#### massmutual@work™

# Your Plan Review MassMutual @work for you

San Mateo Deferred Compensation Plan

Current period: October 1, 2016 – December 31, 2016

Prior period: July 1, 2016 - September 30, 2016

February 16, 2017



## **Executive Summary**

Plan Statistics			
	9/30/2016	12/31/2016	Plan Trend
Total Plan Assets	\$378,797,413	\$385,810,766	▲ 2%
Total Outstanding Loan Balances	\$6,679,601	\$6,490,708	▼ 3%
Participant Contributions			
Participant	\$6,691,508	\$5,960,215	▼ 11%
Rollover	\$324,088	\$893,942	<b>▲</b> 176%
Distributions			
Withdrawals	(\$884,779)	(\$1,887,329)	<b>▲</b> 113%
Terminations	(\$4,484,673)	(\$2,238,677)	▼ 50%
Loans	(\$381,628)	(\$391,448)	▲ 3%
Expenses*	(\$42,857)	(\$54,158)	▲ 26%
Investment Income	\$10,380,084	\$4,686,764	▼ 55%

Notes Withdrawals = hardship, purchase of service credit, death benefits, minimum distribution, installment payment, loan default Terminations = lump sum withdrawal due to termination and retirement

<sup>\*</sup>The expenses shown reflect expenses deducted from plan assets. Expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan are not reflected. The Contribution data displays the combined dollar value of Contributions & Loan Repayments, if applicable.

## **Executive Summary**

Participant Activity			
	9/30/2016	12/31/2016	Plan Trend
Total Participants	5,812	6,040	<b>▲</b> 4%
Participation Rates: Average Percentage	67%	70%	▲ 4%
Average Account Balance	\$65,175	\$63,876	▼ 2%
Average Number of Investments	3.3	3.4	▲ 3%
Number of Outstanding Loans	787	783	▼ 0%
Percent of Participants With a Loan	11%	10%	▼ 9%
Average Loan Balance	\$8,487	\$8,290	▼ 2%
Total Calls to 800#	826	66	▼ 92%
Total Visits to Website	10,450	10,327	▼ 1%

Notes 3Q eligible = 5,439 (does not include extra help) total # contributing = 3,625 = 67% 4Q eligible = 5,351 (does not include extra help) total # contributing = 3,742 = 70%

### 457 Plan Balances by Investment

Asset Allocation										
				Plan Activity	October 01, 201	6 through Decem	ber 31, 2016			
Investment Options	9/30/2016	Percentage*	Contributions	Other Activity	Transfers	Distributions	Expenses**	Investment Income	Balances as of 12/31/2016	Percentage
SAGIC Core Bond (61869)	\$149,304,349	39.42%	\$2,301,598	\$277,634	\$1,042,049	(\$2,248,604)	(\$21,975)	\$1,059,489	\$151,714,539	39.32%
PIMCO Real Return Asset Fund	\$1,978,433	0.52%	\$43,075	\$8,680	\$108,487	(\$3,250)	(\$269)	(\$130,036)	\$2,005,120	0.52%
PIMCO Total Return Fund	\$12,477,259	3.29%	\$115,696	\$21,294	(\$62,041)	(\$89,918)	(\$1,658)	(\$314,167)	\$12,146,467	3.15%
Vanguard Total Bond Mrkt Index Fund	\$892,519	0.24%	\$26,382	\$1,916	\$124,502	(\$1,320)	(\$193)	(\$32,266)	\$1,011,541	0.26%
Loomis Sayles Bond Fund	\$3,331,443	0.88%	\$56,795	(\$119)	(\$72,984)	(\$3,561)	(\$446)	(\$42,474)	\$3,268,654	0.85%
Premier High Yield Fund (Barings)	\$49,434	0.01%	\$7,747	\$1,702	\$84,050	\$0	(\$8)	\$2,404	\$145,329	0.04%
Oppenheimer International Bond Fund	\$633,808	0.17%	\$13,972	\$1,283	\$31,693	(\$5,424)	(\$90)	(\$28,467)	\$646,776	0.17%
Oakmark Equity & Income Fund	\$19,816,206	5.23%	\$435,516	\$32,092	(\$180,729)	(\$351,417)	(\$2,823)	\$991,280	\$20,740,126	5.38%
Vanguard Target Retirement 2015 Fd	\$3,472,916	0.92%	\$161,392	\$5,784	\$33,924	(\$3,732)	(\$529)	(\$17,244)	\$3,652,511	0.95%
Vanguard Target Retirement 2025 Fd	\$10,773,969	2.84%	\$300,507	\$52,757	\$9,848	(\$149,820)	(\$1,595)	\$13,995	\$10,999,662	2.85%
Vanguard Target Retirement 2035 Fd	\$5,248,365	1.39%	\$257,914	\$15,978	(\$25,805)	(\$8,813)	(\$876)	\$44,087	\$5,530,851	1.43%
Vanguard Target Retirement 2045 Fd	\$3,841,742	1.01%	\$333,055	\$9,548	(\$21,834)	(\$61,485)	(\$544)	\$49,315	\$4,149,798	1.08%
Vanguard Target Retirement 2055 Fd	\$201,613	0.05%	\$156,901	\$929	\$5,530	(\$247)	(\$34)	\$4,911	\$369,603	0.10%
Vanguard Target Retirement Incm Fd	\$989,003	0.26%	\$9,914	\$57	\$16,016	(\$1,518)	(\$138)	(\$9,730)	\$1,003,603	0.26%
American Funds American Mutual Fund	\$14,397,364	3.80%	\$148,294	\$20,280	(\$175,990)	(\$183,277)	(\$1,963)	\$451,990	\$14,656,698	3.80%
American Funds Fndmntl Invistrs Fnd	\$33,429,693	8.83%	\$301,133	\$45,412	(\$194,580)	(\$316,638)	(\$4,660)	\$1,361,099	\$34,621,459	8.97%
Parnassus Core Equity Fund	\$2,061,110	0.54%	\$118,023	\$2,110	\$28,971	(\$4,592)	(\$318)	\$58,880	\$2,264,184	0.59%
Vanguard Institutional Index Fund	\$14,371,242	3.79%	\$161,619	\$20,997	\$427,512	(\$327,989)	(\$2,065)	\$569,956	\$15,221,271	3.95%

<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

### 457 Plan Balances by Investment

Asset Allocation										
				Plan Activity	October 01, 201	6 through Decem	ber 31, 2016			
Investment Options	Balances as of 9/30/2016	Percentage*	Contributions	Other Activity	Transfers	Distributions	Expenses**	Investment Income	Balances as of 12/31/2016	Percentage <sup>®</sup>
Vanguard Total Stock Mkt Index Fd	\$6,657,388	1.76%	\$121,981	\$4,760	\$79,751	(\$19,516)	(\$945)	\$279,277	\$7,122,696	1.85%
American Funds Grth Fund of America	\$23,702,141	6.26%	\$195,130	\$26,179	(\$155,029)	(\$331,368)	(\$3,264)	\$392,358	\$23,826,148	6.18%
American Century Mid Cap Value Fund	\$4,689,732	1.24%	\$64,533	\$5,847	\$158,027	(\$6,327)	(\$707)	\$344,748	\$5,255,854	1.36%
Vanguard Mid Cap Index Fund	\$3,202,410	0.85%	\$87,452	\$5,877	(\$34,128)	(\$16,427)	(\$451)	\$71,495	\$3,316,229	0.86%
Sel Mid Cap Gr II Fd (TRP/Frontier)	\$10,191,135	2.69%	\$100,256	\$16,670	(\$328,567)	(\$39,297)	(\$1,404)	\$32,449	\$9,971,242	2.58%
JP Morgan Small Cap Value Fund	\$88,539	0.02%	\$8,580	\$563	\$146,652	(\$967)	(\$31)	\$18,697	\$262,032	0.07%
Vanguard Small Cap Index Fund	\$5,957,940	1.57%	\$99,255	\$8,014	\$85,461	(\$9,587)	(\$865)	\$362,989	\$6,503,206	1.69%
Wells Fargo Small Company Growth Fd	\$7,651,439	2.02%	\$83,333	\$22,196	(\$179,954)	(\$48,797)	(\$1,073)	\$122,492	\$7,649,635	1.98%
American Fnds Cap Wld Gr and Inc Fd	\$8,532,639	2.25%	\$98,396	\$15,101	(\$100,560)	(\$22,270)	(\$1,234)	(\$13,994)	\$8,508,077	2.21%
Vanguard Developed Markets Index Fd	\$234,900	0.06%	\$22,651	\$1,650	\$13,526	(\$23)	(\$49)	(\$3,384)	\$269,271	0.07%
Amer Funds EuroPacific Growth Fund	\$7,720,275	2.04%	\$100,709	\$13,127	(\$31,103)	(\$159,644)	(\$1,133)	(\$319,138)	\$7,323,094	1.90%
Oppenheimer Developing Markets Fund	\$1,699,701	0.45%	\$64,300	\$3,315	\$96,354	(\$3,536)	(\$299)	(\$92,661)	\$1,767,175	0.46%
Invesco Real Estate Fund	\$2,614,604	0.69%	\$46,750	\$4,193	(\$29,028)	(\$8,973)	(\$339)	(\$92,325)	\$2,534,882	0.66%
Bank of The West Savings	\$5,639,745	1.49%	\$44,530	\$6,225	\$164,784	(\$46,484)	(\$836)	\$7,101	\$5,815,066	1.51%
Hartford Healthcare HLS Fund	\$5,388,380	1.42%	\$78,729	\$5,769	(\$955,673)	(\$31,364)	(\$679)	(\$283,447)	\$4,201,716	1.09%
MFS Utilities Fund	\$5,024,166	1.33%	\$64,418	\$9,838	(\$103,246)	(\$11,267)	(\$665)	(\$173,374)	\$4,809,870	1.25%
Schwab PCRA	\$2,529,142	0.67%	\$0	\$0	(\$3,219)	\$0	\$0	\$458	\$2,526,381	0.65%
Schwab PCRA Pending	\$2,669	0.00%	\$0	\$0	(\$2,669)	\$0	\$0	\$0	\$0	0.00%

<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

### 457 Plan Balances by Investment

Asset Allocation										
				Plan Activity	October 01, 2016	through Decem	ber 31, 2016			
Investment Options	Balances as of	Percentage*	Contributions	Other Activity	Transfers	Distributions	Expenses**	Investment	Balances as of	Percentage*
	9/30/2016							Income	12/31/2016	
Total	\$378,797,412	100%	\$6,230,539	\$667,661		(\$4,517,454)	(\$54,158)	\$4,686,764	\$385,810,764	100%

<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

### 401(a) Plan Balances by Investment

			Plan Activity October 01, 2016 through December 31, 2016							
Investment Options	Balances as of 9/30/2016	Percentage*	Contributions		Transfers	Distributions	Expenses**	Investment Income	Balances as of 12/31/2016	Percentage
SAGIC Core Bond (61869)	\$750,803	79.22%	\$87,556	(\$7,300)	(\$7,876)	(\$6,744)	(\$106)	\$5,501	\$821,833	71.61%
PIMCO Real Return Asset Fund	\$1,141	0.12%	\$36	\$0	\$699	\$0	(\$0)	(\$105)	\$1,771	0.15%
PIMCO Total Return Fund	\$966	0.10%	\$45	\$0	\$389	\$0	(\$0)	(\$25)	\$1,374	0.12%
/anguard Total Bond Mrkt Index Fund	\$949	0.10%	\$221	\$0	\$840	\$0	(\$0)	(\$43)	\$1,968	0.17%
oomis Sayles Bond Fund	\$541	0.06%	\$0	\$0	\$156	\$0	(\$0)	(\$7)	\$691	0.06%
Premier High Yield Fund (Barings)	\$544	0.06%	\$0	\$0	\$547	\$0	(\$0)	\$27	\$1,118	0.10%
Oppenheimer International Bond Fund	\$846	0.09%	\$18	\$0	\$389	\$0	(\$0)	(\$51)	\$1,201	0.10%
Dakmark Equity & Income Fund	\$148	0.02%	\$0	\$0	\$0	\$0	(\$0)	\$7	\$155	0.01%
/anguard Target Retirement 2015 Fd	\$4,565	0.48%	\$22,304	\$0	\$0	\$0	(\$1)	(\$1)	\$26,867	2.34%
/anguard Target Retirement 2025 Fd	\$9,877	1.04%	\$14,834	\$0	\$0	\$0	(\$2)	\$110	\$24,819	2.16%
/anguard Target Retirement 2035 Fd	\$25,635	2.71%	\$12,280	\$0	\$0	\$0	(\$4)	\$284	\$38,195	3.33%
/anguard Target Retirement 2045 Fd	\$84,928	8.96%	\$27,494	(\$333)	(\$1)	\$0	(\$13)	\$1,409	\$113,484	9.89%
/anguard Target Retirement 2055 Fd	\$22,017	2.32%	\$30,424	\$0	(\$1)	\$0	(\$4)	\$647	\$53,082	4.63%
/anguard Target Retirement Incm Fd	\$38	0.00%	\$0	\$0	\$0	\$0	\$0	(\$0)	\$37	0.00%
American Funds American Mutual Fund	\$780	0.08%	\$136	\$0	\$1,395	\$0	(\$0)	\$93	\$2,404	0.21%
American Funds Fndmntl Invistrs Fnd	\$1,559	0.16%	\$1,764	\$0	\$1,222	\$0	(\$0)	\$70	\$4,614	0.40%
Parnassus Core Equity Fund	\$344	0.04%	\$57	\$0	\$307	\$0	(\$0)	\$22	\$730	0.06%
/anguard Institutional Index Fund	\$1,555	0.16%	\$1,297	\$0	\$415	\$0	(\$0)	\$99	\$3,365	0.29%

<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

### 401(a) Plan Balances by Investment

Asset Allocation										
				Plan Activity	October 01, 201	6 through Decem	ber 31, 2016			
Investment Options	Balances as of 9/30/2016	Percentage*	Contributions	Other Activity	Transfers	Distributions	Expenses**	Investment Income	Balances as of 12/31/2016	Percentage*
Vanguard Total Stock Mkt Index Fd	\$3,519	0.37%	\$1,260	\$0	\$343	\$0	(\$1)	\$200	\$5,322	0.46%
American Funds Grth Fund of America	\$920	0.10%	\$136	\$0	\$703	\$0	(\$0)	\$27	\$1,785	0.16%
American Century Mid Cap Value Fund	\$368	0.04%	\$65	\$0	\$724	\$0	(\$0)	\$103	\$1,260	0.11%
Vanguard Mid Cap Index Fund	\$4,544	0.48%	\$477	\$0	\$292	\$0	(\$1)	\$124	\$5,435	0.47%
Sel Mid Cap Gr II Fd (TRP/Frontier)	\$224	0.02%	\$65	\$0	\$39	\$0	(\$0)	\$2	\$329	0.03%
JP Morgan Small Cap Value Fund	\$129	0.01%	\$50	\$0	\$2	\$0	(\$0)	\$28	\$209	0.02%
Vanguard Small Cap Index Fund	\$19,945	2.10%	\$2,876	\$0	(\$28)	\$0	(\$3)	\$1,485	\$24,275	2.12%
Wells Fargo Small Company Growth Fd	\$3,790	0.40%	\$50	\$0	(\$2,297)	\$0	(\$0)	(\$180)	\$1,363	0.12%
American Fnds Cap Wld Gr and Inc Fd	\$1,216	0.13%	\$53	\$0	(\$89)	\$0	(\$0)	(\$5)	\$1,175	0.10%
Vanguard Developed Markets Index Fd	\$443	0.05%	\$347	\$0	\$752	\$0	(\$0)	(\$2)	\$1,540	0.13%
Amer Funds EuroPacific Growth Fund	\$1,655	0.17%	\$149	\$0	\$597	\$0	(\$1)	(\$69)	\$2,332	0.20%
Oppenheimer Developing Markets Fund	\$2,032	0.21%	\$116	\$0	\$328	\$0	(\$1)	(\$111)	\$2,364	0.21%
Invesco Real Estate Fund	\$493	0.05%	\$36	\$0	\$152	\$0	(\$0)	(\$16)	\$665	0.06%
Hartford Healthcare HLS Fund	\$847	0.09%	\$751	\$0	\$0	\$0	(\$0)	(\$42)	\$1,557	0.14%
MFS Utilities Fund	\$326	0.03%	\$0	\$0	\$0	\$0	(\$0)	(\$12)	\$315	0.03%
Total	\$947,687	100%	\$204,897	(\$7,634)		(\$6,744)	(\$140)	\$9,568	\$1,147,634	100%

<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

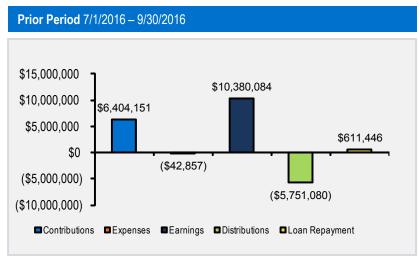
### **OBRA Plan Balances by Investment**

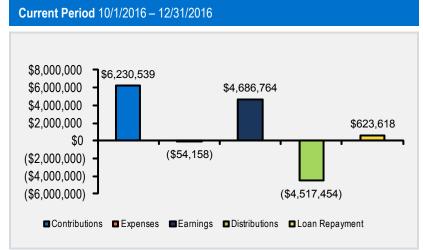
Asset Allocation									
Investment Options	Balances as of 9/30/2016	Percentage*	Pla Contributions	n Activity October Transfers	01, 2016 through Distributions	December 31, 201 Expenses**	6 Investment Income	Balances as of 12/31/2016	Percentage
457 OBRA									
SAGIC Core Bond (61869 OB)	\$1,642,924	100.00%	\$757,373	\$0	(\$19,593)	(\$257)	\$8,014	\$2,388,461	100.00%
Total	\$1,642,924	100%	\$757,373	****	(\$19,593)	(\$257)	\$8,014	\$2,388,461	100%
401(a) OBRA									
SAGIC Core Bond (61869 OB)	\$13,727,870	100.00%	\$0	\$0	(\$434,653)	(\$1,959)	\$53,265	\$13,344,523	100^%
Total	\$13,727,870	100%	\$0	\$0	(\$434,653)	(\$1,959)	\$53,265	\$13,344,523	100%

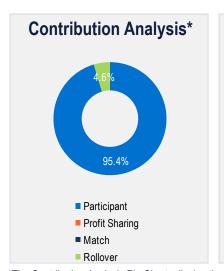
<sup>\*</sup>Due to rounding, percentages may not total 100 percent.

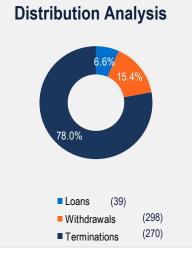
<sup>\*\*</sup>The expenses shown reflect expenses deducted from plan assets. Does not include expenses billed directly to the plan sponsor or expenses related to the expense ratio of investments under the plan.

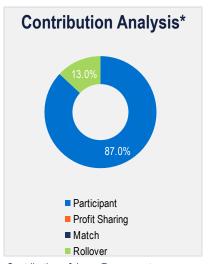
## Cash Flow Analysis

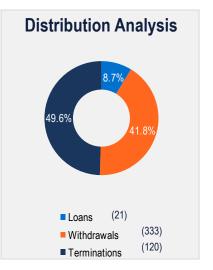












<sup>\*</sup>The Contribution Analysis Pie Charts display the percentage of the combined dollar value of the Contributions & Loan Repayments

### **Total Investment Balance**

as of December 31, 2016

Participant Demographics								
			PARTICIPANTS					
Investment Options	Active	Beneficiary	Retired	Terminated	QDRO	Participants in Option as of 9/30/2016	Participants in Option as of 12/31/2016	Investment Selection Percentage*
SAGIC Core Bond (61869)	\$72,639,869	\$1,415,151	\$12,873,639	\$64,476,457	\$309,424	4,022	3,987	46.7%
PIMCO Real Return Asset Fund	\$1,737,371	\$0	\$27,277	\$240,473	\$0	186	210	0.4%
PIMCO Total Return Fund	\$7,314,028	\$41,304	\$884,411	\$3,906,724	\$0	715	729	1.6%
Vanguard Total Bond Mrkt Index Fund	\$725,206	\$0	\$173,114	\$113,222	\$0	93	130	0.3%
Loomis Sayles Bond Fund	\$2,541,304	\$0	\$89,865	\$637,485	\$0	314	313	0.6%
Premier High Yield Fund (Barings)	\$103,384	\$0	\$0	\$41,945	\$0	12	17	
Oppenheimer International Bond Fund	\$476,725	\$0	\$15,155	\$154,896	\$0	152	168	0.2%
Oakmark Equity & Income Fund	\$9,796,996	\$710,394	\$2,735,566	\$7,463,769	\$33,399	725	722	3.1%
Vanguard Target Retirement 2015 Fd	\$2,815,977	\$0	\$160,535	\$675,988	\$11	119	129	1.2%
Vanguard Target Retirement 2025 Fd	\$8,736,853	\$61,306	\$55,067	\$2,146,436	\$0	309	351	4.7%
Vanguard Target Retirement 2035 Fd	\$4,566,314	\$0	\$84,657	\$879,881	\$0	279	324	5.0%
Vanguard Target Retirement 2045 Fd	\$3,911,570	\$0	\$5,314	\$218,165	\$14,748	277	345	6.3%
Vanguard Target Retirement 2055 Fd	\$366,271	\$0	\$0	\$3,332	\$0	157	260	5.6%
Vanguard Target Retirement Incm Fd	\$399,028	\$0	\$273,350	\$331,225	\$0	24	28	0.1%
American Funds American Mutual Fund	\$10,034,066	\$226,606	\$647,422	\$3,727,573	\$21,030	807	831	2.0%

Total Participants 6040: 4284 Active, 33 Beneficiary, 179 Retired, 1535 Terminated, 9 QDRO

<sup>\*</sup>The investment selection percentages reflect participants with an active status. Due to rounding the percentages may not total 100%. Contracts with multiple plans may result in participants maintaining balances in more than one plan.

### **Total Investment Balance**

as of December 31, 2016

Participant Demographics								
			PARTICIPANTS					
Investment Options	Active	Beneficiary	Retired	Terminated	QDRO	Participants in Option as of 9/30/2016	Participants in Option as of 12/31/2016	Investment Selection Percentage*
American Funds Fndmntl Invstrs Fnd	\$19,599,535	\$285,029	\$2,528,303	\$12,192,303	\$16,289	1,261	1,268	4.1%
Parnassus Core Equity Fund	\$1,771,990	\$0	\$240,559	\$251,634	\$0	169	202	0.4%
Vanguard Institutional Index Fund	\$8,330,564	\$416,546	\$1,574,258	\$4,874,330	\$25,573	528	558	1.8%
Vanguard Total Stock Mkt Index Fd	\$5,670,188	\$0	\$289,583	\$1,162,924	\$0	311	341	1.2%
American Funds Grth Fund of America	\$14,799,943	\$100,900	\$1,624,757	\$7,256,662	\$43,885	1,020	1,039	3.2%
American Century Mid Cap Value Fund	\$3,875,805	\$16,059	\$85,674	\$1,278,315	\$0	429	467	0.7%
Vanguard Mid Cap Index Fund	\$2,510,257	\$0	\$189,805	\$616,167	\$0	322	353	0.6%
Sel Mid Cap Gr II Fd (TRP/Frontier)	\$7,457,812	\$14,281	\$483,401	\$1,990,772	\$24,976	768	779	1.6%
JP Morgan Small Cap Value Fund	\$221,990	\$0	\$0	\$40,041	\$0	93	120	0.1%
Vanguard Small Cap Index Fund	\$4,933,160	\$11,237	\$233,027	\$1,316,430	\$9,352	558	595	1.1%
Wells Fargo Small Company Growth Fc	\$5,279,586	\$31,187	\$116,039	\$2,214,106	\$8,718	722	746	1.1%
American Fnds Cap Wld Gr and Inc Fd	\$5,851,702	\$127,082	\$416,485	\$2,107,870	\$4,939	683	683	1.3%
Vanguard Developed Markets Index Fc	\$224,907	\$0	\$0	\$44,364	\$0	92	116	0.2%
Amer Funds EuroPacific Growth Fund	\$4,989,586	\$7,537	\$203,258	\$2,114,451	\$8,263	677	693	1.3%
Oppenheimer Developing Markets Func	\$1,384,265	\$0	\$25,228	\$357,683	\$0	311	345	0.5%

Total Participants 6040: 4284 Active, 33 Beneficiary, 179 Retired, 1535 Terminated, 9 QDRO

<sup>\*</sup>The investment selection percentages reflect participants with an active status. Due to rounding the percentages may not total 100%. Contracts with multiple plans may result in participants maintaining balances in more than one plan.

### **Total Investment Balance**

as of December 31, 2016

Participant Demographics								
			PARTICIPANTS					
Investment Options	Active	Beneficiary	Retired	Terminated	QDRO	Participants in Option as of 9/30/2016	Participants in Option as of 12/31/2016	Investment Selection Percentage*
Invesco Real Estate Fund	\$1,781,643	\$0	\$247,355	\$505,885	\$0	331	343	0.5%
Bank of The West Savings	\$2,814,758	\$0	\$516,273	\$2,484,035	\$0	300	294	0.9%
Hartford Healthcare HLS Fund	\$2,898,222	\$0	\$144,820	\$1,158,673	\$0	331	322	0.7%
MFS Utilities Fund	\$3,397,153	\$0	\$305,754	\$1,106,964	\$0	414	416	0.9%
Schw ab PCRA	\$1,143,875	\$0	\$219,721	\$1,162,786	\$0	48	47	
Total	\$225,101,902	\$3,464,618	\$27,469,670	\$129,253,966	\$520,609			100%

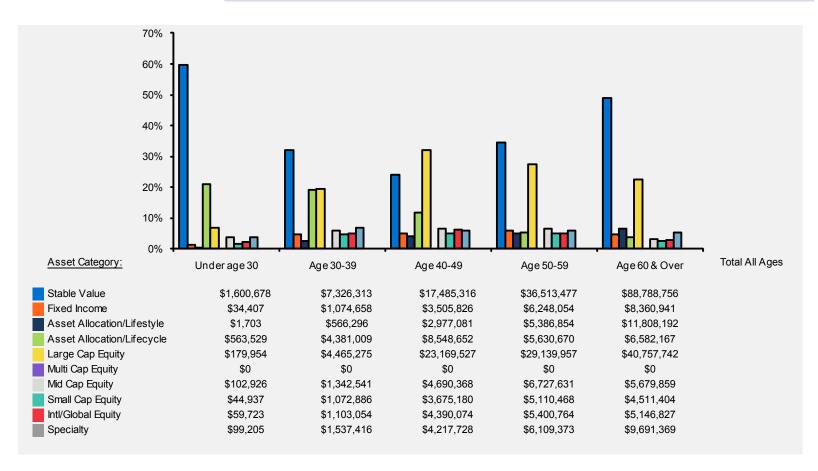
Total Participants 6040: 4284 Active, 33 Beneficiary, 179 Retired, 1535 Terminated, 9 QDRO

<sup>\*</sup>The investment selection percentages reflect participants with an active status. Due to rounding the percentages may not total 100%. Contracts with multiple plans may result in participants maintaining balances in more than one plan.

## Balances by Age

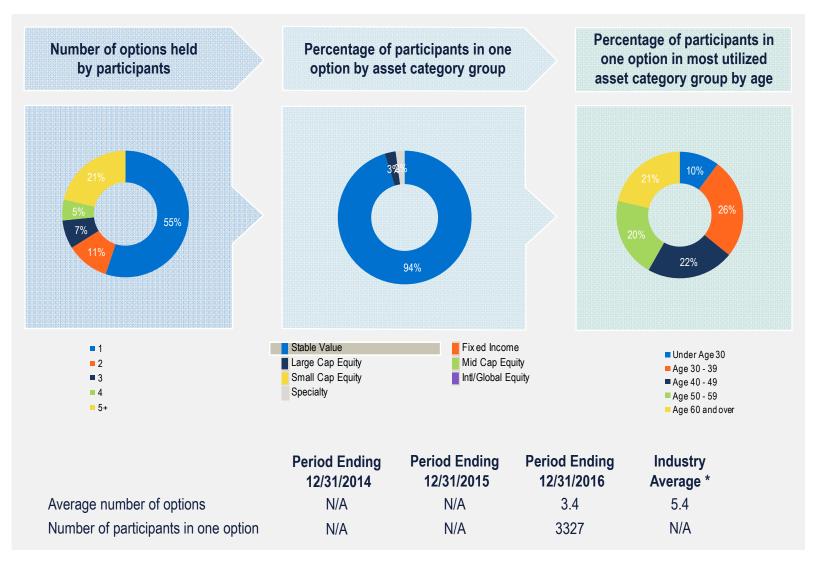
as of December 31, 2016

Age	Under age 30	Age 30-39	Age 40-49	Age 50-59	Age 60 and Over	Total
Number of Participants	482	1,256	1,503	1,388	1,411	6,040
Group Balance	\$2,687,062	\$22,869,448	\$72,659,752	\$106,267,248	\$181,327,255	\$385,810,765
Average Account Balance	\$5,575	\$18,208	\$48,343	\$76,561	\$128,510	\$63,876



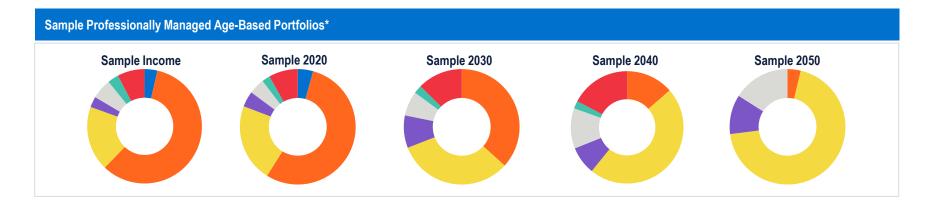
## **Participant Diversification**

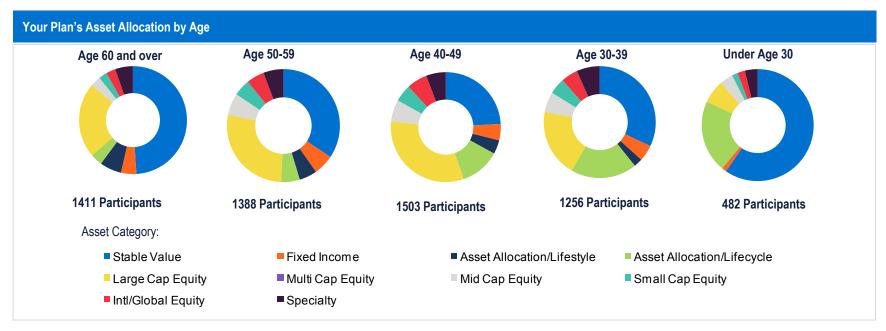
October 01, 2016 through December 31, 2016



## Diversification by Age

as of December 31, 2016





<sup>\*</sup>Sample allocations provided by Morningstar Associates, LLC, a registered investment advisor and a subsidiary of Morningstar Inc. Morningstar Associates is not itself a FINRA member firm.

## Loan Summary

Loan Data				
	Your Plan 09/30/2016	Your Plan 12/31/2016	MassMutual Average 12/31/2016	Industry Averages
Number of loans allowed	1	1	2.0	1.2*
Average number of loans per participant with loans	1.3	1.3	1.2	Not available
Percentage of participants with loans	10.6%	10.4%	11.0%	14.6%*
Average loan balance	\$8,487	\$8,290	\$7,661	\$6,216*
Percentage of plan assets loaned	1.8%	1.7%	1.6%	0.7%*

	Your Plan 09/30/2016	Your Plan 12/31/2016
Total number of participants with loans	615	626
Total number of outstanding loans	787	783
Average account balance of participants with loans	\$57,859	\$58,729
Total value of outstanding loans	\$6,679,601	\$6,490,708

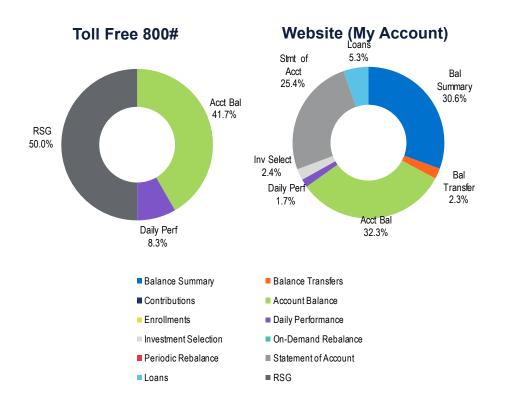
**Current Loan Interest Rate = 4.75%** 

<sup>\*</sup>Source: PSCA's 58th Annual Survey of PS and 401(k) Plans

## **Participant Interactions**

October 01, 2016 through December 31, 2016

	Total Visits
Toll Free 800#	66
Call Center	2,079
Website	10,327



ly Account	5532
Research	104

Highlights - Retirement Services Call Center						
Loans	174					
Transaction Performed	164					
PIN	112					
RSG-Retirement Options	94					
Withdrawals	78					

### Miscellaneous Statistics

Activity	Total #	Total \$
Total 4Q TRAK calculation	90	
Managed Accounts added in 4Q 2016 Total Managed Accounts	2 14	\$198,657.92 \$415,278.11
4Q Hardships Processed	1	\$4,100.00
Rollovers In	25	\$866,676.14
Purchase of Service Credit to SamCera	8	\$113,866.92
Rollovers Out	24	\$1,399,912.85
QDRO	3 draft QDROs preapproved, no QDROs finalized	
401(a) Forfeiture Balance as of 12/31/16	31	\$30,986.10



Prescribe: Targeted messages, meetings



One-to-One Messaging



Diagnose: The MassMutual RetireSMART<sup>SM</sup> Ready Tool

Date	Location	Group Meeting	Individual Meeting		Par	ticipant Act	tion	
Dato	Location	Attendees	Attendees	Enroll	Save More	Asset Allocation	Consolidate	TRAK
10/3	455 CC	13						
10/4	CSMC		2			2	1	2
10/6	2000		4		2	2	1	4
10/11	455 CC		4	1	1	2		2
10/12	455 CC	155						
10/13	SMMC	223						
10/17	455 CC	9						
10/18	2000		1			1		1
10/21	SMMC		3					2
10/24	455 CC	10						
10/24	1 Davis		4		2	2		4
10/25	455 CC		4		1	2	1	4
10/28	NCMC		5	1	1	3	1	3
10/31	455 CC	7						
Total	14	417	108	2	7	14	4	22



Prescribe: Targeted messages, meetings



One-to-One Messaging



Diagnose: The MassMutual RetireSMART<sup>SM</sup> Ready Tool

Data	Date Location	Group Meeting				Par	ticipant Ac	tion	
Date	Location	Attendees		Enroll	Save More	Asset Allocation	Consolidate	TRAK	
11/1	SMMC		5		2	1	1	2	
11/3	2000		4		1	2		2	
11/7	400 CC		6		2	4	1	3	
11/7	SMHS		1			1		1	
11/10	801 SSF		7		2	3	1	4	
11/14	455 CC		3		3	1		2	
11/14	455 CC	7							
11/15	2000		1					1	
11/18	AIRPORT		1			1		1	
11/21	SMMC		2		1	2	1	2	
11/22	MAGUIRE		12		2	4	2	10	
11/23	MAGUIRE		12		4	5	1	10	
11/28	455 CC	19							
11/29	SMMC		2	1	1	1	1	2	
11/29	HARBOR		1			1		1	
Total	15	26	57	1	18	26	8	50	



Prescribe: Targeted messages, meetings



One-to-One Messaging



Diagnose: The MassMutual RetireSMART<sup>SM</sup> Ready Tool

Date Location	Group Meeting	Individual Meeting		Participant Action				
Bute	Location	Attendees	Attendees	Enroll	Save More	Asset Allocation	Consolidate	TRAK
12/1	SMMC		6	1	1	2		3
12/2	YSC		11	3	1	3	1	4
12/12	455 CC	9						
12/12	SMMC	11						
12/13	455 CC		3		1	1	1	2
12/16	ALAMEDA		1		1			1
12/19	QUARRY		1		1	1		1
12/21	801 SSF		7		2	2	2	6
12/22	YSC		1			1		1
Total	9	20	30	4	7	10	5	18



Prescribe: Targeted messages, meetings

Date	Location	Group Meeting	Individual Meeting	Participant Action				
		Attendees	Attendees	Enroll	Save More	Asset Allocation	Consolidate	TRAK
ОСТ	14	417	108	2	7	14	4	22
NOV	15	26	57	1	18	26	8	50
DEC	9	20	30	4	7	10	5	18
Total	38	463	195	7	32	50	17	90



One-to-One Messaging



Diagnose: The MassMutual RetireSMART<sup>SM</sup> Ready Tool



## We'll help you get there:

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