Plumbers and Steamfitters Local 486 Severance & Annuity/401(k) Plan - 51580 - 001

Cost and Revenue Disclosure

Non-Fixed Investment Option	Plan Assets [A]	Annual Administrative Services Revenue (%)[1] [B]	Annual Administrative Services Revenue ($) [A] X [B]	Annual Expense Ratio[2] [C]	Annual Plan Cost ($) [A] X [C]
Prem U.S. Govt Money Mrkt (Barings) 5 (MKSXX)	$172,102	0.10%	$172	0.50%	$861
Stable Return II (Wells/Galliard) R	$18,176,970	0.51%	$92,703	0.82%	$149,051
Prem Short-Duration Bond (Barings) I (MSTZX)	$1,164,807	0.00%	$0	0.39%	$4,543
Premier Core Bond (Barings) I (MCZZX)	$9,490,758	0.00%	$0	0.42%	$39,861
T. Rowe Price Balanced Fund (RPBAX)	$16,734,620	0.15%	$25,102	0.61%	$102,081
American Fnds 2010 Target Dt Ret Fd 4 (RDATX)	$1,452,970	0.35%	$5,085	0.69%	$10,025
American Fnds 2015 Target Dt Ret Fd 4 (RDBTX)	$4,365,629	0.35%	$15,280	0.68%	$29,686
American Fnds 2020 Target Dt Ret Fd 4 (RDCTX)	$10,267,051	0.35%	$35,935	0.69%	$70,843
American Fnds 2025 Target Dt Ret Fd 4 (RDDTX)	$20,584,606	0.35%	$72,046	0.71%	$146,151
American Fnds 2030 Target Dt Ret Fd 4 (RDETX)	$19,076,024	0.35%	$66,766	0.73%	$139,255
American Fnds 2035 Target Dt Ret Fd 4 (RDFTX)	$20,525,083	0.35%	$71,838	0.74%	$151,886
American Fnds 2040 Target Dt Ret Fd 4 (RDGTX)	$13,038,492	0.35%	$45,635	0.75%	$97,789
American Fnds 2045 Target Dt Ret Fd 4 (RDHTX)	$15,773,645	0.35%	$55,208	0.75%	$118,302
American Fnds 2050 Target Dt Ret Fd 4 (RDITX)	$11,663,958	0.35%	$40,824	0.77%	$89,812
American Fnds 2055 Target Dt Ret Fd 4 (RDJTX)	$5,886,209	0.35%	$20,602	0.77%	$45,324
American Fnds 2060 Target Dt Ret Fd 4 (RDKTX)	$1,278,514	0.35%	$4,475	0.79%	$10,100
Sel Fundamental Val (BrwHnly/BsPt) I (MFUZX)	$4,512,329	0.00%	$0	0.63%	$28,428
MM S&P 500 Index (Northern Trust) I (MMIZX)	$14,559,484	0.00%	$0	0.12%	$17,471
Sel Fundamental Growth (Wellington) 5 (MOTCX)	$14,837,792	0.15%	$22,257	0.88%	$130,573
T. Rowe Price Growth Stock Fund (PRGFX)	$26,644,654	0.15%	$39,967	0.67%	$178,519
Mid Cap Value (CRM) I (CRMMX)	$5,279,290	0.35%	$18,478	1.12%	$59,128
Select Mid Cap Gr (TRP/Frontier) I (MEFZX)	$9,055,654	0.00%	$0	0.71%	$64,295
Sel Small Co Value (AB/Am Century) I (MSVZX)	$2,340,327	0.00%	$0	0.95%	$22,233
Small Cap Index (Northern) (NSIDX)	$1,842,769	0.36%	$6,634	0.45%	$8,292
Premier Global (Invesco) 5 (MGFSX)	$7,934,325	0.15%	$11,901	0.97%	$76,963
EuroPacific Growth (American) 5 (RERFX)	$2,927,954	0.05%	$1,464	0.53%	$15,518
Subtotal of Non-Fixed Investment Options	**$259,586,015**	**0.25%**	**$652,370**	**0.70%**	**$1,806,991**

Fixed Investment Option	Rate					
Subtotal of Fixed Investment Options		**$0**	**0.00%**	**$0**	**0.00%**	**$0**
Total of All Investment Options		**$259,586,015**	**0.25%**	**$652,370**	**0.70%**	**$1,806,991**

Additional Fees[3]

No Additional Fees

Total Annual Plan Cost[4]				**0.70%**	**$1,806,991**

Total Annual Revenue for Administrative Services[5]	**0.25%**
Less Annual Compensation to Advisor[6]:	0.00%
Less Annual Plan Expense Reimbursement[9]:	0.12%
Net Annual Revenue for Administrative Services[7]	**0.13%**
Less Cost for Participant Services[8]:	0.04%
Less Cost for Plan Sponsor Services[8]:	0.05%
Cost for Recordkeeping Services as Defined by 408(b)2[8]:	**0.04%**

This statement provides calculations of the annual expenses incurred by your plan for investment management and administrative services, including recordkeeping services. It also provides calculations of the annual revenue that MassMutual receives as compensation for the administrative services it provides to your plan. This means that these amounts are estimates because they are calculated based on information listed on the statement (as of the date listed on the statement) and assume that the plan assets, investment allocations and investment expenses remain constant for the duration of the annual period. Because the size of your plan, the plan's asset allocations and the investment expense ratios will change over time, actual expenses and revenues will differ from these calculated amounts.

Notwithstanding some of the terms used in these materials (e.g., plan sponsor or employer), these materials are directed to and are intended for use by the referenced plan's independent fiduciary adviser based MassMutual's understanding that (a) the independent fiduciary is a broker-dealer, investment adviser, insurance carrier, bank, or other independent fiduciary that has under management or control total assets of at least $50 million, as defined in 29 CFR section 2510.3-21(c)(1), (b) the independent fiduciary is responsible for exercising independent judgment in evaluating any transaction between the plan and MassMutual and (c) the independent fiduciary is capable of evaluating investment risks independently, both in general and with regard to particular transactions and investment strategies. Unless you tell us otherwise, MassMutual will assume that our understanding of the independent fiduciary's role and qualifications is correct. MassMutual is not undertaking to provide impartial investment advice, or give advice in a fiduciary capacity, in connection with any investment by, or other transaction of, the plan. MassMutual and its affiliates have a financial interest in any investment made by the plan while a client of MassMutual's and may receive 12(b)(1) fees, sub-transfer agency fees, shareholder servicing fees, revenue sharing, investment advisory fees, administrative fees, asset charges, float, optional services fees and other fees and revenue as a result of any investment by the plan. MassMutual will provide the plan with a complete description of all such fees prior to any investment by the plan and upon request.

Please read the footnotes below for additional information about the information presented above.

1. The Annual Administrative Services Revenue (%) for each investment option with an annual expense ratio is the portion of such investment option's expense ratio that MassMutual Retirement Services either receives from investment options other than the Premier and Select Funds in the form of revenue sharing or retains from the Premier and Select Funds and uses to support administrative services. The remainder of the investment option's annual expense ratio supports investment services. Please keep in mind that the revenue MassMutual Retirement Services retains is a part of, and is not additional to, your plan's total expenses. The rate of fees and payments reflected on any money market fund is based on MassMutual's agreement with the Fund and/or the Fund's affiliates. The rate is subject to reduction due to certain contractual and voluntary fee waivers maintained by the Fund's affiliates which are described in the Fund's prospectus. The Fund's affiliates may renew, modify or discontinue such fee waivers from time to time.

2. The Annual Expense Ratio for each investment option (expressed as an annualized percentage of fund assets) refers to the amount paid from the investment's assets for investment management and other services and expenses (including any 12b-1 fees less any expense reimbursement). It shows what your plan and participants pay, along with all other investors, in connection with their investment. The annual expense ratios are current as of March 31, 2019.

3. Additional Fees discloses revenue collected by MassMutual Retirement Services in addition to revenue derived from investments, but excludes the transaction expenses, such as distribution check charges and fees for optional services, and, if applicable, the non-active-employee participant fee, which is deducted directly from the account of each such participant (See the "Understanding Your Plan's Services and Related Fees" brochure and the list of services in the Plan Administrator's Guide attached to the brochure for more information generally and see your services agreement for information regarding the applicability of plan specific expenses). If your plan has a banded asset charge, this disclosure is based on the asset charge applicable to the total amount of plan assets from all investment options listed on this statement. To determine the asset charge applicable at different asset levels, please check either your services agreement or group annuity contract. The dollar amount reflected in the Annual Plan Cost column is a point-in-time calculation based on the reported Total Plan Assets and the fee schedule in effect at the time this statement was generated and does not necessarily reflect the actual amount to be collected.

4. Total Annual Plan Cost is the total of the Annual Expense Ratios and the Additional Fees (with dollar cost items, if any, converted to a percentage based on the applicable expense schedule and the total plan assets listed above).

5. The disclosed Total Annual Revenue for Administrative Services has been reduced if one or more administrative service fee income reductions or credits have been applied. If any fee income reductions or credits have been applied, they are disclosed, and the basis for the reduction explained, in Exhibit D of your Services Agreement under the heading "Administrative Service Fee Income Reductions." which will also explain the basis for the reduction of the Total Annual Revenue for Administrative Services. MassMutual reserves the right to re-evaluate pricing if there is a change in the circumstances that justified the reduction in administrative services revenue.

6. Annual Compensation to Advisor may be paid as a flat dollar amount or as a percentage of assets. If compensation is paid as a flat dollar amount, it is converted to an annual percentage based on the total amount of plan assets from all investment options listed on this statement. If compensation is calculated as a percentage of your plan's assets, this percentage is listed on this statement. If your plan offers investments with respect to which compensation is not paid (e.g., company stock, self-directed brokerage account), the percentage listed will be the percentage applied to the compensable investments and may be overstated with respect to all plan assets depending on the amount of assets allocated to the non-compensable investments. If the Annual Compensation to Advisor is listed as 0.00%, MassMutual does not pay compensation to an advisor with respect to your plan.

7. Net Annual Revenue for Administrative Services is the Total Annual Revenue for Administrative Services less the Annual Compensation to Advisor and the Annual Plan Expense Reimbursement, if any, which reduce the revenue MassMutual receives to cover plan administrative services. If your plan offers investments with respect to which compensation is not paid to the advisor (see Annual Compensation to Advisor footnote), the Net Annual Revenue for Administrative Services may be correspondingly understated depending on the amount of assets allocated to the non-compensable investments.

8. The Net Annual Revenue for Administrative Services is allocated among up to three categories of services depending on your service model - Participant Services (30%), Plan Sponsor Services (40%) and Recordkeeping Services (30%). If this allocation process does not result in whole numbers, then the numbers will be rounded based on conventional rounding principles and if rounding results in the total of the applicable categories not equaling the Net Annual Revenue for Administrative Services, then the allocation to the Plan Sponsor Services will be adjusted as necessary. The services within each category are listed in the "Understanding Your Plan's Services and Related Fees" brochure. The percentage of the Net Annual Revenue for Administrative Services that is allocated to each of the applicable categories of services is consistent with an independent, third-party market research study of defined contribution plan service providers and MassMutual's internal expense allocation analysis. The third-party study analyzes the costs associated with administering and providing recordkeeping services to plans and the revenue derived from offering these retirement services in comparison to averages and ranges of organizations of similar size and servicing similar market segments.

9. Annual Plan Expense Reimbursement is the amount MassMutual makes available for the payment of plan administrative expenses in accordance with your agreement with MassMutual. If your plan is entitled to a flat dollar amount, it is converted to an annual percentage based on the total amount of plan assets from all investment options listed on this statement. If your plan is entitled to an amount calculated as a percentage of your plan's assets, this percentage is listed on this statement. If an amount is made available for more than one plan, this amount is split between the two plans based on the direction you have provided or, if no direction is received, it is pro-rated based on the amount of assets in the various plans for which expenses are paid.

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Quarter-by-Quarter Required Revenue Summary

0.13% Annual Required Revenue

Quarter Ending	(a) Quarter Ending Plan Assets	(b) Quarter Ending SIA Assets	(c) Quarter Ending GIA Assets	(d) Average Quarterly Participants	(e) Quarterly Required Revenue	(f) = (a) x (e) MM Required Revenue	(g) Administrative Services Revenue Received	(h) = (g) - (f) Credit (Reimbursement) / Debit (Billable)
Q1 2017	$218,483,601	$218,483,601	$0	n/a	0.0325%	$71,007	$190,024	$119,017
Q2 2017	$225,823,656	$225,823,656	$0	n/a	0.0325%	$73,393	$194,739	$121,346
Q3 2017	$232,453,571	$232,453,571	$0	n/a	0.0325%	$75,547	$199,365	$123,817
Q4 2017	$241,518,849	$241,518,849	$0	n/a	0.0325%	$78,494	$207,134	$128,640
Total 2017					**0.1300%**	**$298,441**	**$791,261**	**$492,820**
Q1 2018	$242,331,177	$242,331,177	$0	n/a	0.0325%	$78,758	$208,950	$130,192
Q2 2018	$248,991,381	$248,991,381	$0	n/a	0.0325%	$80,922	$156,271	$75,349
Q3 2018	$255,286,742	$255,286,742	$0	n/a	0.0325%	$82,968	$159,735	$76,767
Q4 2018	$223,283,942	$223,283,942	$0	n/a	0.0325%	$72,567	$141,856	$69,288
Total 2018					**0.1300%**	**$315,215**	**$666,811**	**$351,596**
Q1 2019	$251,564,332	$251,564,332	$0	n/a	0.0325%	$81,758	$158,280	$76,521
Q2 2019	$259,586,015	$259,586,015	$0	n/a	0.0325%	$84,365	$163,092	$78,727
Q3 2019								
Q4 2019								
Total 2019					**0.0650%**	**$166,124**	**$321,372**	**$155,248**