	2.7	0.1	4.1	2.5
<i>60% MSCI ACWI / 40% Barclays Global Aggregate</i>	-2.5	2.8	12.1	11.5	-2.1	10.2	23.3	-25.9	10.9	15.1
Domestic Equity	0.4	12.4	33.5	16.3	1.0	17.5	30.8	-38.3	3.9	11.2
SSgA Russell 1000 Value Index-NL	-3.7	13.4	32.5	17.4	0.4	15.6	20.0	-36.8	-0.1	22.2
<i>Russell 1000 Value</i>	-3.8	13.5	32.5	17.5	0.4	15.5	19.7	-36.8	-0.2	22.2
SSgA Russell 1000 Growth Index-NL	5.6	13.1	33.5	15.4	2.6	16.7	37.2	-38.4	NA	NA
<i>Russell 1000 Growth</i>	5.7	13.0	33.5	15.3	2.6	16.7	37.2	-38.4	11.8	9.1
SSgA Russell 2000 Index-NL	-4.4	5.0	38.9	16.4	-4.1	NA	NA	NA	NA	NA
<i>Russell 2000</i>	-4.4	4.9	38.8	16.3	-4.2	26.9	27.2	-33.8	-1.6	18.4
International Developed Market Equity	2.0	-4.7	24.4	18.1	-12.6	11.4	36.2	-41.5	9.8	26.5
SSgA MSCI EAFE Index-NL	-0.5	-4.6	23.1	17.7	-11.9	NA	NA	NA	NA	NA
<i>MSCI EAFE</i>	-0.8	-4.9	22.8	17.3	-12.1	7.7	31.8	-43.4	11.2	26.3
SSgA MSCI EAFE Small Cap Index-NL	9.7	-4.7	29.5	20.1	-15.0	NA	NA	NA	NA	NA
<i>MSCI EAFE Small Cap</i>	9.6	-4.9	29.3	20.0	-15.9	22.0	46.8	-47.0	1.4	19.3
International Emerging Market Equity	-18.2	-4.4	-3.8	18.8	-25.6	22.1	92.3	-53.9	NA	NA
Dimensional Emerging Markets Value	-18.8	-4.4	-3.8	18.8	-25.6	22.1	92.3	-53.9	NA	NA
<i>MSCI Emerging Markets Value</i>	-18.6	-4.1	-5.1	15.9	-17.9	18.4	79.1	-50.3	42.2	32.0



Massachusetts Housing Finance Agency
Retirement System

Aggregate Assets
Calendar Year Performance

	2015 (%)	2014 (%)	2013 (%)	2012 (%)	2011 (%)	2010 (%)	2009 (%)	2008 (%)	2007 (%)	2006 (%)
Investment Grade Bonds	0.8	6.1	-3.1	4.6	8.6	6.8	9.7	3.9	6.2	4.5
McDonnell Core Aggregate Bond	0.8	6.1	-3.1	4.6	8.6	6.8	9.7	3.9	6.2	4.5
Barclays Aggregate	0.5	6.0	-2.0	4.2	7.8	6.5	5.9	5.2	7.0	4.3
High Yield Bonds	-0.2	4.1	6.0	13.6	6.2	12.9	43.2	-23.3	2.2	11.2
Columbia Institutional High Yield	-0.2	4.1	6.0	NA	NA	NA	NA	NA	NA	NA
Barclays High Yield	-4.5	2.5	7.4	15.8	5.0	15.1	58.2	-26.2	1.9	11.8
TIPS	-1.4	3.6	-8.6	6.9	13.5	6.3	11.3	-2.4	NA	NA
SSgA TIPS Index-NL	-1.4	3.6	-8.6	6.9	13.5	6.3	11.3	-2.4	NA	NA
Barclays U.S. TIPS	-1.4	3.6	-8.6	7.0	13.6	6.3	11.4	-2.4	11.6	0.4
Emerging Market Debt	-15.2	-8.5	NA	NA	NA	NA	NA	NA	NA	NA
Stone Harbor Emerging Markets Local Currency Debt	-15.2	-8.5	NA	NA	NA	NA	NA	NA	NA	NA
JPM GBI-EM Global Diversified	-14.9	-5.7	-9.0	16.8	-1.8	15.7	22.0	-5.2	18.1	15.2
Natural Resources & Commodities	-38.0	-22.6	-0.3	6.5	NA	NA	NA	NA	NA	NA
RS Global Natural Resources	-38.0	-22.6	-0.3	6.5	NA	NA	NA	NA	NA	NA
S&P Global Natural Resources	-24.0	-9.7	1.5	7.2	-14.9	11.0	36.1	-38.3	41.7	29.8

