| QUARTERLY STATEMENT |
|--|
| OF THE MML Bay State Life Insurance Company |
| TO THE |
| Insurance Department |
| OF THE |
| STATE OF |
| FOR THE QUARTER ENDED MARCH 31, 2015 |

LIFE AND ACCIDENT AND HEALTH

2015



LIFE AND ACCIDENT AND HEALTH COMPANIES - ASSOCIATION EDITION

QUARTERLY STATEMENT

AS OF MARCH 31, 2015

OF THE CONDITION AND AFFAIRS OF THE

MML Bay State Life Insurance Company

| Ν | · | | y Code 70416 Employer's | | |
|-----------------------------|---|----------------------|--|------------------|---|
| Organized under the Laws o | of <u>Conne</u> | ecticut | , State of Domicile or Port of E | Entry | Connecticut |
| Country of Domicile | | United Sta | es of America | | |
| ncorporated/Organized | 04/01/1935 | | Commenced Business | | 07/01/1894 |
| Statutory Home Office | 100 Bright Meadow | v Boulevard | | Enfield , CT, | US 06082 |
| | (Street and N | umber) | (City or | Town, State, C | ountry and Zip Code) |
| Vain Administrative Office | | 1295 S | tate Street | | |
| | | (Street a | and Number) | 440 700 | 0444 |
| (City | Springfield , MA, US 01111 or Town, State, Country and Zip (| | ,(A | 413-788 | -8411 phone Number) |
| City | or rown, State, Country and Zip C | Jode) | A) | irea Code) (Tele | phone Number) |
| Mail Address | 1295 State Stree | | , | Springfield, M | |
| | (Street and Number or P | .O. Box) | (City or | Town, State, Co | ountry and Zip Code) |
| Primary Location of Books a | and Records | 1295 | State Street | | |
| | | (Street a | and Number) | | |
| (*** | Springfield , MA, US 01111 | | _, | 413-788 | |
| (City | or Town, State, Country and Zip (| Code) | (A | irea Code) (Tele | phone Number) |
| nternet Website Address | | www.ma | ssmutual.com | | |
| Statutory Statement Contac | t Tamm | A. Peatman | | 419 | 3-744-6327 |
| | | (Name) | | | (Telephone Number) |
| | tpeatman@massmutual.com | × , | | 413-226 | |
| | (E-mail Address) | | | (FAX Nu | mber) |
| | | OF | FICERS | | |
| President and Chief | | | IOENO | | |
| | Roger Williar | n Crandall | Treasurer | | Todd Garett Picken |
| Secretary | Pia Denise | Flanagan | | | Isadore Jermyn |
| | | 0 | THER | | |
| | Executive Vice President and nancial Officer | Mark Douglas Roellig | Executive Vice President and ral Counsel | Mishael Del | aart Fanning - Fragutiva Vice Dragidant |
| | tt Executive Vice President | Gene | | WICHAEL NO | pert Fanning Executive Vice President |
| | | | | | |
| | | | OR TRUSTEES | | |
| | Crandall - Chairman | IVIIChael | Robert Fanning | | Michael Thomas Rollings |
| mante | | | | | |
| 04-4 | Maaaabuaatta | | | | |
| State of County of | Massachusetts Hampden | SS: | | | |
| | nampoon | | | | |

The officers of this reporting entity being duly sworn, each depose and say that they are the described officers of said reporting entity, and that on the reporting period stated above, all of the herein described assets were the absolute property of the said reporting entity, free and clear from any liens or claims thereon, except as herein stated, and that this statement, together with related exhibits, schedules and explanations therein contained, annexed or referred to, is a full and true statement of all the assets and liabilities and of the condition and affairs of the said reporting entity as of the reporting period stated above, and of its income and deductions therefrom for the period ended, and have been completed in accordance with the NAIC Annual Statement Instructions and Accounting Practices and Procedures manual except to the extent that: (1) state law may differ; or, (2) that state rules or regulations require differences in reporting not related to accounting practices and procedures, according to the best of their information, knowledge and belief, respectively. Furthermore, the scope of this attestation by the described officers also includes the related corresponding electronic filing with the NAIC, when required, that is an exact copy (except for formatting differences due to electronic filing) of the enclosed statement. The electronic filing may be requested by various regulators in lieu of or in addition to the enclosed statement.

| Roger William Crandall | Pia Denise Flanagan | Todd Garett Picken |
|---|--|--------------------|
| President and Chief Executive Officer | Secretary | Treasurer |
| Subscribed and sworn to before me this day of | a. Is this an original filing? b. If no, 1. State the amendment number 2. Date filed 3. Number of pages attached | |

| | AS | SETS | | | |
|-------|---|---------------|------------------------|--------------------------|-------------------------------|
| | | | Current Statement Date | | 4 |
| | | 1 | 2 | 3 Net Admitted Assets | December 31 Prior Year Net |
| | | Assets | Nonadmitted Assets | (Cols. 1 - 2) | Admitted Assets |
| | | | | 160,875,599 | 144 , 280 , 400 |
| 2. | Stocks: | | | | |
| | 2.1 Preferred stocks | | | | |
| 3. | Z.z. Common stocks | | | | |
| | 3.1 First liens | 4 048 491 | | 4 048 491 | 4 170 281 |
| | | | | | |
| 4. | Real estate: | | | | |
| | 4.1 Properties occupied by the company (less \$ | | | | |
| | 4.2 Properties held for the production of income (less | | | | |
| | \$encumbrances) | | | | |
| | 4.3 Properties held for sale (less \$ | | | | |
| | encumbrances) | | | | |
| F | Cash (\$(2,579,204)), cash equivalents | | | | |
| 5. | | | | | |
| | (\$111,344,461) and short-term | 114 700 000 | | 114 700 000 | 110 700 005 |
| | investments (\$5,998,345) Contract loans (including \$ | | | | |
| | | | | | |
| 7. | Derivatives | | | | |
| 8. | Other invested assets | | | | |
| 9. | Receivables for securities | | | | |
| 10. | Securities lending reinvested collateral assets | | | | |
| 11. | Aggregate write-ins for invested assets | | | | 252 207 222 |
| | Title plants less \$ | | | | |
| 13. | only) | | | | |
| 14. | Investment income due and accrued | | | | |
| | Premiums and considerations: | | | | |
| 15. | 15.1 Uncollected premiums and agents' balances in the course of collection | 59 | 162 | (103) | 1 079 |
| | 15.2 Deferred premiums, agents' balances and installments booked but | | 102 | (100) | |
| | deferred and not yet due (including \$ | | | | |
| | earned but unbilled premiums) | (1 341 155) | | (1.341.155) | (2 114 733 |
| | 15.3 Accrued retrospective premiums | | | | |
| 16. | Reinsurance: | | | | |
| | 16.1 Amounts recoverable from reinsurers | 2.975.838 | | 2.975.838 | 7,224,626 |
| | 16.2 Funds held by or deposited with reinsured companies | | | | |
| | 16.3 Other amounts receivable under reinsurance contracts | | | | |
| 17. | Amounts receivable relating to uninsured plans | | | | |
| | Current federal and foreign income tax recoverable and interest thereon | | | | 5,513,685 |
| | Net deferred tax asset | | | | 4,454,553 |
| | Guaranty funds receivable or on deposit | | | | |
| 20. | Electronic data processing equipment and software | | | | |
| 21. | Furniture and equipment, including health care delivery assets | | | | |
| | (\$ | | | | |
| 22. | Net adjustment in assets and liabilities due to foreign exchange rates | | | | |
| | Receivables from parent, subsidiaries and affiliates | | | | |
| 24. | Health care (\$ | | | | |
| 25. | Aggregate write-ins for other than invested assets | | | | |
| 26. | Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25) | 415,156,516 | 3,925,953 | 411,230,563 | 396,121,986 |
| 27. | From Separate Accounts, Segregated Accounts and Protected Cell | 4,317,471,834 | | 4,317,471,834 | 4,274,843,259 |
| 28. | Total (Lines 26 and 27) | 4,732,628,350 | 3,925,953 | 4,728,702,397 | 4,670,965,245 |
| | DETAILS OF WRITE-INS | | | | |
| 1101. | | | | | |
| 1102. | | | | | |
| 1103. | | | | | |
| 1198. | Summary of remaining write-ins for Line 11 from overflow page | | | | |
| 1199. | Totals (Lines 1101 through 1103 plus 1198)(Line 11 above) | | | | |
| 2501. | Miscellaneous other assets | | | | |
| 2502. | | | | | |
| 2503. | | | | | |
| 2598. | Summary of remaining write-ins for Line 25 from overflow page | | | | |
| 2599. | Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) | | | | 509,448 |

ASSETS

LIABILITIES, SURPLUS AND OTHER FUNDS

| | | 1 Current Statement Date | 2 December 31 Prior Year |
|---|---|--------------------------------|--------------------------------|
| | Aggregate reserve for life contracts \$ | | |
| 2. 3. | Aggregate reserve for accident and health contracts (including \$ | | |
| | Contract claims: | 10,309,029 | 0, 323, 703 |
| | 4.1 Life | | |
| 5. | 4.2 Accident and health Policyholders' dividends \$ | | |
| | Provision for policyholders' dividends and coupons payable in following calendar year - estimated amounts: | | |
| | 6.1 Dividends apportioned for payment (including \$ | | |
| | 6.2 Dividends not yet apportioned (including \$ Modco) 6.3 Coupons and similar benefits (including \$ Modco) | | |
| 7. | Amount provisionally held for deferred dividend policies not included in Line 6 | | |
| 8. | Premiums and annuity considerations for life and accident and health contracts received in advance less \$ | 2 041 | 1 301 |
| 9. | Contract liabilities not included elsewhere: | | |
| | 9.1 Surrender values on canceled contracts | | |
| | 9.2 Provision for experience rating refunds, including the liability of \$accident and health experience rating refunds of which \$is for medical loss ratio rebate per the Public Health | | |
| | Service Act | | |
| | 9.3 Other amounts payable on reinsurance, including \$ assumed and \$ | E EE0 107 | 2 052 504 |
| | ceded | | |
| 10. | Commissions to agents due or accrued-life and annuity contracts \$ | | |
| | \$ and deposit-type contract funds \$ | | |
| 11. 12. | Commissions and expense allowances payable on reinsurance assumed | | |
| 13. | Transfers to Separate Accounts due or accrued (net) (including \$ | | , |
| | allowances recognized in reserves, net of reinsured allowances) | | |
| | Taxes, licenses and fees due or accrued, excluding federal income taxes Current federal and foreign income taxes, including \$ | | |
| | Net deferred tax liability | | |
| 16. | Unearned investment income | | |
| | Amounts withheld or retained by company as agent or trustee | | |
| 19. | Remittances and items not allocated | | |
| | Net adjustment in assets and liabilities due to foreign exchange rates | | |
| 21. 22. | Liability for benefits for employees and agents if not included above Borrowed money \$ | | |
| 23. | Dividends to stockholders declared and unpaid | | |
| 24. | Miscellaneous liabilities: 24.01 Asset valuation reserve | 4 050 001 | 4 202 715 |
| | 24.01 Asset valuation reserve | | |
| | 24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers | | |
| | 24.04 Payable to parent, subsidiaries and affiliates | | 2,823,732 |
| | 24.06 Liability for amounts held under uninsured plans | | |
| | 24.07 Funds held under coinsurance | | |
| | 24.08 Derivatives | | |
| | 24.10 Payable for securities lending | | |
| 05 | 24.11 Capital notes \$and interest thereon \$ | 242,659 | 288,794 |
| 25. 26. | Total liabilities excluding Separate Accounts business (Lines 1 to 25) | 194,127,234 | 184,428,288 |
| 27. | From Separate Accounts Statement | 4,317,471,834 | 4,274,843,259 |
| 28. | Total liabilities (Lines 26 and 27) | 4,511,599,068 | 4,459,271,547 |
| 29. 30. | Common capital stock | | , , |
| 31. | Aggregate write-ins for other than special surplus funds | | |
| 32. 33. | Surplus notes | | |
| 33. 34. | Aggregate write-ins for special surplus funds | | |
| 35. | Unassigned funds (surplus) | | |
| 36. | Less treasury stock, at cost: 36.1 shares common (value included in Line 29 \$ | | |
| | 36.2 shares preferred (value included in Line 30 \$ | | |
| | Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) | 214,603,129 | 209,193,498 |
| 38. 39. | Totals of Lines 29, 30 and 37 Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) | 217,103,329 4,728,702,397 | 211,693,698 |
| 39. | DETAILS OF WRITE-INS | 4,720,702,007 | 4,070,303,243 |
| | Miscellaneous liabilities | | |
| 2502. 2503. | Funds awaiting escheat | , | |
| 2503. 2598. | Summary of remaining write-ins for Line 25 from overflow page | | |
| 2599. | Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) | 242,659 | 288,794 |
| 3101. 3102. | | | |
| 3102. 3103. | | | |
| | Summary of remaining write-ins for Line 31 from overflow page | | |
| | Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) | | |
| 3199. | | i | |
| 3198. <u>3199.</u> 3401. 3402. | | | |
| 3199. 3401. | | | |

SUMMARY OF OPERATIONS

| | | 1 Current Year | 2 Prior Year | 3 Prior Year Ended |
|--|--|-------------------|---------------------------------------|---------------------------------------|
| | | To Date | To Date | December 31 |
| 1. 2. | | | 7,630,764 . | |
| 3. | Net investment income | 2,943,845 | | |
| 4. | | | | |
| 5. | Separate Accounts net gain from operations excluding unrealized gains or losses | | | |
| 6. | Commissions and expense allowances on reinsurance ceded | 1,399,378 | | 5,522,840 |
| 7. | Reserve adjustments on reinsurance ceded | (3,490,774) | (3,918,498) | (12,814,717) |
| 8. | Miscellaneous Income: | | | |
| | 8.1 Income from fees associated with investment management, administration and contract guarantees from Separate Accounts. | 19 183 887 | 19 643 520 | |
| | 8.2 Charges and fees for deposit-type contracts | | | |
| | 8.3 Aggregate write-ins for miscellaneous income | (278,472) | (967,818) | (856,658) |
| 9. | Totals (Lines 1 to 8.3) | 26,186,936 | 26,700,736 | 99,787,087 |
| 10. | | | | |
| 11. | Matured endowments (excluding guaranteed annual pure endowments) | | | |
| 12. | | | | |
| 13. | Disability benefits and benefits under accident and health contracts | | | |
| 14. | Coupons, guaranteed annual pure endowments and similar benefits | | | |
| 15. | Surrender benefits and withdrawals for life contracts | | | |
| 16. | | | | |
| 17. 18. | Interest and adjustments on contract or deposit-type contract funds Payments on supplementary contracts with life contingencies | | | |
| 18. | Increase in aggregate reserves for life and accident and health contracts | | 189,450 | 2,168,416 |
| 20. | Totals (Lines 10 to 19) | | | |
| 20. | Commissions on premiums, annuity considerations, and deposit-type contract funds (direct | | | |
| | business only) | | | 3,468,861 |
| 22. | Commissions and expense allowances on reinsurance assumed | | | · · · · · · · · · · · · · · · · · · · |
| 23. | General insurance expenses | 1,892,214 | 2,561,622 | |
| 24. | Insurance taxes, licenses and fees, excluding federal income taxes | | | 1,207,597 |
| 25. | Increase in loading on deferred and uncollected premiums | (693) | | (824) |
| 26. | Net transfers to or (from) Separate Accounts net of reinsurance | | . , , , | (38,746,685) |
| 27. | Aggregate write-ins for deductions | 14,108 | 20,716 | 172,908 |
| 28. | Totals (Lines 20 to 27) | 19,567,270 | 20,776,385 | 74,568,557 |
| 29. | Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus Line 28) | 6 610 666 | 5 024 251 | 25 219 520 |
| 30. | Line 28) Dividends to policyholders | | | |
| 30. | Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 | | | |
| 51. | minus Line 30) | | | |
| 32. | Federal and foreign income taxes incurred (excluding tax on capital gains) | 1,457,027 | 990,807 | 9,577,811 |
| 33. | Net gain from operations after dividends to policyholders and federal income taxes and before | | | |
| | realized capital gains or (losses) (Line 31 minus Line 32) | | 4,933,544 | |
| 34. | Net realized capital gains (losses) (excluding gains (losses) transferred to the IMR) less capital | | | |
| | gains tax of \$ | (4,000) | (45,500) | 100.045 |
| | transferred to the IMR) | (4,828) | (45,529) | 160,945 |
| 35. | Net income (Line 33 plus Line 34) | 5,157,811 | 4,888,015 | 15,801,664 |
| | CAPITAL AND SURPLUS ACCOUNT | 011 000 000 | 100 001 000 | 100 001 000 |
| 36. | Capital and surplus, December 31, prior year | 211,693,698 | 196,021,268 | 196,021,268 |
| 37. | Net income (Line 35) | | 4,888,015 | |
| 38. 39. | Change in net unrealized capital gains (losses) less capital gains tax of \$ Change in net unrealized foreign exchange capital gain (loss) | | | |
| 40. | | | (575,985) | |
| 41. | Change in nonadmitted assets | | | (3,296,141) |
| 42. | Change in liability for reinsurance in unauthorized and certified companies | | | |
| 43. | Change in reserve on account of change in valuation basis, (increase) or decrease | | | |
| 44. | Change in asset valuation reserve | | | |
| 45. | Change in treasury stock | | | |
| 46. | Surplus (contributed to) withdrawn from Separate Accounts during period | | | |
| 47. | Other changes in surplus in Separate Accounts Statement | | | |
| 48. | Change in surplus notes | | | |
| 49. | Cumulative effect of changes in accounting principles | | | |
| 50. | Capital changes: | | | |
| | 50.1 Paid in | | | |
| | 50.2 Transferred from surplus (Stock Dividend) | | | |
| 51 | Surplus adjustment: | | | |
| 51. | 51.1 Paid in | | | |
| | | | | |
| | 51.3 Transferred from capital | | [| |
| | 51.4 Change in surplus as a result of reinsurance | | | |
| 52. | Dividends to stockholders | | | |
| 53. | Aggregate write-ins for gains and losses in surplus | | | |
| 54. | Net change in capital and surplus for the year (Lines 37 through 53) | 5,409,631 | 5,713,309 | 15,672,430 |
| 55. | Capital and surplus, as of statement date (Lines 36 + 54) | 217,103,329 | 201,734,577 | 211,693,698 |
| | DETAILS OF WRITE-INS | | | |
| | Sub advisory fees | (407,457) | | (1,689,464) |
| | | | (420,324) | |
| 08 303 | | | | |
| | Summary of remaining write-ins for Line 8.3 from overflow page | (278,472) | (067 818) | (056 650) |
| 08.398. | | (2/0.4/2) | (967,818) | (856,658) |
| 08.398. 08.399. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) | | 00 710 | 177 908 |
| 08.398. 08.399. 2701. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscellaneous charges to operations | 14 , 108 | | |
| 08.398. 08.399. 2701. 2702. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscellaneous charges to operations | 14 , 108 | · · · · · · · · · · · · · · · · · · · | |
| 08.398. 08.399. 2701. 2702. 2703. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscellaneous charges to operations | | | |
| 08.398. 08.399. 2701. 2702. 2703. 2798. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscellaneous charges to operations Summary of remaining write-ins for Line 27 from overflow page | | | · · · · · · · · · · · · · · · · · · · |
| 08.398. 08.399. 2701. 2702. 2703. 2798. 2799. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) | 14,108 | 20,716 | 172,908 |
| 08.398. 08.399. 2701. 2702. 2703. 2798. 2799. 5301. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) | 14,108 | | · · · · · · · · · · · · · · · · · · · |
| 08.398. 08.399. 2701. 2702. 2703. 2798. 2799. 5301. 5302. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) | 14,108 | 20,716 | · · · · · · · · · · · · · · · · · · · |
| 08.398. 08.399. 2701. 2702. 2703. 2798. 2799. 5301. 5302. 5303. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) Miscel laneous charges to operations Summary of remaining write-ins for Line 27 from overflow page Totals (Lines 2701 through 2703 plus 2798)(Line 27 above) | | 20,716 | 172,908 |

CASH FLOW

| | CASITIEOW | 1 Current Year | 2 Prior Year | 3 Prior Year Ended |
|------------|--|-------------------|-----------------|-----------------------|
| | | To Date | To Date | December 31 |
| | Cash from Operations | | | |
| 1. | Premiums collected net of reinsurance | 5,091,144 | 5,927,439 | |
| 2. | Net investment income | 2,613,909 | 2,577,457 . | |
| 3. | Miscellaneous income | 17,491,784 | 22,773,300 | 67,620,228 |
| 4. | Total (Lines 1 to 3) | 25,196,837 | 31,278,196 | 103,521,605 |
| 5. | Benefit and loss related payments | 20,914,840 | | |
| 6. | Net transfers to Separate Accounts, Segregated Accounts and Protected Cell Accounts | (12,793,833) | (8,029,609) | |
| 7. | Commissions, expenses paid and aggregate write-ins for deductions | 4,010,709 | | |
| 8. | Dividends paid to policyholders | | | |
| 9. | Federal and foreign income taxes paid (recovered) net of \$175,982 tax on capital | | | |
| | gains (losses) | (3, 153, 253) | (409,679) | 9,366,97 |
| 10. | Total (Lines 5 through 9) | 8,978,463 | 20,095,255 | 87,057,64 |
| 11. | Net cash from operations (Line 4 minus Line 10) | 16,218,374 | 11,182,941 | 16,463,96 |
| | Cash from Investments | | | |
| 12. | Proceeds from investments sold, matured or repaid: | | | |
| | 12.1 Bonds | 1 883 511 | 8 311 283 | 38 473 42 |
| | 12.2 Stocks | | | |
| | 12.3 Mortgage loans | | | |
| | 12.4 Real estate | | | , |
| | 12.5 Other invested assets | | | |
| | 12.6 Net gains or (losses) on cash, cash equivalents and short-term investments | | | |
| | 12.7 Miscellaneous proceeds | 505,203 | (70,011) | (183,94 |
| | 12.8 Total investment proceeds (Lines 12.1 to 12.7) | , | . , , | |
| 13. | Cost of investments acquired (long-term only): | 2,010,200 | | |
| 13. | | 10 447 500 | 0 000 750 | 20 250 01 |
| | 13.1 Bonds | | | |
| | 13.2 Stocks | | | |
| | 13.3 Mortgage loans | | | |
| | 13.4 Real estate | | | |
| | 13.5 Other invested assets | | | |
| | 13.6 Miscellaneous applications | 1 | (600,000) | (|
| | 13.7 Total investments acquired (Lines 13.1 to 13.6) | 18,447,539 | 2,323,759 | 36,259,12 |
| 14. | Net increase (or decrease) in contract loans and premium notes | 315,346 | (397,460) | (880,90 |
| 15. | Net cash from investments (Line 12.8 minus Line 13.7 and Line 14) | (16,252,647) | 6,453,078 | 3,415,34 |
| | Cash from Financing and Miscellaneous Sources | | | |
| 16. | Cash provided (applied): | | | |
| | 16.1 Surplus notes, capital notes | | | |
| | 16.2 Capital and paid in surplus, less treasury stock | | | |
| | 16.3 Borrowed funds | | | |
| | 16.4 Net deposits on deposit-type contracts and other insurance liabilities | 4,023,067 | 1,508,696 | |
| | 16.5 Dividends to stockholders | | | |
| | 16.6 Other cash provided (applied) | 38,413 | (46,761) | 383,68 |
| 17. | Net cash from financing and miscellaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 plus Line 16.6) | 4,061,480 | 1,461,935 | (300,95 |
| | RECONCILIATION OF CASH, CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS | | | |
| 18. | Net change in cash, cash equivalents and short-term investments (Line 11, plus Lines 15 and 17) | | | |
| 10. 19. | Cash, cash equivalents and short-term investments: | | | |
| | 19.1 Beginning of year | 110 736 395 | | |
| | 19.2 End of period (Line 18 plus Line 19.1) | 114,763,602 | 110,256,002 | 110,736,39 |
| | | 117,700,002 | 110,200,002 | 110,700,00 |
| e: Si | upplemental disclosures of cash flow information for non-cash transactions: | | | |
| | D1. Interest capitalization for long-term debt | .986 | 7 | |

| Note: Suppl | emental disclosures of cash flow information for non-cash transactions: | | |
|-------------|---|------|-------|
| 20.0001. | Interest capitalization for long-term debt | | 1,580 |
| 20.0002. | Bond conversions and refinancing | | |
| | | | |

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

| | | 1 Current Year | 2 Prior Year | 3 Prior Year Ended |
|-------|---|-------------------|-----------------|-----------------------|
| | | To Date | To Date | December 31 |
| 1. | Industrial life | | | |
| 2. | Ordinary life insurance | | 10,466,095 | 42,217,666 |
| 3. | Ordinary individual annuities | | | |
| 4. | Credit life (group and individual) | | | |
| 5. | Group life insurance | | (707,000) | 171,341 |
| 6. | Group annuities | | | |
| 7. | A & H - group | | | |
| 8. | A & H - credit (group and individual) | | | |
| 9. | A & H - other | | | |
| 10. | Aggregate of all other lines of business | | | |
| 11. | Subtotal | | 9,788,336 | 42,461,904 |
| 12. | Deposit-type contracts | | | |
| 13. | Total | 8,965,864 | 9,788,336 | 42,461,904 |
| | DETAILS OF WRITE-INS | | | |
| 1001. | | | | |
| 1002. | | | | |
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Note 1 – Summary of Significant Accounting Policies

- a. Accounting practices: The accompanying financial statements of MML Bay State Life Insurance Company (the Company) have been prepared in conformity with the statutory accounting practices of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the State of Connecticut Insurance Department (the Department).
- Use of estimates in the preparation of the financial statements No significant changes b.
- Accounting policy: c.
 - (1-5) No significant changes
 - (6) For fixed income securities that do not have a fixed schedule of payments, such as asset-backed securities, mortgage-backed securities, including residential mortgage-backed securities and commercial mortgage-backed securities, and structured securities, including collateralized debt obligations, amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies for each type of security.

Certain fixed income securities with the highest ratings from a rating agency follow the retrospective method of accounting. Under the retrospective method, the recalculated effective yield equates the present value of the actual and anticipated cash flows, including new prepayment assumptions, to the original cost of the investment. Prepayment assumptions are based on borrower constraints and economic incentives such as the original term, age and coupon of the loan as affected by the interest rate environment. The current carrying value is then increased or decreased to the amount that would have resulted had the revised yield been applied since inception, and investment income is correspondingly decreased or increased.

All other fixed income securities, such as floating rate bonds and interest only securities, including those that have been impaired, follow the prospective method of accounting. Under the prospective method, the recalculated future effective yield equates the carrying value of the investment to the present value of the anticipated future cash flows.

(7-14) No significant changes

Note 2 – Accounting Changes and Corrections of Errors a. For the three months ended March 31, 2015 and 2014, the Company did not record any corrections of prior year errors.

Certain prior year amounts within these financial statements have been reclassified to conform to the current year presentation.

Adoption of new accounting standards: b.

In December 2014, the NAIC issued Statement of Statutory Accounting Principles (SSAP) No. 40 Revised, "Real Estate Investments" (SSAP No. 40R), which was effective January 1, 2015, and requires that single real estate property investments that are directly and wholly-owned through a limited liability company (LLC) be accounted for, and reported as, directly owned real estate provided that certain criteria are met. For investments meeting the criteria that were previously reported within SSAP No. 48, "Joint Ventures, Partnerships and Limited Liability Companies" (SSAP No. 48), and owned as of the effective date, this guidance required that the Company recognize a cumulative effect of a change in accounting principle as if the entity had followed the revisions of SSAP No. 40R since acquisition of the property. The adoption of this guidance did not have a significant impact on the Company's valuation of its assets.

Note 3 - Business Combinations and Goodwill - No significant changes

Note 4 - Discontinued Operations - No significant changes

Note 5 – Investments

- Mortgage loans No significant changes a.
- b. Debt restructuring - No significant changes
- Reverse mortgages No significant changes c.
- d. Loan-backed and structured securities:
 - (1) No significant changes
 - Loan-backed and structured securities recognized no other-than-temporary impairments for the three (2)months ended March 31, 2015.
 - (3) The Company had no impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis for the three months ended March 31, 2015.
 - As of March 31, 2015, the gross unrealized losses and fair values for investments in structured and loan-(4) backed securities for which an OTTI has not been recognized in earnings follow (in millions): a.

3 4

| The aggregate amount of unrealized losses: | |
|---|-----------|
| 1. Less than 12 months | \$ |
| 2. 12 months or longer | \$ |
| The aggregate related fair value of securities with unrealize | d losses: |
| 1. Less than 12 months | \$ |
| 2. 12 months or longer | \$ |

(5) No significant changes

b.

Repurchase agreements – No significant changes e.

- f. The Company does not have any investments in real estate.
- g. Low income housing tax credit properties No significant changes
- h. Restricted assets No significant changes
- i. Working capital finance investments The Company does not invest in working capital finance investments.
- j. The Company reports assets and liabilities as gross in the financial statements without offsetting.
- k. Structured notes The Company did not have any investments in structured notes.

Note 6 - Joint Ventures, Partnerships and LLCs - No significant changes

Note 7 – Investment Income – No significant changes

Note 8 - Derivative Instruments - No significant changes

Note 9 - Income Taxes - No significant changes

Note 10 - Information Concerning Parent, Subsidiaries and Affiliates - No significant changes

Note 11 - Debt

- a. No significant changes
- b. The Company is not a member of the Federal Home Loan Bank (FHLB) therefore it has no FHLB funding agreements.

<u>Note 12 – Retirement Plans, Deferred Compensation, Postemployment Benefits and Compensated Absences and</u> <u>Other Postretirement Benefit Plans</u> - No significant changes

<u>Note 13 – Capital and Surplus, Shareholders' Dividend Restrictions and Quasi-Reorganizations</u> - No significant changes

<u>Note 14 – Liabilities, Contingencies and Assessments</u> a. Contingent commitments - No significant changes

- b. Assessments No significant changes
- c. Gain contingencies No significant changes
- d. Claims related to extra contractual obligations No significant changes
- e. All other contingencies:

The Company is involved in litigation arising in the normal course of business, which seeks both compensatory and punitive damages and equitable remedies. Although the Company is not aware of any actions or allegations that reasonably should give rise to a material adverse impact to the Company's financial position or liquidity, the outcome of litigation cannot be foreseen with certainty. It is the opinion of management that the ultimate resolution of these matters will not materially impact the Company's financial position or liquidity. However, the outcome of a particular proceeding may be material to the Company's results of operations for a particular period depending upon, among other factors, the size of the loss and the level of the Company's results of operations for the period.

f. Regulatory matters:

The Company is subject to governmental and administrative proceedings and regulatory inquiries, examinations and investigations in the ordinary course of its business. In connection with regulatory inquiries, examinations and investigations, the Company has been contacted by various regulatory agencies including, among others, the Securities and Exchange Commission, the U.S. Department of Labor and various state insurance departments and state attorneys general. The Company has cooperated fully with these regulatory agencies with regard to their inquiries, examinations and investigations and has responded to information requests and comments.

Market volatility in the financial services industry over the last several years has contributed to increased scrutiny of the entire financial services industry. Therefore, the Company believes that it is reasonable to expect that proceedings, regulatory inquiries, examinations and investigations into the insurance and financial services industries will continue for the foreseeable future. Additionally, new industry-wide legislation, rules and regulations could significantly affect the insurance and financial services industries as a whole. It is the opinion of management that the ultimate resolution of these regulatory inquiries, examinations, investigations, legislative and regulatory changes of which management is aware will not materially impact the Company's financial position or liquidity. However, the outcome of a particular matter may be material to the Company's operating results for a particular period depending upon, among other factors, the financial impact of the matter and the level of the Company's income for the period.

Note 15 - Leases - No significant changes

<u>Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With</u> <u>Concentrations of Credit Risk</u> - No significant changes

<u>Note 17 – Sale, Transfer and Servicing of Financial Assets and Extinguishments of Liabilities</u> a. Transfers of receivables reported as sales – No significant changes

- b. Transfer and Servicing of Financial Assets:
 - (1) The Company did not participate in securities lending as of March 31, 2015 or December 31, 2014.
 - (2) The Company did not have any servicing assets or liabilities in 2015 or 2014.
 - (3) The Company did not have any servicing assets or liabilities in 2015 or 2014.
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2015 or 2014.
 - (5) The Company did not have any transfers of financial assets accounted for as secured borrowing in 2015 or 2014.
 - (6) The Company did not have any transfers of receivables with recourse in 2015 or 2014.
 - (7) Repurchase agreements no significant changes
- c. Wash sales:
 - (1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days of the sale date.
 - (2) The Company did not sell any securities with the NAIC Designation 3 or below through the quarter ended March 31, 2015 that were reacquired within 30 days of the sale date.

<u>Note 18 – Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured</u> <u>Plans</u> – No significant changes

<u>Note 19 – Direct Premium Written/Produced By Managing General Agents/Third Party Administrators</u> – No significant changes

Note 20 – Fair Value Measurements

- a. Fair value as defined and unique level descriptions No significant changes
 - 1. The following presents the Company's fair value hierarchy for assets and liabilities that are carried at fair value:

| | March 31, 2015 | | | | | | | |
|---|----------------|-------|----|--------|---------|------|----|-------|
| | Le | vel 1 | Le | evel 2 | Lev | el 3 | | Total |
| | | | | (In Mi | llions) | | | |
| Financial assets: Separate account assets ⁽¹⁾ | \$ | 975 | \$ | 2,273 | \$ | _ | \$ | 3,248 |
| Total financial assets carried at fair value | \$ | 975 | \$ | 2,273 | \$ | - | \$ | 3,248 |

⁽¹⁾\$1,069 million of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the three months ended March 31, 2015 there were no significant transfers between Level 1 and Level 2.

| | December 31, 2014 | | | | | |
|--|-------------------|-------|-----------------|---------|-------------------|--|
| | Le | vel 1 | Level 2 | Level 3 | Total | |
| | | | (In Mi | llions) | | |
| Financial assets: | | | | | | |
| Separate account assets ⁽¹⁾ | \$ | 971 | \$ 2,246 | \$ | - \$ 3,217 | |
| Total financial assets carried | | | | | | |
| at fair value | \$ | 971 | \$ 2,246 | \$ | - <u>\$</u> 3,217 | |

⁽¹⁾\$1,058 million of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the year ended December 31, 2014 there were no significant transfers between Level 1 and Level 2.

2. The following presents changes in the Company's Level 3 financial instruments that are carried at fair value:

| | Begin Balance | • | Trai | nsfers | Gains (Losses) in | Gains (Losses) in | | | | | Endir Balance | • |
|------------------------|------------------|------|------|--------|----------------------|----------------------|-----------|-----------|----------|-------------|------------------|------|
| | 01/01/2 | 2015 | In | Out | Net Income | Surplus | Purchase | s Issuanc | es Sales | Settlements | 03/31/2 | 2015 |
| | | | | | | (In | Millions) | | | | | |
| Financial assets: | \$ | - | \$ - | \$ - | \$ - | \$ - | \$ | - \$ | - \$ - | \$ - | \$ | - |
| Total financial assets | \$ | - | \$ - | \$ - | \$- | \$- | \$ | - \$ | - \$ - | \$ - | \$ | |

| | Beginning | | | Gains | Gains | | | | | Ending |
|-------------------------|---------------|------|--------|-------------|-------------|-----------|-----------|-------|-------------|---------------|
| | Balance as of | Tra | nsfers | (Losses) in | (Losses) in | | | | | Balance as of |
| | 01/01/2014 | In | Out | Net Income | Surplus | Purchases | Issuances | Sales | Settlements | 12/31/2014 |
| | | | | | (In l | Millions) | | | | |
| Financial assets: | | | | | | | | | | |
| Separate account assets | \$ - | \$ - | \$ - | \$ - | \$ - | \$- | \$ - | \$ - | \$ - | \$ - |
| Total financial assets | \$- | \$ - | \$ - | \$- | \$ - | \$- | \$- | \$ - | \$ - | \$ - |

3. Fair value hierarchy classifications - No significant changes

- 4. Valuation techniques and inputs No significant changes
- 5. Derivative assets and liabilities fair value disclosures No significant changes
- b. The Company provides additional fair value information in Notes 1, 5, 21, 32 and 34.

c. The following presents a summary of the carrying values and fair values of the Company's financial

| | | | March | 31, 2015 | | |
|-------------------------------------|------------|----------|---------|----------|---------|---------------------------------|
| | Aggregate | Admitted | | | | Not Practicable (Carrying |
| | Fair Value | Assets | Level 1 | Level 2 | Level 3 | Value) |
| | | | (In M | illions) | | |
| Financial assets: | | | | | | |
| Bonds: | | | | | | |
| U.S. government and agencies | \$ 4 | \$ 4 | \$- | \$ 4 | \$- | \$- |
| Special revenue | - | - | - | - | - | - |
| Industrial and miscellaneous | 164 | 155 | - | 151 | 13 | - |
| Parent, subsidiaries and affiliates | 2 | 2 | - | 2 | - | - |
| Mortgage loans - residential | 4 | 4 | - | - | 4 | - |
| Cash, cash equivalents and | | | | | | |
| short-term investments | 115 | 115 | (3) | 118 | - | - |
| Separate account assets | 4,355 | 4,317 | 975 | 3,359 | 21 | - |
| Financial liabilities: | | | | | | |
| Individual annuity contracts | 2 | 3 | - | - | 2 | - |
| Supplementary contracts | 10 | 10 | - | - | 10 | - |

| | | | Decembe | er 31, 2014 | | |
|-------------------------------------|-------------------------|--------------------|----------|-------------|----------|---|
| | Aggregate Fair Value | Admitted Assets | Level 1 | Level 2 | Level 3 | Not Practicable (Carrying Value) |
| | Fail Value | Assels | | | Level 3 | value) |
| | | | (In M | illions) | | |
| Financial assets: | | | | | | |
| Bonds: | | • • | <u>^</u> | • • | <u>^</u> | • |
| U. S. government and agencies | \$ 4 | \$ 4 | \$- | \$ 4 | \$- | \$- |
| Special revenue | - | - | - | - | - | - |
| Industrial and miscellaneous | 145 | 138 | - | 132 | 13 | - |
| Parent, subsidiaries and affiliates | 2 | 2 | - | 2 | - | - |
| Mortgage loans - residential | 4 | 4 | - | - | 4 | - |
| Cash, cash equivalents and | | | | | | |
| short-term investments | 111 | 111 | (2) | 113 | - | - |
| Separate account assets | 4,305 | 4,275 | 971 | 3,313 | 21 | - |
| Financial liabilities: | | | | | | |
| Individual annuity contracts | 2 | 3 | - | - | 2 | - |
| Supplementary contracts | 6 | 6 | - | - | 6 | - |

d. For the three months ended March 31, 2015, the Company had no investments where it was not practicable to estimate fair value.

Note 21 – Other Items

a. Extraordinary items - No significant changes

- b. Troubled debt restructuring No significant changes
- c. Other disclosures and unusual items

Business risks

The Company operates in a business environment subject to various risks and uncertainties. Such risks and uncertainties include, but are not limited to, currency exchange risk, interest rate risk and credit risk. Interest rate risk is the potential for interest rates to change, which can cause fluctuations in the value of investments and amounts due to policyholders. To the extent that fluctuations in interest rates cause the duration of assets and

liabilities to differ, the Company manages its exposure to this risk by, among other things, asset/liability management techniques that account for the cash flow characteristics of the assets and liabilities. This quarterly risks and uncertainties disclosure should be read in conjunction with the statutory disclosure in the Company's 2014 year end annual financial statements.

Investment and interest rate risks

Investment earnings can be influenced by a number of factors including changes in interest rates, credit spreads, equity markets, portfolio asset allocation and general economic conditions. The Company employs a rigorous asset/liability management process to help mitigate the economic impacts of various investment risks, in particular interest rate risk.

The levels of U.S. interest rates are influenced by U.S. monetary policies and by the relative attractiveness of U.S. markets to investors versus other global markets. As interest rates increase, certain debt securities may experience slower amortization or prepayment speeds than assumed at purchase, impacting the expected maturity of these securities and the ability to reinvest the proceeds at the higher yields. Rising interest rates may also result in a decrease in the fair value of the investment portfolio. As interest rates decline, certain debt securities may experience accelerated amortization and prepayment speeds than what was assumed at purchase. During such periods, the Company is at risk of lower net investment income as it may not be able to reinvest the proceeds at comparable yields. Declining interest rates may also increase the fair value of the investment portfolio.

- d. Business interruption insurance recoveries No significant changes
- e. State transferrable tax credits No significant changes
- f. Subprime mortgage related risk exposure:
 - (1) No significant changes
 - (2) No significant changes
 - (3) The actual cost reduced by paydowns, carrying value, fair value and related gross realized losses from OTTI of the Company's investments with significant Alt-A and subprime exposure were as follows:

| | | | March 31 | , 201 | | Three Months En March 31, 2015 | ded | |
|---|------|------|----------|-------|----------|--------------------------------------|------|---|
| | Ac | tual | Carryin | g | F | air | | |
| Alt-A: | Cost | | Value | | Value | | OTTI | |
| | | | | (Ir | n Millio | ns) | | |
| a. Residential mortgage-backed securities | \$ | 4 | \$ | 3 | \$ | 4 | \$ | - |
| b. Commercial mortgage-backed securities | | - | | - | | - | | - |
| c. Collateralized debt obligations | | - | | - | | - | | - |
| d. Structured securities | | - | | - | | - | | - |
| e. Equity investments in subsidiary | | - | | - | | - | | - |
| and controlled affiliates | | - | | - | | - | | - |
| f. Other assets | | - | | - | | - | | - |
| g. Total | \$ | 4 | \$ | 3 | \$ | 4 | \$ | - |

| | | March 31, 2015 | | | | | Three Months Er March 31, 2015 | nded |
|---|----|----------------|----------|---|----------|-----|--------------------------------------|------|
| | Ac | tual | Carrying |) | F | air | | |
| Subprime: | | ost | Value | | Value | | OTTI | |
| | | (In Mil | | | n Millio | ns) | | |
| a. Residential mortgage-backed securities | \$ | 4 | \$ | 2 | \$ | 3 | \$ | - |
| b. Commercial mortgage-backed securities | | - | | - | | - | | - |
| c. Collateralized debt obligations | | - | | - | | - | | - |
| d. Structured securities | | - | | - | | - | | - |
| e. Equity investments in subsidiary | | - | | - | | - | | - |
| and controlled affiliates | | - | | - | | - | | - |
| f. Other assets | | - | | - | | - | | - |
| g. Total | \$ | 4 | \$ | 2 | \$ | 3 | \$ | - |

NOTES TO FINANCIAL STATEMENTS

| | | D | ecember | [.] 31, 20 | 14 | | Year Ende December 3 2014 | - | |
|---|---------------|-----------------|---------|---------------------|-------|---|---------------------------------|---|--|
| | Ac | Actual Carrying | | F | air | | | | |
| Alt-A: | С | ost | Value | | Value | | OTTI | | |
| | (In Millions) | | | | | | | | |
| a. Residential mortgage-backed securities | \$ | 4 | \$ | 3 | \$ | 4 | \$ | - | |
| b. Commercial mortgage-backed securities | | - | | - | | - | | - | |
| c. Collateralized debt obligations | | - | | - | | - | | - | |
| d. Structured securities | | - | | - | | - | | - | |
| e. Equity investments in subsidiary | | | | | | | | | |
| and controlled affiliates | | - | | - | | - | | - | |
| f. Other assets | | - | | - | | - | | - | |
| g. Total | \$ | 4 | \$ | 3 | \$ | 4 | \$ | - | |

| | | D | ecember | [.] 31, 20 | 14 | | Year Ende December 3 2014 | - |
|---|----|---------------|---------|---------------------|-------|-----|---------------------------------|---|
| | Ac | tual | Carryii | ng | F | air | | |
| Subprime: | | ost | Value | | Value | | OTTI | |
| | | (In Millions) | | | | | | |
| a. Residential mortgage-backed securities | \$ | 4 | \$ | 2 | \$ | 3 | \$ | - |
| b. Commercial mortgage-backed securities | | - | | - | | - | | - |
| c. Collateralized debt obligations | | - | | - | | - | | - |
| d. Structured securities | | - | | - | | - | | - |
| e. Equity investments in subsidiary | | | | | | | | |
| and controlled affiliates | | - | | - | | - | | - |
| f. Other assets | | - | | - | | - | | - |
| g. Total | \$ | 4 | \$ | 2 | \$ | 3 | \$ | - |

(4) The Company has no underwriting exposure to subprime mortgage risk through Mortgage Guaranty or Financial Guaranty insurance coverage.

g. Retained asset accounts – No significant changes

Note 22 – Events Subsequent

The Company has evaluated subsequent events through May 6, 2015, the date the financial statements were available to be issued. No events have occurred subsequent to the balance sheet date and before the date of evaluation that would require disclosure.

Note 23 – Reinsurance - No significant changes

Note 24 - Retrospectively Rated Contracts and Contracts Subject to Redetermination - No significant changes

Note 25 - Change in Incurred Losses and Loss Adjustment Expenses - No significant changes

Note 26 - Intercompany Pooling Arrangements - No significant changes

Note 27 - Structured Settlements - No significant changes

- Note 28 Health Care Receivables No significant changes
- Note 29 Participating Policies No significant changes
- Note 30 Premium Deficiency Reserves No significant changes

Note 31 - Reserves for Life Contracts and Annuity Contracts - No significant changes

<u>Note 32 – Analysis of Annuity Actuarial Reserves and Deposit Liabilities by Withdrawal Characteristics</u> – No significant changes

Note 33 - Premium and Annuity Considerations Deferred and Uncollected - No significant changes

Note 34 - Separate Accounts - No significant changes

Note 35 - Loss/Claim Adjustment Expenses - No significant changes

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

| 1.1 | Did the reporting entity experience any material transactions requiring the filing of Disclosure of Material Transactions with the State of Domicile, as required by the Model Act? | Yes [] No [X] |
|-----|---|------------------|
| 1.2 | If yes, has the report been filed with the domiciliary state? | Yes [] No [] |
| 2.1 | Has any change been made during the year of this statement in the charter, by-laws, articles of incorporation, or deed of settlement of the reporting entity? | Yes [] No [X] |
| 2.2 | If yes, date of change: | |
| 3.1 | Is the reporting entity a member of an Insurance Holding Company System consisting of two or more affiliated persons, one or more of which is an insurer? | Yes [X] No [] |
| 3.2 | Have there been any substantial changes in the organizational chart since the prior quarter end? | Yes [] No [X] |
| 3.3 | If the response to 3.2 is yes, provide a brief description of those changes. | |
| 4.1 | Has the reporting entity been a party to a merger or consolidation during the period covered by this statement? | Yes [] No [X] |
| 4.2 | If yes, provide the name of the entity, NAIC Company Code, and state of domicile (use two letter state abbreviation) for any entity that has ceased to exist as a result of the merger or consolidation. | |
| | 1 2 3 Name of Entity NAIC Company Code State of Domicile | |
| | | |
| 5. | If the reporting entity is subject to a management agreement, including third-party administrator(s), managing general agent(s), attorney- in-fact, or similar agreement, have there been any significant changes regarding the terms of the agreement or principals involved? | [] No [X] N/A [] |
| 6.1 | State as of what date the latest financial examination of the reporting entity was made or is being made. | 12/31/2009 |
| 6.2 | State the as of date that the latest financial examination report became available from either the state of domicile or the reporting entity. This date should be the date of the examined balance sheet and not the date the report was completed or released. | 12/31/2009 |
| 6.3 | State as of what date the latest financial examination report became available to other states or the public from either the state of domicile or the reporting entity. This is the release date or completion date of the examination report and not the date of the examination (balance sheet date). | 12/20/2010 |
| 6.4 | By what department or departments? | |
| 6.5 | State of Connecticut Insurance Department Have all financial statement adjustments within the latest financial examination report been accounted for in a subsequent financial statement filed with Departments? | [X] No[] N/A[] |
| 6.6 | Have all of the recommendations within the latest financial examination report been complied with? | [X] No [] N/A [] |
| 7.1 | Has this reporting entity had any Certificates of Authority, licenses or registrations (including corporate registration, if applicable) suspended or revoked by any governmental entity during the reporting period? | Yes [] No [X] |
| 7.2 | If yes, give full information: | |
| 8.1 | Is the company a subsidiary of a bank holding company regulated by the Federal Reserve Board? | Yes [] No [X] |
| 8.2 | If response to 8.1 is yes, please identify the name of the bank holding company. | |
| 8.3 | Is the company affiliated with one or more banks, thrifts or securities firms? | Yes [X] No [] |
| 8 / | If response to 8.3 is ves, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal | |

If response to 8.3 is yes, please provide below the names and location (city and state of the main office) of any affiliates regulated by a federal regulatory services agency [i.e. the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), the Federal Deposit Insurance Corporation (FDIC) and the Securities Exchange Commission (SEC)] and identify the affiliate's primary federal regulator.

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|------------------------|-----|-----|------|-----|
| Affiliate Name | Location (City, State) | FRB | 000 | FDIC | SEC |
| Babson Capital Securities, LLC | Boston, MA | | | | YES |
| Baring Asset Management (Asia) Limited | Hong Kong | | | | YES |
| Baring International Investment Limited | London, UK | | | | YES |
| MML Distributors, LLC | | | | | YES |
| MML Investment Advisers, LLC | Enfield, CT | | | | YES |
| MML Investrors Services, LLC | Springfield, MA | | | | YES |
| MML Strategic Distributors, LLC | Springfield, MA | | | | YES |
| MMLISI Financial Alliances, LLC | Springfield, MA | | | | YES |
| OppenheimerFunds Distributor, Inc. | | | | | YES |
| Society of Grownups, LLC | Springfield, MA | | | | YES |
| The MassMutual Trust Company, FSB | Enfield, CT | | YES | | |
| | | | | | |

GENERAL INTERROGATORIES

| 9.1 9.11 | Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller similar functions) of the reporting entity subject to a code of ethics, which includes the following standards? | sonal and professional | Yes [X] No [] |
|--------------|--|---------------------------------|----------------------------------|
| 0.0 | | | |
| 9.2 | Has the code of ethics for senior managers been amended? | | Yes [] No [X] |
| 9.21 | If the response to 9.2 is Yes, provide information related to amendment(s). | | |
| 9.3 9.31 | Have any provisions of the code of ethics been waived for any of the specified officers? If the response to 9.3 is Yes, provide the nature of any waiver(s). | | Yes [] No [X] |
| | FINANCIAL | | |
| 10.1 | | | |
| 10.1 10.2 | Does the reporting entity report any amounts due from parent, subsidiaries or affiliates on Page 2 of this statement? If yes, indicate any amounts receivable from parent included in the Page 2 amount: | | |
| 10.2 | in yes, indicate any anounts receivable non-parent included in the r age 2 anount. | | 0 |
| | | | |
| | | | |
| | INVESTMENT | | |
| | | | |
| 11.1 | Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or oth use by another person? (Exclude securities under securities lending agreements.) | nerwise made available for | Yes [] No [X] |
| 11.2 | If yes, give full and complete information relating thereto: | | |
| | | | |
| 12. | Amount of real estate and mortgages held in other invested assets in Schedule BA: | \$ | |
| 13. | Amount of real estate and mortgages held in short-term investments: | | |
| 14.1 | Does the reporting entity have any investments in parent, subsidiaries and affiliates? | | Yes [X] No [] |
| 14.2 | If yes, please complete the following: | | |
| | | 1 | 2 |
| | | Prior Year-End Book/Adjusted | Current Quarter Book/Adjusted |
| | | Carrying Value | Carrying Value |
| 14.21 | Bonds | \$ 2 287 569 | \$2,359,294 |
| | Preferred Stock | | \$\$ |
| | Common Stock | | \$ |
| | Short-Term Investments | \$ | \$ |

| 11.1 11.2 | Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available use by another person? (Exclude securities under securities lending agreements.) If yes, give full and complete information relating thereto: | | Yes [] | No [X] | |
|----------------------------|---|----|---------|--------------------------------|-----|
| 12. 13. 14.1 14.2 | Amount of real estate and mortgages held in other invested assets in Schedule BA: | \$ | | | |
| 14.01 | Bonds | | Book | 2 ent Quarter ying Value | |
| 14.21 | Donos | 99 | ቅ ¢ | 2,359,2 | .94 |
| | Common Stock\$ | | φ \$ | | |
| 14.24 | Short-Term Investments \$ | | | | |
| 14.25 | Mortgage Loans on Real Estate \$ | | \$ | | |
| 14.26 | All Other\$ | | \$ | | |
| 14.27 | Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | 69 | \$ | 2,359,2 | 294 |
| 14.28 | Total Investment in Parent included in Lines 14.21 to 14.26 above\$ | | \$ | | |
| 15.1 15.2 | | | | | |

GENERAL INTERROGATORIES

For the reporting entity's security lending program, state the amount of the following as of the current statement date: 16.

| 16.1 Total fair value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2\$ | |
|---|--|
| 16.2 Total book adjusted/carrying value of reinvested collateral assets reported on Schedule DL, Parts 1 and 2\$ | |
| 16.3 Total payable for securities lending reported on the liability page\$ | |
| Excluding items in Schedule E - Part 3 - Special Deposits, real estate, mortgage loans and investments held physically in the reporting entity's offices, vaults or safety deposit boxes, were all stocks, bonds and other securities, owned throughout the current year held pursuant to a | |

Yes [X] No []

17.1

2 Name of Custodian(s) Custodian Address Citibank, N.A. .. 333 West 34th Street, New York, NY 10001 For all agreements that do not comply with the requirements of the NAIC Financial Condition Examiners Handbook, provide the name, location and a complete explanation: 17.2 2 З Name(s) Location(s) Complete Explanation(s) Have there been any changes, including name changes, in the custodian(s) identified in 17.1 during the current quarter? 17.3] No [X] Yes [17.4 If yes, give full information relating thereto: 2 4 Old Custodian Reason New Custodian Date of Change Identify all investment advisors, brokers/dealers or individuals acting on behalf of broker/dealers that have access to the investment accounts, handle securities and have authority to make investments on behalf of the reporting entity: 17.5

| 1 | 2 | 3 | |
|---------------------------------|--------------------------------|---|--|
| Central Registration Depository | Name(s) | Address | |
| 106006 | Babson Capital Management, LLC | 1500 Main Street, Springfield, MA 01115 | |
| | | | |

Have all the filing requirements of the Purposes and Procedures Manual of the NAIC Securities Valuation Office been followed? Yes [X] No [] 18.1 18.2 If no, list exceptions:

17.

GENERAL INTERROGATORIES

PART 2 - LIFE & HEALTH

| 1. | Report the statement value of mortgage loans at the end of this reporting period for the following categories: | 1 Amount |
|-----|--|-------------|
| | 1.1 Long-Term Mortgages In Good Standing | |
| | 1.11 Farm Mortgages | |
| | 1.12 Residential Mortgages | 4,048,491 |
| | 1.13 Commercial Mortgages | <u>}</u> |
| | 1.14 Total Mortgages in Good Standing | 4,048,491 |
| | 1.2 Long-Term Mortgages In Good Standing with Restructured Terms | |
| | 1.21 Total Mortgages in Good Standing with Restructured Terms | S |
| | 1.3 Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months | |
| | 1.31 Farm Mortgages | 3 |
| | 1.32 Residential Mortgages | 5 |
| | 1.33 Commercial Mortgages | 3 |
| | 1.34 Total Mortgages with Interest Overdue more than Three Months | 3 |
| | | |
| | 1.4 Long-Term Mortgage Loans in Process of Foreclosure | |
| | 1.41 Farm Mortgages | 3 |
| | 1.42 Residential Mortgages | 5 |
| | 1.43 Commercial Mortgages | 3 |
| | 1.44 Total Mortgages in Process of Foreclosure | <u>.</u> |
| 1.5 | Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2)\$ | 4.048.491 |
| 1.6 | Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter | |
| | 1.61 Farm Mortgages | |
| | 1.62 Residential Mortgages | |
| | 1.63 Commercial Mortgages | |
| | 1.64 Total Mortgages Foreclosed and Transferred to Real Estate | |
| 2. | Operating Percentages: | |
| 2. | 2.1 A&H loss percent | ٩ |
| | 2.2 A&H cost containment percent | |
| | | |
| o 4 | 2.3 A&H expense percent excluding cost containment expenses | |
| 3.1 | Do you act as a custodian for health savings accounts? | |
| 3.2 | If yes, please provide the amount of custodial funds held as of the reporting date | |
| 3.3 | Do you act as an administrator for health savings accounts? | |
| 3.4 | If yes, please provide the balance of the funds administered as of the reporting date | 3 |

SCHEDULE S - CEDED REINSURANCE

Showing All New Reinsurance Treaties - Current Year to Date

| | | | | Chewing / in New Heinsdrahee Treation | e eanent rear te | 240 | | |
|-------------------------|--------------|-------------------|-------------------|---------------------------------------|------------------------------|-------------------|---|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| NAIC Company Code | ID Number | Effective Date | Name of Reinsurer | | Tyne⊧of ry Rein: Coned | Type of Reinsurer | Certified Reinsurer Rating (1 through 6) | Effective Date of Certified Reinsurer Rating |
| 0000 | Humbon | Duio | | | 0.00 | | (T through 0) | rialing |
| | | | | | | | | |

STATEMENT AS OF MARCH 31, 2015 OF THE MML Bay State Life Insurance Company **SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS**

| | C | urrent Year | To Date - Alloca | ated by States a | | inona Only | | |
|----------------|---|-------------|---------------------|------------------|----------------------------------|-----------------|-----------------------|--------------|
| | | 1 | | ntracts | 4 | iness Only 5 | 6 | 7 |
| | | | 2 | 3 | Accident and Health Insurance | | | |
| | | | | | Premiums, Including Policy, | | Total | |
| | 0 . . | Active | Life Insurance | Annuity | Membership | Other | Columns | Deposit-Type |
| 1. | States, Etc. AlabamaAL | Status | Premiums | Considerations | and Other Fees | Considerations | 2 Through 5 62,860 | Contracts |
| 2. | Alaska | L | | | | | | |
| 3. | Arizona AZ | L | | | | | | |
| 4. | Arkansas AR | Ĺ | | | | | | |
| 5. | California CA | L | 1, 170, 817 | | | | 1, 170, 817 | |
| 6. | Colorado CO | L | | | | | | |
| 7. | Connecticut CT | L | | | | | | |
| 8. | Delaware DE | L | | | | | | |
| 9. | District of Columbia DC | L | | | | | | |
| 10. | Florida FL | L | | | | | | |
| 11. | Georgia GA | L | | | | | | |
| 12. | Hawaii HI | L | 53,704 | | | | 53,704 | |
| 13. | Idaho ID | L | | | | | | |
| 14. | Illinois IL | L | | | | | | |
| 15. | Indiana IN | L | | | | | | |
| 16. | lowa IA | L | | | | | 153,743 | |
| 17. | Kansas KS | L | 107 , 432 | | | | 107 , 432 | |
| 18. | Kentucky KY | L | | | | | | |
| 19. | Louisiana LA | L | | | | | 94 , 167 | |
| 20. | Maine ME | | | | | | | |
| 21. | Maryland MD | | | | | | | |
| 22. | Massachusetts MA | | | | | | | |
| 23. | Michigan MI | L | | 1,200 | | | | L |
| 24. | Minnesota MN | L | | | | | | L |
| 25. 26. | Mississippi MS Missouri | L I | 74,747 | | | | 74,747 | |
| 26. 27. | Missouri MO Montana MT | | 173,147 | | | | 173, 147 | |
| 27. | Nebraska NE | L | | | | | | |
| 28. 29. | Nebraska | I | | | | | | |
| 29. 30. | New Hampshire NH | I | | | | | | |
| 30. | New Jersey NJ | I | | | | | | |
| 32. | New Mexico NM | I | | | | | | |
| 33. | New York NY | N | | | | | | |
| 34. | North Carolina | | | | | | | |
| 35. | North Dakota | 1 | 1,399 | | | | | |
| 36. | Ohio OH | Ĺ | | | | | | |
| 37. | Oklahoma OK | Ĺ | | | | | | |
| 38. | Oregon OR | L | | | | | | |
| 39. | Pennsylvania PA | L | 537,949 | | | | 537,949 | |
| 40. | Rhode IslandRI | L | | | | | | |
| 41. | South Carolina SC | L | | | | | | |
| 42. | South Dakota SD | L | | | | | | |
| 43. | Tennessee TN | L | | | | | | |
| 44. | Texas TX | L | | | | | | |
| 45. | Utah UT | L | | | | | | |
| 46. | Vermont VT | L | 21,886 | | | | 22 , 186 | |
| 47. | Virginia VA | L | | | | | | |
| 48. | Washington WA | L | | | | | | |
| 49. | West Virginia WV | L | 47,984 | | | | 47,984 | |
| 50. | Wisconsin WI | L | | | | | | |
| 51. | WyomingWY | L | 4,612 | | | | 4,612 | |
| 52. | American Samoa AS | N | | | | | | |
| 53. | Guam | N | | | | | | |
| 54. | Puerto Rico PR | N | | | | | | |
| 55. | U.S. Virgin Islands | N | | | | | | L |
| 56. | Northern Mariana Islands MP | N | | | | | | |
| 57. | Canada CAN | N | 01.067 | | | | 04 007 | |
| 58. 59. | Aggregate Other Aliens OT Subtotal | (a) | 21,867 9.756.001 | 4.715 | | | 21,867 | |
| 59. 90. | Reporting entity contributions for employee benefits | | ອ, / ວດ , ບປ ໄ | | | | | |
| 90. | Plans | XXX | | | | | | |
| 91. | Dividends or refunds applied to purchase paid-up | | | | | | | |
| . | additions and annuities | xxx | | | | | | |
| 92. | Dividends or refunds applied to shorten endowmen | | | | | | | |
| | or premium paying period | | | | | | | |
| 93. | Premium or annuity considerations waived under | 1 | | | | | | |
| | disability or other contract provisions | XXX | | | | | | |
| 94. | Aggregate or other amounts not allocable by State_ | XXX | | | | | | |
| 95. | Totals (Direct Business) | XXX | 9,840,270 | 4,715 | | | 9,844,985 | |
| 96. | Plus Reinsurance Assumed | XXX | | | | | | |
| 97 | Totals (All Business) | XXX | 9,840,270 | 4,715 | | | 9,844,985 | |
| 98. | Less Reinsurance Ceded | XXX | 4,753,841 | | | | 4,753,841 | |
| 99. | Totals (All Business) less Reinsurance Ceded | XXX | 5,086,429 | 4,715 | | | 5,091,144 | |
| | DETAILS OF WRITE-INS | | | | | | | |
| 58001. | Other foreign | XXX | 21,867 | | | | 21,867 | |
| 58002. | | XXX | | | | | | |
| 58003. | Commence of commissions with the feat line 50 from | XXX | | | | | | |
| 58998. | Summary of remaining write-ins for Line 58 from | xxx | | | | | | |
| 52000 | overflow page Totals (Lines 58001 through 58003 plus | | | | | | | |
| JU9999. | 58998)(Line 58 above) | XXX | 21.867 | | | | 21.867 | |
| 9401. | | XXX | 21,007 | | 1 | | 21,007 | |
| 9401. 9402. | | XXX | | | | | | |
| | | XXX | | | | | | |
| | Summary of remaining write-ins for Line 94 from | | | | | | | |
| | overflow page | XXX | | | | | | |
| 9499. | Totals (Lines 9401 through 9403 plus 9498)(Line | | | | | | | |
| | 94 above) | XXX | | | | | | |
| (1) 1 ! | sed or Chartered - Licensed Insurance Carrier or Do | | | | | () I A III I A | | |

(L) Licensed or Chartered - Licensed Insurance Carrier or Domiciled RRG; (R) Registered - Non-domiciled RRGs; (Q) Qualified - Qualified or Accredited Reinsurer; (E) Eligible - Reporting Entities eligible or approved to write Surplus Lines in the state; (N) None of the above - Not allowed to write business in the state. (a) Insert the number of L responses except for Canada and Other Alien.

PART 1 – ORGANIZATIONAL CHART

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|-------------------|
| MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY | 04-1590850 | 65935 | Massachusetts |
| Direct & Indirect Owned Subsidiaries: | | | |
| C.M. Life Insurance Company | 06-1041383 | 93432 | Connecticut |
| MML Bay State Life Insurance Company | 43-0581430 | 70416 | Connecticut |
| CML Mezzanine Investor, LLC | 06-1041383 | | Delaware |
| CML Mezzanine Investor L, LLC | 06-1041383 | | Delaware |
| CML Mezzanine Investor III, LLC | 06-1041383 | | Delaware |
| CML Re Finance LLC | 06-1041383 | | Delaware |
| CML Special Situations Investor LLC | None | | Delaware |
| MML Mezzanine Investor L, LLC | 04-1590850 | | Delaware |
| Berkshire Way LLC | 04-1590850 | | Delaware |
| MML Special Situations Investor LLC | None | | Delaware |
| WP-SC, LLC* | 26-4441097 | | Delaware |
| MSP-SC, LLC | 04-1590850 | | Delaware |
| Country Club Office Plaza LLC* | 27-1435692 | | Delaware |
| Fern Street LLC | 37-1732913 | | Delaware |
| MassMutual Retirement Services, LLC | 04-1590850 | | Delaware |
| MML Distributors LLC* | 04-3356880 | | Massachusetts |
| MML Investment Advisers, LLC | None | | Delaware |
| MML Mezzanine Investor, LLC | 04-1590850 | | Delaware |
| MML Strategic Distributors, LLC | 46-3238013 | | Delaware |
| The MassMutual Trust Company, FSB | 06-1563535 | | United States |
| MMC Equipment Finance LLC | 04-1590850 | | Delaware |
| MassMutual Asset Finance LLC* | 26-0073611 | | Delaware |
| MMAF Equipment Finance LLC 2009-A | 27-1379258 | | Delaware |
| MMAF Equipment Finance LLC 2011-A | 45-2589019 | | Delaware |
| MML Private Placement Investment Company I, LLC | 04-1590850 | | Delaware |
| Pioneers Gate LLC | None | | Delaware |
| MSC Holding Company, LLC | 45-4376777 | | Delaware |
| MassMutual Holding MSC, Inc. | 04-3341767 | | Massachusetts |
| MassMutual Holding LLC | 04-2854319 | | Delaware |
| MassMutual Assignment Company | 06-1597528 | | North Carolina |
| MassMutual Capital Partners LLC | 04-1590850 | | Delaware |
| MassMutual Ventures LLC | 47-1296410 | | Delaware |
| MM Caerulus Holdco US LLC | None | | Delaware |
| MM Rothesay Holdco US LLC | 04-1590850 | | Delaware |
| MML Investors Services, LLC | 04-1590850 | | Massachusetts |
| MML Insurance Agency, LLC | 04-1590850 | | Massachusetts |
| MMLISI Financial Alliances, LLC | 41-2011634 | | Delaware |
| MassMutual International LLC | 04-3313782 | | Delaware |

PART 1 – ORGANIZATIONAL CHART

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|--|----------------|--------------|---|
| MassMutual Asia Limited | None | | Hong Kong, Special Administrative Region of China |
| MassMutual Asia Investors Ltd. | None | | Hong Kong, Special Administrative Region of China |
| MassMutual Guardian Limited | None | | Hong Kong, Special Administrative Region of China |
| MassMutual Insurance Consultants Limited | None | | Hong Kong, Special Administrative Region of China |
| MassMutual Services Limited | None | | Hong Kong, Special Administrative Region of China |
| MassMutual Trustees Limited | None | | Hong Kong, Special Administrative Region of China |
| Protective Capital (International) Limited | 98-0610331 | | Hong Kong, Special Administrative Region of China |
| MassMutual Life Insurance Company | None | | Japan |
| MassMutual Internacional (Chile) SpA | 98-1033127 | | Chile |
| MM Asset Management Holding LLC | 45-4000072 | | Delaware |
| Babson Capital Management LLC | 51-0504477 | | Delaware |
| Babson Capital Finance LLC | 80-0875475 | | Delaware |
| BCF Europe Funding Limited | None | | Ireland |
| Babson Capital Securities LLC | 04-3238351 | | Delaware |
| Babson Capital Guernsey Limited | 98-0437588 | | Guernsey |
| Babson Capital Management (UK) Limited | 98-0432153 | | United Kingdom |
| Almack Mezzanine GP III Limited | None | | United Kingdom |
| Almack Holding Partnership GP Limited | None | | United Kingdom |
| Almack Mezzanine Fund Limited | None | | United Kingdom |
| Almack Mezzanine Fund II Limited | None | | United Kingdom |
| Babson Capital Global Advisors Limited | 98-1012393 | | United Kingdom |
| Babson Capital Japan KK | None | | Japan |
| Cornerstone Real Estate Advisers LLC | 55-0878489 | | Delaware |
| Cornerstone Real Estate Advisers Inc. | 04-3238351 | | California |
| Cornerstone Real Estate Advisers Japan K.K. | None | | Japan |
| Cornerstone Real Estate UK Holdings Limited | None | | Delaware |
| Cornerstone Real Estate UK (No. 2) Limited | 98-0654401 | | United Kingdom |
| Cornerstone Real Estate Advisers Europe LLP | 98-0654388 | | United Kingdom |
| Cornerstone Real Estate Advisers Europe Finance LLP | 98-0654412 | | United Kingdom |
| PAMERA Cornerstone Real Estate Advisers GmbH | 98-1194368 | | Germany |
| Babson Capital Management (Australia) Holding Company Pty Ltd. | None | | Australia |
| Babson Capital Management (Australia) Pty Ltd. | 98-0457456 | | Australia |
| Babson Capital Cornerstone Asia Limited | None | | Hong Kong, Special Administrative Region of China |
| Wood Creek Capital Management LLC | 04-1590850 | | Delaware |
| Wood Creek Index Company, LLC | 26-3115362 | | Delaware |
| Milestone Acquisition Holding, LLC. | 47-3055009 | | Delaware |
| Alchemy Copyrights, LLC. | None | | Delaware |
| Red Lake Ventures, LLC | 46-5460309 | | Delaware |
| Teaktree Acquisition, LLC | None | | Delaware |
| Sweet Tree Holdings 1, LLC | 46-3123110 | | Delaware |

PART 1 – ORGANIZATIONAL CHART

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|--|----------------|--------------|-------------------|
| U.S. WIG Holdings, LP | 46-1500495 | | Delaware |
| US Trailer Holdings LLC | 90-0841497 | | Delaware |
| WC Aircraft Holdings US II, LLC | 46-3378584 | | Delaware |
| Wood Creek Aircraft Holding I, LP | None | | Cayman Islands |
| Babson Capital Floating Rate Income Fund Management, LLC | 04-1590850 | | Delaware |
| Babson Capital Core Fixed Income Management LLC | 27-3523916 | | Delaware |
| Babson Capital Total Return Management LLC | 27-3524203 | | Delaware |
| Benton Street Advisors, Inc. | 98-0536233 | | Cayman Islands |
| SDCOS Management LLC | 04-1590850 | | Delaware |
| Great Lakes III GP, LLC | 04-1590850 | | Delaware |
| Loan Strategies Management LLC | 04-1590850 | | Delaware |
| Mezzo LLC | 04-1590850 | | Delaware |
| Mezzco II LLC | 02-0767001 | | Delaware |
| Mezzco III LLC | 41-2280126 | | Delaware |
| Mezzco IV LLC | 80-0920285 | | Delaware |
| Mezzco Australia LLC | 90-0666326 | | Delaware |
| Mezzco Australia II | None | | Delaware |
| Somerset Special Opportunities Management LLC | 04-1590850 | | Delaware |
| Winterset Management LLC | 04-1590850 | | Delaware |
| Oppenheimer Acquisition Corp. | 84-1149206 | | Delaware |
| OppenheimerFunds, Inc. | 13-2527171 | | Colorado |
| OppenheimerFunds Distributor, Inc. | 13-2953455 | | New York |
| Oppenheimer Real Asset Management, Inc. | 84-1106295 | | Delaware |
| OFI Global Institutional, Inc. | 13-4160541 | | New York |
| OFI Global Trust Company | 13-3459790 | | New York |
| HarbourView Asset Management Corporation | 22-2697140 | | New York |
| Trinity Investment Management Corporation | 25-1951632 | | Pennsylvania |
| OFI SteelPath, Inc. | 84-1128397 | | Delaware |
| Shareholder Services, Inc. | 84-1066811 | | Colorado |
| OFI Global Asset Management, Inc. | 84-0765063 | | Delaware |
| OFI Private Investments Inc. | 91-2036414 | | New York |
| Tremont Group Holdings, Inc. | 62-1210532 | | New York |
| Tremont Partners, Inc. | 06-1121864 | | Connecticut |
| Tremont Capital Management (Ireland) Limited | None | | Ireland |
| Tremont GP, Inc. | 20-8215352 | | Delaware |
| Settlement Agent LLC | 90-0874510 | | Delaware |
| Tremont (Bermuda) Limited | None | | Bermuda |
| MassMutual Baring Holding LLC | 04-1590850 | | Delaware |
| Baring North America LLC | 98-0241935 | | Massachusetts |
| MassMutual Holdings (Bermuda) Limited | None | | Bermuda |

PART 1 – ORGANIZATIONAL CHART

| Baring Asset Management Limited98-0241935United KingdomBaring International Investment Management Holdings98-0457328United KingdomBaring International Investment Management UK Holdings Limited98-045756United KingdomBaring Asset Management UK Holdings Limited98-045756United KingdomBaring Asset Management GmbH98-045756United KingdomBaring Asset Management (Asia) Holdings Limited98-0457465BermudaBaring Asset Management (Asia) Limited98-0457465BaringBaring Asset Management (Australia) Pty Limited98-0457456AustraliaBaring Asset Management Switzerland SàrlNoneSwitzerlandBaring Asset Management Switzerland SàrlNoneSwitzerland <td< th=""><th></th><th></th><th><u>Federal Tax ID</u></th><th>NAIC Co Code</th><th>State of Domicile</th></td<> | | | <u>Federal Tax ID</u> | NAIC Co Code | State of Domicile |
|--|--|---|--|--------------|---|
| Baring President Horders Fulled 96-04-374 Chined Kingdom Baring Investments (UK) Limited 80-05-7578 United Kingdom Baring Investments (UK) Limited Nore Cinenessee Haven Life Insurance Agency, Inc. 62-055163 Tennessee MML Management Corporation 04-243240 Measachusetts MassMutual International Holding MSC, Inc. 04-159850 Delaware Society of Grownups, LLC MAL Mezzanine Investor III, LLC MassMutual International Holding MSC, Inc. 04-1590850 Delaware MML Mezzanine Investor III, LLC 04-1590850 Delaware 04-04-04-04-04-04-04-04-04-04-04-04-04-0 | Baring Intern Baring Intern Baring Intern Baring Intern Baring Invest Baring Pensid Baring Invest Baring Invest MML Mezzanine Investor II, LLC MML Re Finance LLC Other Affiliates: Invicta Advisors LLC Jefferies Finance LLC MML Private Equity Intercontinental LLC Jefferies Finance LLC MM Private Equity Intercontinental LLC 100 w. 3rd Street LLC 300 South Tryon Hotel LLC 300 South Tryon Hotel LLC 300 South Tryon LLC 54 West Capital LLC Alexandria Towers Investors LLC Cambridge Hotel, LLC Cheyenne Mountain Resort LLC | ational Investment Limited ational Investment Management Holdings aring Asset Management UK Holdings Limited Baring Asset Management GmbH Baring Asset Management (Asia) Holdings Limited Baring International Fund Managers (Bermuda) Limited Baring Asset Management (Asia) Limited Baring Asset Management (Asia) Limited Baring Asset Management (Japan) Limited Baring Asset Management (Australia) Pty Limited Baring Asset Management Switzerland Sarl Baring Asset Management Switzerland Sarl Baring SICE (Taiwan) Limited Baring France SAS Managers Limited ment Services Limited | 98-0241935 98-0457328 98-0457328 98-0457587 98-0457587 98-0457587 98-0457587 98-0457465 98-0457465 98-0457463 None 98-0236449 98-0457456 98-0457456 98-0457570 98-0457570 98-0457578 None 62-0951563 46-2252944 04-2443240 04-3548444 47-1466022 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 04-1590850 | | United Kingdom United Kingdom Germany Hong Kong, Special Administrative Region of China Bermuda Hong Kong, Special Administrative Region of China Korea Japan Australia Ireland Switzerland Taiwan ROC France United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom Enessee Delaware Massachusetts Massachusetts Massachusetts Delaware |

PART 1 – ORGANIZATIONAL CHART

| | <u>Federal Tax ID</u> | NAIC Co Code State of Domicile |
|--|-----------------------|--------------------------------|
| E-Wise Land Venture LLC | 20-3887968 | Delaware |
| Kazwell Realty Partners LLC | 20-3887968 | Delaware |
| King Alexander LLC | 45-3754085 | Delaware |
| Marco Hotel LLC | 46-4255307 | Delaware |
| MMI/BDI Riverside Mt. Vernon LLC | 26-2704765 | Delaware |
| MML O'Hare Hotel LLC | 26-3799762 | Delaware |
| Oakley Grove Development LLC | 20-3887968 | Delaware |
| Old Pasco Properties LLC | 20-3887968 | Delaware |
| Reston Arboretum LLC | 75-2901061 | Delaware |
| Riva Portland LLC | 30-0713071 | Delaware |
| Rockville Town Center LLC | 54-2055778 | Virginia |
| Seattle 1415 Hotel Owner LLC | 46-5491311 | Delaware |
| Sedona TFMP Land LLC | 04-1590850 | Delaware |
| South Myrtle Monrovia MM LLC | 04-1590850 | Delaware |
| South Pasco Properties LLC | 20-3887968 | Delaware |
| West 46 th Street Hotel LLC | 05-1590850 | Delaware |
| Babson Affiliates & Funds: | | |
| Almack Mezzanine Fund I LP* | None | United Kingdom |
| Almack Mezzanine Fund II Unleveraged LP | None | United Kingdom |
| Almack Mezzanine Fund III LP* | None | United Kingdom |
| Babson Capital High Yield LLC* | 55-0886109 | Delaware |
| Babson Capital Floating Rate Income Fund, L.P. | 27-3330830 | Delaware |
| Babson Capital Global Special Situation Credit Fund 2* | 98-1206017 | Delaware |
| Babson Capital Global Investment Funds plc | None | Ireland |
| Babson Capital Global Investment Fund 2 plc | None | Ireland |
| Babson Capital Global Umbrella Fund plc | None | Ireland |
| Babson Capital Loan Strategies Fund, L.P.* | 37-1506417 | Delaware |
| Babson CLO Ltd. 2005-I | None | Cayman Islands |
| Babson CLO Ltd. 2005-II | None | Cayman Islands |
| Babson CLO Ltd. 2005-III | None | Cayman Islands |
| Babson CLO Ltd. 2006-I | None | Cayman Islands |
| Babson CLO Ltd. 2006-II | None | Cayman Islands |
| Babson CLO Ltd. 2007-I | None | Cayman Islands |
| Babson CLO Ltd. 2011-I | None | Cayman Islands |
| Babson CLO Ltd. 2012-I | None | Cayman Islands |
| Babson CLO Ltd. 2012-II | None | Cayman Islands |
| Babson CLO Ltd. 2013-I | None | Cayman Islands |
| Babson CLO Ltd. 2013-II | 98-1128827 | Cayman Islands |
| Babson CLO Ltd. 2014-I | None | Cayman Islands |
| Babson CLO Ltd. 2014-II | None | Cayman Islands |
| Babson CLO Ltd. 2014-III | None | Cayman Islands |

PART 1 – ORGANIZATIONAL CHART

| | <u>Federal Tax ID</u> | NAIC Co Code | State of Domicile |
|--|-----------------------|--------------|-------------------|
| Babson Euro CLO 2014-I BV | None | | Netherlands |
| Babson Euro CLO 2014-II BV | None | | Netherlands |
| Babson Global Floating Rate Fund | 46-3133952 | | Massachusetts |
| Babson Global Income Opportunities Credit Fund | 46-3119764 | | Massachusetts |
| Babson Mid-Market CLO Ltd. 2007-II | None | | Cayman Islands |
| Benton Street Partners I, L.P.* | 98-0536233 | | Cayman Islands |
| Benton Street Partners II, L.P. | 98-0536199 | | Cayman Islands |
| Clear Lake CLO, Ltd. | None | | Cayman Islands |
| Connecticut Valley Structured Credit CDO II, Ltd. | None | | Cayman Islands |
| Connecticut Valley Structured Credit CDO III, Ltd. | None | | Cayman Islands |
| Diamond Lake CLO, Ltd. | None | | Cayman Islands |
| Duchess I CDO S.A. | None | | United Kingdom |
| Duchess III CDO S.A. | None | | United Kingdom |
| Duchess IV CDO S.A. | None | | United Kingdom |
| Duchess V CDO S.A. | None | | United Kingdom |
| Duchess VI CLO B.V. | None | | United Kingdom |
| Duchess VII CLO B.V. | None | | United Kingdom |
| Fugu CLO B.V. | None | | United Kingdom |
| Fugu Credit Plc | None | | United Kingdom |
| Gateway Mezzanine Partners I, L.P.* | 80-0691253 | | Delaware |
| Gateway Mezzanine Partners I Trust | None | | Cayman Islands |
| Gateway Mezzanine Partners II LP* | 90-0991195 | | Delaware |
| Great Lakes II LLC* | 71-1018134 | | Delaware |
| Great Lakes III, L.P. | 37-1708623 | | Delaware |
| Great Lakes LLC* | 56-2505390 | | Delaware |
| Intermodal Holding II LLC | 46-2344300 | | Delaware |
| Malin CLO B.V. | None | | United Kingdom |
| Newton CDO Ltd | None | | Cayman Islands |
| Rockall CLO B.V. | None | | United Kingdom |
| Saint James River CDO, Ltd. | None | | Cayman Islands |
| Sapphire Valley CDO I, Ltd. | None | | Cayman Islands |
| SDCOS L.P. | 74-3182902 | | Delaware |
| Somerset Special Opportunities Fund L.P.* | 20-8856877 | | Delaware |
| Tower Square Capital Partners, L.P.* | 04-3722906 | | Delaware |
| Tower Square Capital Partners II, L.P.* | 30-0336246 | | Delaware |
| Tower Square Capital Partners II-A, L.P.* | 32-0160190 | | Delaware |
| Tower Square Capital Partners III, L.P.* | 41-2280127 | | Delaware |
| Tower Square Capital Partners IIIA, L.P. | 41-2280129 | | Delaware |
| Tower Square Capital Partners IV, L.P. | 80-0920340 | | Delaware |
| Tower Square Capital Partners IV-A, L.P. | 80-0920367 | | Delaware |
| U.S. Trailer Holdings II LLC | 46-2104352 | | Delaware |

PART 1 – ORGANIZATIONAL CHART

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|-------------------|
| Vinacasa CLO, Ltd. | None | | Cayman Islands |
| Whately CDO, Ltd. | None | | Cayman Islands |
| Wood Čreek Multi Asset Fund, L.P. | 20-4981369 | | Delaware |
| Wood Creek Venture Fund LLC | 04-1590850 | | Delaware |
| Baring Affiliates & Funds: | | | |
| Baring ACWI ex US (SRI) Equity Fund | 27-3234744 | | Delaware |
| Baring All Country World ex US Equity Fund | 45-4184261 | | Delaware |
| Baring Emerging Market Corp Debt Fund | None | | Ireland |
| Baring Focused EAFE Equity Fund | 11-3789446 | | Delaware |
| Baring Focused International Equity Fund | 01-0850479 | | Delaware |
| Baring Global Dynamic Asset Allocation Fund | 30-0607379 | | Delaware |
| Baring International Equity Fund | 39-2059577 | | Delaware |
| Baring International Small Cap Equity Fund | 26-4142796 | | Delaware |
| Baring World Equity Fund | 46-1197222 | | Delaware |
| Multi-Employer Global Aggregate Diversified Portfolio | 26-1896226 | | Delaware |
| Cornerstone Affiliates & Funds: | | | |
| 12-18 West 55th Street Predevelopment, LLC* | 20-2548283 | | Delaware |
| 2 Harbor Shore Member LLC* | 46-4803557 | | Delaware |
| 20 Gates Management LLC | 45-2738137 | | New York |
| 21 West 86 LLC* | 45-5257904 | | Delaware |
| Ygnatio Valley Funding | 20-5481477 | | Delaware |
| AT Mid-Atlantic Office Portfolio LLC* | 45-2779931 | | Delaware |
| Babson Mezzanine Realty Investors I* | 20-4570515 | | Delaware |
| Babson Mezzanine Realty Investors II | 24-1446970 | | Delaware |
| CHC/RFP VI Core LLC | 04-1590850 | | Delaware |
| Cornerstone Core Mortgage Fund I LP | 27-1701733 | | Delaware |
| Cornerstone Core Mortgage Venture I LP | 27-1701622 | | Delaware |
| Cornerstone Enhanced Mortgage Fund I LP | 45-3751572 | | Delaware |
| Cornerstone Fort Pierce Development LLC* | 56-2630592 | | Delaware |
| Cornerstone Global Real Estate LP* | 20-8730751 | | Delaware |
| Cornerstone High Yield Venture LP | 36-4770946 | | Delaware |
| Cornerstone Hotel Income and Equity Fund II LP | 26-1828760 | | Delaware |
| Cornerstone Patriot Fund LP | 20-5578089 | | Delaware |
| Cornerstone Real Estate Fund VIII LP | 27-0547156 | | Delaware |
| Cornerstone Permanent Mortgage Fund | 45-2632610 | | Massachusetts |
| CREA 330 Third LLC* | 46-5001122 | | Delaware |
| CREA FMF Nashville LLC | 46-4367364 | | Delaware |
| CREA/LYON West Gateway, LLC* | 26-2399532 | | Delaware |
| CREA/PPC Venture LLC* | 20-0348173 | | Delaware |
| Fallon Cornerstone One MPD LLC* | 26-1611591 | | Delaware |
| Farringdon London Holdings LLC* | 46-3880526 | | Delaware |

PART 1 – ORGANIZATIONAL CHART

| | <u>Federal Tax ID</u> <u>N</u> | AIC Co Code State of Domicile |
|---|--------------------------------|--------------------------------|
| Fan Pier Development LLC* | 20-3347091 | Delaware |
| Gracechurch London Holdings LLC* | 46-1586427 | Delaware |
| Infinity SCD Ltd. | None | United Kingdom |
| Johnston Groves LLC | 20-4819358 | Delaware |
| Metropolitan At Lorton* | 20-5984759 | Delaware |
| MM Greenhill Office LLC* | 46-3317841 | Delaware |
| MMI/Hines Harrison LLC* | 46-5347643 | Delaware |
| MM Woodfield Martingale LLC* | 46-4077059 | Delaware |
| Salomon Brothers Commercial Mortgage Trust 2001-MM | None | Delaware |
| Sawgrass Village Shopping Center LLC* | 27-2977720 | Delaware |
| SBNP SIA LLC | 46-3465271 | Delaware |
| Twenty Two Liberty LLC* | 35-2484550 | Massachusetts |
| UK LIW Manager LLC | 45-4606547 | Delaware |
| UK LIW Member LLC | 45-4606547 | Delaware |
| Washington Gateway Apartments Venture LLC* | 45-5401109 | Delaware |
| Waterford Development Associates | 20-2970495 | Delaware |
| Waterloo London Holdings LLC | 47-1993493 | Delaware |
| WeHo Domain LLC* | 46-3122029 | Delaware |
| MassMutual Premier Funds: | | |
| MassMutual Barings Dynamic Allocation Fund | 45-3168892 | Massachusetts |
| MassMutual Premier Balanced Fund | 04-3212054 | Massachusetts |
| MassMutual Premier Core Bond Fund | 04-3277549 | Massachusetts |
| MassMutual Premier Disciplined Growth Fund | 04-3539084 | Massachusetts |
| MassMutual Premier Disciplined Value Fund | 04-3539083 | Massachusetts |
| MassMutual Premier Diversified Bond Fund | 04-3464165 | Massachusetts |
| MassMutual Premier Focused International Fund | 02-0754273 | Massachusetts |
| MassMutual Premier Global Fund | 51-0529334 | Massachusetts |
| MassMutual Premier High Yield Fund | 04-3520009 | Massachusetts |
| MassMutual Premier Inflation-Protected and Income Fund | 03-0532475 | Massachusetts |
| MassMutual Premier International Equity Fund | 04-3212044 | Massachusetts |
| MassMutual Premier Main Street Fund | 51-0529328 | Massachusetts |
| MassMutual Premier Short-Duration Bond Fund | 04-3212057 | Massachusetts |
| MassMutual Premier Small/Mid Cap Opportunities Fund | 04-3424705 | Massachusetts |
| MassMutual Premier Strategic Emerging Markets Fund | 26-3229251 | Massachusetts |
| MassMutual Premier Value Fund | 04-3277550 | Massachusetts |
| MassMutual Select Funds: | 27 10282(2 | Masarahura#a |
| MassMutual Select Blackrock Global Allocation Fund | 27-1028263 | Massachusetts |
| MassMutual Select Blue Chip Growth Fund MassMutual Select Diversified International Fund | 04-3556992 14-1980900 | Massachusetts Massachusetts |
| | | |
| MassMutual Select Diversified Value Fund MassMutual Select Focused Value Fund | 01-0821120 04-3512590 | Massachusetts Massachusetts |
| Massimular Select Focused Value Fully | 04-3312390 | wassacnuseus |

PART 1 – ORGANIZATIONAL CHART

| | <u>Federal Tax ID</u> | NAIC Co Code | State of Domicile |
|--|-----------------------|--------------|-------------------|
| MassMutual Select Fundamental Growth Fund | 04-3512593 | | Massachusetts |
| MassMutual Select Fundamental Value Fund | 04-3584138 | | Massachusetts |
| MassMutual Select Growth Opportunities Fund | 04-3512589 | | Massachusetts |
| MassMutual Select Large Cap Value Fund | 04-3513019 | | Massachusetts |
| MassMutual Select Mid Cap Growth Equity II Fund | 04-3512596 | | Massachusetts |
| MassMutual Select Mid-Cap Value Fund | 42-1710935 | | Massachusetts |
| MassMutual Select MSCI EAFE International Index Fund | 45-5357167 | | Massachusetts |
| MassMutual Select Overseas Fund | 04-3557000 | | Massachusetts |
| MassMutual Select PIMCO Total Return Fund | 27-2377446 | | Massachusetts |
| MassMutual Select Russell 2000 Small Cap Index Fund | 45-5366542 | | Massachusetts |
| MassMutual Select S&P 500 Index Fund | 04-3410047 | | Massachusetts |
| MassMutual Select Small Cap Growth Equity Fund | 04-3464205 | | Massachusetts |
| MassMutual Select Small Capital Value Equity Fund | 02-0769954 | | Massachusetts |
| MassMutual Select Small Company Growth Fund | 04-3584141 | | Massachusetts |
| MassMutual Select Small Company Value Fund | 04-3584140 | | Massachusetts |
| MassMutual Select S&P Mid Cap Index Fund | 45-5349772 | | Massachusetts |
| MassMutual Select Strategic Bond Fund | 26-0099965 | | Massachusetts |
| MML Series Investment Funds: | | | |
| MML International Equity Fund | 46-4257056 | | Massachusetts |
| MassMutual RetireSMART Funds: | | | |
| MassMutual RetireSMART 2010 Fund | 03-0532456 | | Massachusetts |
| MassMutual RetireSMART 2015 Fund | 27-1933828 | | Massachusetts |
| MassMutual RetireSMART 2020 Fund | 03-0532467 | | Massachusetts |
| MassMutual RetireSMART 2025 Fund | 27-1933753 | | Massachusetts |
| MassMutual RetireSMART 2035 Fund | 27-1933389 | | Massachusetts |
| MassMutual RetireSMART 2040 Fund | 03-0532471 | | Massachusetts |
| MassMutual RetireSMART 2045 Fund | 27-1932769 | | Massachusetts |
| MassMutual RetireSMART 2050 Fund | 26-1345332 | | Massachusetts |
| MassMutual RetireSMART 2055 Fund | 46-3289207 | | Massachusetts |
| MassMutual RetireSMART Conservative Fund | 45-1618155 | | Massachusetts |
| MassMutual RetireSMART Growth Fund | 45-1618222 | | Massachusetts |
| MassMutual RetireSMART In Retirement Fund | 03-0532464 | | Massachusetts |
| MassMutual RetireSMART Moderate Fund | 45-1618262 | | Massachusetts |
| MassMutual RetireSMART Moderate Growth Fund | 45-1618046 | | Massachusetts |
| Oppenheimer Funds: | | | ~ |
| HarbourView CLO 2006-1 Limited | None | | Cayman Islands |
| HarbourView CLO VII, Ltd. | None | | Cayman Islands |
| Oppenheimer Global High Yield Fund | 45-3417590 | | Delaware |
| Oppenheimer Global Multi-Asset Income Fund | 47-1714929 | | Delaware |
| Oppenheimer Global Real Estate Fund* | 46-1604428 | | Delaware |
| Oppenheimer International Growth Fund | 13-3867060 | | Massachusetts |

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| <u>Federal Tax ID</u> | NAIC Co Code | State of Domicile |
|--------------------------|--------------|--------------------------------|
| 84-1073463 22-3849391 | | Massachusetts Massachusetts |

Oppenheimer Main Street Fund Oppenheimer Real Estate Fund

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---------|------------------------------|---------|--------------|---------|--------------|--------------------|---|---------|-----------|-------------------------------------|-------------------|---------|-----------------------|----|
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| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board. | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NIALO | | | | | Nama a f | | - 1- | | | | | |
| • | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| | | | | | | | Massachusetts Mutual Life Insurance | | | Massachusetts Mutual Life Insurance | | | | |
| 0435 Ma | assachusetts Mut Life Ins Co | 65935 | 04-1590850 . | 3848388 | 0000225602 | | Company (MMLIC) | MA | UIP | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0435 CM | M Life Ins Co | 93432 | 06-1041383 | | | | C.M. Life Insurance Company | CT | UDP | Company | Ownership | 100.000 | MMLIC | |
| | ML Bavstate Life Ins Co | 70416 | 43-0581430 | | 0000924777 | | MML Bay State Life Insurance Company | CT | | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | |
| 0000 | Daystate Erre mis oo | | 06-1041383 | | 0000024111 | | CML Mezzanine Investor. LLC | DE | | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | |
| 0000 | | | 06-1041383 | | | | CML Mezzanine Investor L, LLC | DE | | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | | | | | | | | |
| 0000 | | | 06-1041383 | | | | CML Mezzanine Investor III, LLC | DE | | C.M. Life Insurance Company | 0wnership | | | |
| 0000 | | | 06-1041383 . | | | | CML Re Finance LLC | DE | | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | CML Special Situations Investor LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 . | | | | MML Mezzanine Investor L, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | MML Special Situations Investor LLC | DE | NIA | Company | Ownership. | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 | | | | Berkshire Way LLC | DE | NIA | | Ownership | 100.000 | MMLIC | |
| | | | 04-1090600 - | | | | Derksiffe way LLC | VE | NIA | Massachusetts Mutual Life Insurance | ownership | | | |
| | | | | | | | | | | | | | | |
| 0000 | | | 26-4441097 . | | | | WP-SC, LLC | DE | NIA | Company | Ownership | | - MMLIC | |
| 0000 | | | 26-4441097 . | | | | WP-SC, LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | . MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 . | | | | MSP-SC, LLC | DE | NIA | Company | Ownership. | | MMLIC | |
| | | | | | | | • | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 27-1435692 | | | | Country Club Office Plaza LLC | DE | NIA | Company | Ownership | 88,100 | MMLIC | |
| 0000 | | | 27-1435692 | | | | Country Club Office Plaza LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 21 1400002 - | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 37-1732913 | | | | Fern Street LLC | DE | NIA | | Ownership | | MMLIC | |
| | | | 37-1732913 . | | | | Fern Street LLC | | NTA | | Uwnersnip | | MMLTC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 . | | | | MassMutual Retirement Services, LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-3356880 . | | 0000943903 | | MML Distributors LLC | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 04-3356880 . | | 0000943903 | | MML Distributors LLC | MA | NIA | MassMutual Holding LLC | Ownership | 1.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | MML Investment Advisers, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 | | | | MML Mezzanine Investor, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 04-1390030 - | | | | MINL MEZZAIIIIE IIIVESTOI, LLC | UE | | Massachusetts Mutual Life Insurance | ownership | | | |
| 0000 | | | 10.0000010 | | | | | 55 | | | | 400,000 | 184 10 | |
| | | | 46-3238013 . | | | | MML Strategic Distributors, LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 06-1563535 . | 2881445 | . 0001103653 | | The MassMutual Trust Company, FSB | US | NIA | Company | Ownership | | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 | | | | MMC Equipment Finance LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 26-0073611 | | | ····· | MassMutual Asset Finance LLC | DE. | NIA | MMC Equipment Finance LLC | Ownership | | MMLIC | |
| | | | 26-0073611 | | | | MassMutual Asset Finance LLC | DE. | | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 27-1379258 | | | | MMAF Equipment Finance LLC 2009-A | DE | | MassMutual Asset Finance LLC | Ownership | | MMLIC | |
| 0000 | | | 45-2589019 | | | | MMAF Equipment Finance LLC 2005-A | DE | | MassMutual Asset Finance LLC | Ownership | | MMLIC | |
| | | | -10-2003019 | | | | | | NIA | | | | | |
| 0000 | | | | | 1 | | MML Private Placement Investment Company I, | | | Massachusetts Mutual Life Insurance | | 400 000 | 144 10 | |
| 0000 | | | 04-1590850 . | | | | LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | Pioneers Gate LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 45-4376777 | | 1 | | MSC Holding Company, LLC | DF | NIA | Company | Ownership | | MMLIC | |

| | â | 0 | 4 | 5 | 0 | 7 | | - | 10 | | 10 | 10 | 14 | 15 |
|-------|------------|---------|--------------|---------|--------------|--------------------|--|----------|------------|---|-------------------|----------|-----------------------|----|
| 1 | 2 | 3 | 4 | 5 | 6 | / | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence. | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| 0000 | aroup Hamo | 0000 | 04-3341767 | | 0 | internationaly | MassMutual Holding MSC. Inc. | MA | NIA | MSC Holding Company, LLC | Ownership | | MMLIC | |
| | | | 04 0041101 1 | | | | massimutual horung moo, mo. | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-2854319 . | 2392316 | | | MassMutual Holding LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 04-2004319 . | 2092010 | | | MassMutual Assignment Company | NC | NIA NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| | | | 06-1597528 . | | 0001399869 | | MassMutual Capital Partners LLC | | NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| | | | 47-1296410 | | 0001399869 | | MassMutual Capital Partners LLC | UE | | | | | MMLIC | |
| | | | 47-1296410 . | | | | | DE DE | NIA | MassMutual Holding LLC | Ownership | | | |
| 0000 | | | | | | | MM Caerulus Holdco US LLC | | NIA | MassMutual Holding LLC | 0wnership | | | |
| 0000 | | | 04-1590850 | | | | MM Rothesay Holdco US LLC | DE | NIA | MassMutual Holding LLC | Ownership | | | |
| 0000 | | | 04-1590850 | | 0000701059 | | MML Investors Services, LLC | MA | NIA | MassMutual Holding LLC | 0wnership | | | |
| 0000 | | | 04-1590850 . | | | | MML Insurance Agency, LLC | MA | NIA | MML Investors Services, LLC | 0wnership | | | |
| 0000 | | | 41-2011634 . | | 0001456663 | | MMLISI Financial Alliances, LLC | DE | NIA | MML Investors Services, LLC | Ownership | | - MMLIC | |
| 0000 | | | 04-3313782 . | | | | MassMutual International LLC | DE | NI A | MassMutual Holding LLC | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Asia Limited | HKG | IA | MassMutual International LLC | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Asia Investors Ltd | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Guardian Limited | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Insurance Consultants Limited | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Services Limited | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Trustees Limited | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| | | | | | | | Protective Capital (International) Limited | | | | | | | |
| | | | 98-0610331 . | | | | | HKG | NIA | MassMutual Asia Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | MassMutual Life Insurance Company | JPN | IA | MassMutual International LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 98-1033127 | | | | MassMutual Internacional (Chile) SpA | CHL | NIA | MassMutual International LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 45-4000072 | | | | MM Asset Management Holding LLC | | NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| 0000 | | | 51-0504477 | | 0000009015 | | Babson Capital Management LLC | DE | NIA | MassMutual Asset Management Holding LLC | Ownership | | MMLIC | |
| 0000 | | | 80-0875475 | | | | Babson Capital Finance LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| 0000 | | | 00 0010410 - | | | | BCF Europe Funding Limited | IRL | NIA | Babson Capital Finance LLC | Ownership | | MMLIC | |
| 0000 | | | 04-3238351 | | 0000930012 | | Babson Capital Securities LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| 0000 | | | 98-0437588 | | 0000930012 | | Babson Capital Guernsey Limited | GGY | | Babson Capital Management LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 98-0432153 | | | | Babson Capital Mangement (UK) Limited | GBR | | Babson Capital Guernsev Limited | Ownership | | MMLIC | |
| | | | 98-0432153 . | | | | | GBR | | | | | MMLIC | |
| 0000 | | | | | | | Almack Mezzanine GP III Limited | | | Babson Capital Europe Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | Almack Holding Partnership GP Limited | GBR | NIA | Babson Capital Europe Limited | Ownership | | | |
| 0000 | | | | | | | Almack Mezzanine Fund Limited | GBR | NIA | Babson Capital Europe Limited | Ownership | | | |
| 0000 | | | | | | | Almack Mezzanine Fund II Limited | GBR | | Babson Capital Europe Limited | Ownership | | | |
| 0000 | | | 98-1012393 . | | | | Babson Capital Global Advisors Limited | GBR | | Babson Capital Europe Limited | Ownership | | | |
| 0000 | | | | | | | Babson Capital Japan KK | JPN | NIA | Babson Capital Management LLC | 0wnership | | | |
| 0000 | | | 55-0878489 . | 3456895 | . 0001379495 | | Cornerstone Real Estate Advisers LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| 0000 | | | 04-3238351 . | 3456895 | . 0001011148 | | Cornerstone Real Estate Advisers Inc. | CA | NIA | Cornerstone Real Estate Advisers LLC | Ownership | | | |
| | | | | | 1 | | Cornerstone Real Estate Advisers Japan | | | | | | | |
| 0000 | | | | | | | К.К | JPN | NIA | Cornerstone Real Estate Advisers LLC | Ownership | | MMLIC | |
| | | | | | 1 | | Cornerstone Real Estate UK Holdings | | | | | | | |
| 0000 | | | | | | | Limited | DE | NIA | Cornerstone Real Estate Advisers LLC | Ownership | | MMLIC | |
| | | | | | 1 | | Cornerstone Real Estate UK (No. 2) Limited | | | Cornerstone Real Estate UK Holdings | | | | |
| 0000 | | | 98-0654401 . | | | | | GBR | NIA | Limited | Ownership | | MMLIC | |
| | | | | | | | Cornerstone Real Estate Advisers Europe | | | Cornerstone Real Estate UK Holdings | | | | |
| 0000 | | | 98-0654388 . | | | | | GBR | NIA | Limited | Ownership | | MMLIC | |
| | | | | | | | Cornerstone Real Estate Advisers Europe | | | Cornerstone Real Estate UK Holdings | | | 1 | |
| 0000 | | | 98-0654412 | | 1 | | Finance LLP | GBR | NIA | Limited | Ownership | 100.000 | MMLIC | |
| | | | | | | | PAMERA Cornerstone Real Estate Advisers | | | Cornerstone Real Estate UK Holdings | | | | |
| 0000 | | | 98-1194368 | | | | GmbH | DEU | NIA | Limited | Ownership | 100.000 | MMLIC | |
| | | | 00 110-000 | | | | Babson Capital Management (Australia) | | | | 0 | | | |
| 0000 | | | | | 1 | | Holding Company Pty Ltd. | AUS | NIA | Babson Capital Management LLC | Ownership | .100.000 | MMLIC | |
| | | | <u> </u> | | | | Inorung company rty Ltg. | HUƏ | NTA | Dauson Capital Management LLC | | | | |

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| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board. | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIO | | | | | Nama af | ciliary | | | | | | |
| 0 | | NAIC | 10 | E a da val | | if Publicly Traded | Names of | | to | Diversity On a two lines have | Attorney-in-Fact, | Provide | Lillting at a O antra lilia a | |
| Group | One we blower | Company | ID | Federal | CIK | (U.S. or | Parent, Subsidiaries Or Affiliates | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | * |
| Code | Group Name | Code | Number | RSSD | CIK | International) | | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | |
| | | | | | | | Babson Capital Management (Australia) Pty | | | Babson Capital Australia Holding Company | | | | |
| | | | 98-0457456 . | | | | Ltd | | NIA | Pty Ltd. | Ownership | | MMLIC | |
| | | | | | | | Babson Capital Cornerstone Asia Limited | HKG | | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 04-1590850 . | | | | Wood Creek Capital Management LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| 0000 | | | 26-3115362 . | | | | Wood Creek Index Company, LLC | DE | NIA | Wood Creek Capital Management LLC | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | Alchemy Copyrights, LLC | DE | NIA | Company | Ownership | 15. 100 | MMLIC | |
| 0000 | | | | | | | Alchemy Copyrights, LLC | DE | NIA | Wood Creek Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 47-3055009 . | | | | Milestone Acquisition Holding, LLC. | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 47-3055009 . | | | | Milestone Acquisition Holding, LLC. | DE | NIA | Wood Creek Capital Management LLC | Influence | | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | 1 |
| 0000 | | | 46-5460309 . | | | | Red Lake Ventures, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 46-5460309 . | | | | Red Lake Ventures, LLC | DE | NIA | Wood Creek Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-3123110 . | | | | Sweet Tree Holdings 1, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 46-3123110 | | | | Sweet Tree Holdings 1, LLC | DE | NIA | Wood Creek Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | Teaktree Acquisition, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | Teaktree Acquisition, LLC | DE | NIA | Wood Creek Capital Management LLC | Influence | | MMLIC | |
| | | | 46-1500495 . | | | | U.S. WIG Holdings, LP | DE | NIA | Wood Creek Capital Management LLC | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 90-0841497 _ | | | | US Trailer Holdings LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 90-0841497 | | | | US Trailer Holdings LLC | DE | NIA | Wood Creek Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-3378584 . | | | | WC Aircraft Holdings US II, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 46-3378584 . | | | | WC Aircraft Holdings US II, LLC | DE | NIA | Wood Creek Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | | | | | Wood Creek Aircraft Holding I, LP | CYM | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | | | | | Wood Creek Aircraft Holding I, LP | CYM | NIA | Wood Creek Capital Management LLC | Management | | MMLIC | |
| | | | | | | | Babson Capital Floating Rate Income Fund | | | | | | | |
| 0000 | | | 04-1590850 | | 0001501011 | | Management, LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | | | | | Babson Capital Core Fixed Income | | | | | | | |
| 0000 | | | 27-3523916 . | | 0001503878 | | Management LLC | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | | | | | Babson Capital Total Return Management LLC | | | | | | | |
| | | | 27-3524203 . | | 0001503879 | | | DE | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 98-0536233 . | | | | Benton Street Advisors, Inc. | CYM | NIA | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 04-1590850 | | | | SDCOS Management LLC | DE | | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 04-1590850 | | | | Great Lakes III GP, LLC | | | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 04-1590850 | | | | Loan Strategies Management LLC | DE | | Babson Capital Management LLC | Ownership | .100.000 | MMLIC | |
| 0000 | | | 04-1590850 | | | | Mezzco LLC | DE | | Babson Capital Management LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 02-0767001 | | | | Mezzco II LLC | DE | | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 41-2280126 | | | | Mezzco III LLC | DE | | Babson Capital Management LLC | Ownership. | | MMLIC | |
| | | | 80-0920285 | | | | Mezzco IV LLC | | | Babson Capital Management LLC | Ownership. | | MMLIC | |
| 0000 | | | 90-0666326 | | | | Mezzco Australia LLC | DE | | Babson Capital Management LLC | Ownership. | | MMLIC | |
| | | | | | | | Mezzco Australia II | DE | | Babson Capital Management LLC | Ownership. | .100.000 | MMLIC | |
| | | | | | | | Somerset Special Opportunities Management | | | oup tu managomont LEo | | | 1 | |
| 0000 | | | 04-1590850 | | | | LLC | DE | NIA | Babson Capital Management LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 04-1590850 | | | | Winterset Management LLC | | NIA | Babson Capital Management LLC | Ownership | 100.000 | MMLIC | |
| 0000 | | | 84-1149206 | 2897101 | | | Oppenheimer Acquisition Corp. | DE | NIA | MassMutual Asset Management Holding LLC | Ownership | | MMLIC | |
| 0000 | | | 13-2527171 | 2679183 | 0000820031 | | Oppenheimer Acquisition corp. | DE | | Oppenheimer Acquisition Corp. | Ownership | | MMLTC | |
| | | | 10-202/1/1 | 2013100 | 0000020031 | | oppennetmetrunus, the. | | NIA | oppennermer Acquisition corp. | 0mile1 5111P | | | |

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| | | | | | | Name of Securities | | | Relation | - | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| | Gloup Name | Code | | H33D | - | International) | | | | (| | | | |
| | | | 13-2953455 . | | 0000276541 | | OppenheimerFunds Distributor, Inc | NY | NIA | OppenheimerFunds, Inc | Ownership | | | |
| 0000 | | | 84-1106295 . | | | | Oppenheimer Real Asset Management, Inc | DE | NIA | OppenheimerFunds, Inc | Ownership | 100.000 | MMLIC | |
| | | | 13-4160541 . | 3458125 | 0001179479 | | OFI Global Institutional, Inc | NY | NIA | OppenheimerFunds, Inc | Ownership | | MMLIC | |
| | | | | | | | | | | OFI Institutional Asset Management, In | s. | | | |
| | | | 13-3459790 . | 2914875 | | | OFI Global Trust Company | NY | NIA | | Ownership | | MMLIC | |
| | | | | | | | | | | OFI Institutional Asset Management, Inc | b. | | | |
| 0000 | | | 22-2697140 | | | | HarbourView Asset Management Corporation | NY | NIA | · · · · · · · · · · · · · · · · · · · | Ownership | 100,000 | MMLIC | |
| | | | | | | | | | | OFI Institutional Asset Management, In | 2 | | | |
| | | | 25-1951632 | | 0000099782 | | Trinity Investment Management Corporation . | PA | NIA | di i institutional noott management, in | Ownership | | MMLIC | |
| | | | 84-1128397 | | 0000857468 | | OFI SteelPath. Inc. | DE | NIA | OppenheimerFunds, Inc. | Ownership | | | |
| | | | 84-1066811 | | 0000037408 | | Shareholder Services. Inc. | | NIA NIA | OppenheimerFunds, Inc. | Ownership | | MILIC | |
| | | | | | | | | | | | | | | |
| 0000 | | | 84-0765063 . | | 0001041674 | | OFI Global Asset Management, Inc | DE | NIA | OppenheimerFunds, Inc. | Ownership | | | |
| 0000 | | | 91-2036414 . | | 0001179480 | | OFI Private Investments Inc. | NY | NIA | OppenheimerFunds, Inc | Ownership | | MMLIC | |
| | | | 62-1210532 . | | | | Tremont Group Holdings, Inc | NY | NIA | Oppenheimer Acquisition Corp | Ownership | | MMLIC | |
| 0000 | | | 06-1121864 . | | 0000764139 | | Tremont Partners, Inc | CT | NIA | Tremont Group Holdings, Inc | Ownership | | MMLIC | |
| | | | | | | | Tremont Capital Management (Ireland) | | | | | | | |
| | | | | | | | Limited | J RL | NIA | Tremont Group Holdings, Inc. | Ownership | | MMLIC | |
| | | | 20-8215352 | | | | Tremont GP, Inc | DE | NIA | Tremont Group Holdings, Inc | Ownership | | MMLIC | |
| | | | 90-0874510 | | | | Settlement Agent LLC | DE | NIA | Tremont Group Holdings, Inc. | Ownership | .100.000 | MMLIC | |
| | | | 00 00/ 1010 1 | | | | Tremont (Bermuda) Limited | BMU | NIA | | Ownership | | MILIC | |
| 0000 | | | 04-1590850 | | | | MassMutual Baring Holding LLC | DE | NIA | MassMutual Asset Management Holding LL | | | MILIC | |
| 0000 | | | 98-0241935 | 2363071 | 0000932463 | | Baring North America LLC | | NIA | MassMutual Baring Holding LLC | Ownership | | | |
| 0000 | | | 90-024 1930 . | 2303071 | 0000932403 | | | BMU | | MassMutual Baring Holding LLC | | | MMLIC | |
| | | | | | | | MassMutual Holdings (Bermuda) Limited | | NIA | | Ownership | | | |
| | | | 98-0241935 . | | | | Baring Asset Management Limited | GBR | NIA | MassMutual Holdings (Bermuda) Limited . | Ownership | | | |
| 0000 | | | 98-0457328 _ | | 0001568131 | | Baring International Investment Limited | GBR | NIA | Baring Asset Management Limited | Ownership | | MMLIC | |
| | | | | | | | Baring International Investment Management | | | | | | | |
| 0000 | | | 98-0457587 . | | | | Holdings | GBR | NIA | Baring Asset Management Limited | Ownership | 100.000 | MMLIC | |
| | | | | | | | Baring Asset Management UK Holdings | | | Baring International Investment | | | | |
| | | | 98-0457576 . | | | | Limited | GBR | NIA | Management Holdings | Ownership. | | MMLIC | |
| | | | | | | | | | | Baring Asset Management UK Holdings | | | | |
| 0000 | | | 98-0465031 . | | | | Baring Asset Management GmbH | DEU | NIA | Limited | Ownership | | MILIC | |
| | | | | | | | Baring Asset Management (Asia) Holdings | | | Baring Asset Management UK Holdings | | | | |
| 0000 | | | 98-0524271 | | | | Limited | HKG | NIA | Limited | Ownership | 100.000 | MILIC | |
| | | | 30 0024271 | | | | Baring International Fund Managers | | | Baring Asset Management (Asia) Holding | | | | |
| 0000 | | | 00 0457405 | | | | | BMU | ALL A | | | 100.000 | MMLIC | |
| | | | 98-0457465 . | | | | (Bermuda) Limited | BMU | NIA | Limited | Ownership | | MMLTC | |
| | | | | | | | | | | Baring Asset Management (Asia) Holding | - | | | |
| | | | 98-0457463 . | | | | Baring Asset Management (Asia) Limited | HKG | NIA | Limited | Ownership | | MMLIC | |
| 0000 | | | | | | | Baring Asset Management Korea Limited | KOR | NIA | Baring Asset Management (Asia) Limited | | | MMLIC | |
| | | | | | | | | | | Baring Asset Management (Asia) Holding | 5 | | | |
| | | | 98-0236449 | | | | Baring Asset Management (Japan) Limited | JPN | NIA | Limited | Ownership | | MMLIC | |
| | | | | | | | Baring Asset Management (Australia) Pty | | | Baring Asset Management (Asia) Holding | s | | | |
| 0000 | | | 98-0457456 | | | | Limited | AUS | NIA | Limited | Ownership | 100,000 | MMLIC | |
| | | | | | | | Baring International Fund Managers | | | Baring Asset Management UK Holdings | • • • • • • • • • • • • • • • • • • • | | | |
| | | | 98-0524272 . | | | | (Ireland) Limited | IRL | NIA | Limited | Ownership | | MMLIC | |
| | , | | 30-0324272 . | | | | | | NIA | | ownership | | IWWILTO | |
| 0000 | | | | | | | | | A11.A | Baring Asset Management UK Holdings | 0 mmm h i | 100,000 | 184 10 | 1 |
| 0000 | | | | | | | Baring Asset Management Switzerland Sàrl | CHE | NIA | Limited | Ownership | | MMLIC | |
| | | | | | | | | | | Baring Asset Management UK Holdings | | | | 1 |
| | | | 98-0457707 . | | | | Baring SICE (Taiwan) Limited | | NIA | Limited | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Baring Asset Management UK Holdings | | | | 1 |
| 0000 | | | 98-0497550 _ | | | | Baring France SAS | FRA | NIA | Limited | Ownership | | MMLIC | |
| 0000 | | | 98-0457586 | | | | Baring Fund Managers Limited | GBR | NIA | Baring Asset Management Limited | Ownership | 100.000 | MILIC | |
| | | | | | | 1 | 194 | | | | | | | |

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| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| 0000 | citoup Namo | | 98-0457574 . | HOOD | 0.11 | internationaly | Baring Pension Trustees Limited | GBR | | Baring Asset Management Limited | Ownership | | | |
| | | | 98-0457578 - | | | | Baring Investment Services Limited | GBR | | Baring Asset Management Limited | Ownership | | MMLIC | |
| | | | 90-040/076 . | | | | Baring Investments (UK) Limited | | | Baring Asset Management Limited | Ownership | | - MMLIC | |
| | | | 00.0054500 | 1100004 | 0001259664 | | | | | | | | - MMLIC | |
| | | | 62-0951563 . | 1160004 | 0001209004 | | First Mercantile Trust Company | TN | | MassMutual Holding LLC | Ownership | | | |
| | | | 46-2252944 . | | | | Haven Life Insurance Agency, Inc. | DE | | MassMutual Holding LLC | Ownership | | | |
| 0000 | | | 04-2443240 . | | | | MML Management Corporation | MA | NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| | | | | | | | MassMutual International Holding MSC, Inc. | | | | | | | |
| 0000 | | | 04-3548444 | | | | | MA | NIA | MML Management Corporation | Ownership | 100.000 | MMLIC | |
| 0000 | | | 47-1466022 . | | | | Society of Grownups, LLC | MA | NIA | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | |
| | | | | | 1 | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 . | | | | MML Mezzanine Investor II, LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 . | | | | MML Mezzanine Investor III, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 27-3576835 . | | | | MassMutual External Benefits Group LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 | | | | MML Re Finance LLC | DE. | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | · | | | |
| | | | 56-2574604 | | | | Invicta Advisors LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 27-0105644 | | | | Jefferies Finance LLC | DE | NIA | Company | Ownership | 45.000 | MMLIC | 1 |
| 0000 | | | 27-0105644 | | | | Jefferies Finance LLC | DE | | Babson Capital Management LLC | Ownership | | MMLIC | |
| | | | 21 0100044 . | | | | | | | Massachusetts Mutual Life Insurance | owner an p | | | |
| 0000 | | | 04-1590850 | | 0000067160 | | MML Private Equity Fund Investor LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 04-1590850 | | 0000007100 | | MM Private Equity Intercontinental LLC | DE | | ML Private Equity Fund Investor LLC | Ownership | | MMLIC | |
| | | | 04 1000000 | | | | | | | Massachusetts Mutual Life Insurance | owner strip | | | |
| | | | 04-1590850 | | | | 100 w. 3rd Street LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 04-1090600 . | | | | 100 w. Sid Street LLC | VE | NIA | Massachusetts Mutual Life Insurance | owner strip | | MMLIC | |
| .0000 | | | 04-1590850 | | | | 300 South Tryon Hotel LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 04-1090800 . | | | | SOU South Tryon Hotel LLC | | NIA | Massachusetts Mutual Life Insurance | ownersnip | | | |
| 0000 | | | 04 4500050 | | | | 000 0th Ta | DE | ALL A | | 0 | 100,000 | MMLIC | |
| 0000 | | | 04-1590850 . | | | | 300 South Tryon LLC | | NIA | Company | Ownership | | | |
| 0000 | | | 00.0007000 | | | | 54 W 1 0 11 1 10 | | | Massachusetts Mutual Life Insurance | a | 100,000 | 184 10 | |
| 0000 | | | 20-3887968 _ | | | | 54 West Capital LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 16-1720387 . | | | | Alexandria Towers Investors LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 06-1614196 . | | | | Cambridge Hotel, LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 . | | | | Cheyenne Mountain Resort LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 71-0908077 . | | | | Cornerstone Partners IV LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-3887968 | | | | E-Wise Land Venture LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-3887968 . | | | | Kazwell Realty Partners LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 45-3754085 | | | | King Alexander LLC | DE | NIA | Company | Ownership. | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-4255307 | | 1 | | Marco Hotel LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | · · · · · · · · · · · · · · · · | |
| | | | 26-2704765 | | | | MMI/BDI Riverside Mt. Vernon LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20-2104100 . | | L | | וועט ווועפוטוע אווייטט ווויטט ווויטט ווויטט ווויטט ווויטט ווויטט ווויטט ווויטט בבט | VE | | oompany | Uminer 3111p | | | |

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| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | _12 | 13 | 14 | 15 |
| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation | - | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reportin | g Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| OUUC | | 0000 | Number | HOOD | OIIX | international) | Of Attillates | uon | Linuy | Massachusetts Mutual Life Insurance | Otilely | lage | | |
| | | | 26-3799762 . | | | | MML O'Hare Hotel LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20-3/99/02 . | | | | WWL UTHATE HOLET LLC | VE | NIA | Massachusetts Mutual Life Insurance | Owner snip | | WWWLIC | |
| | | | 20-3887968 . | | | | Oskilan Craws Development II C | DE | NIA | Company | Ownership | .100.000 | MMLIC | |
| | | | 20-388/968 . | | | | Oakley Grove Development LLC | DE | NIA | | Ownership | 100.000 | MMLIC | |
| 0000 | | | 00 0007000 | | | | | 55 | | Massachusetts Mutual Life Insurance | | 100,000 | | |
| | | | 20-3887968 . | | | | Old Pasco Properties LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 75-2901061 . | | | | Reston Arboretum LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 30-0713071 . | | | | Riva Portland LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 54-2055778 . | | | | Rockville Town Center LLC | VA | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 46-5491311 . | | | | Seattle 1415 Hotel Owner LLC | DE | NIA | Company | Ownership. | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 | | | | Sedona TFMP Land LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-1590850 | | | | South Myrtle Monrovia MM LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 01 1000000 1 | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 20-3887968 | | | | South Pasco Properties LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20 3007300 . | | | | | UL | | Massachusetts Mutual Life Insurance | 0whet ship | | | |
| 0000 | | | 04-1590850 | | | | West 46th Street Hotel LLC | DE | NIA | | Ownership | 100.000 | MMLIC | |
| | | | 04-1090600 . | | | | West 40th Street Hoter LLC | VC | NTA | Massachusetts Mutual Life Insurance | ownership | | | |
| | | | | | | | Almack Mezzanine Fund I LP | GBR | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | | | | | | | | | | | MMLIC | |
| | | | | | | | Almack Mezzanine Fund I LP | GBR | NIA | C.M. Life Insurance Company | 0wnership | 4.000 | | |
| 0000 | | | | | | | Almack Mezzanine Fund I LP | GBR | NIA | Babson Capital Europe Limited | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | | | | | Almack Mezzanine Fund II Unleveraged LP | GBR | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | Almack Mezzanine Fund II Unleveraged LP | GBR | NIA | Babson Capital Europe Limited | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | | | | | Almack Mezzanine Fund III LP | GBR | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | Almack Mezzanine Fund III LP | GBR | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| 0000 | | | | | | | Almack Mezzanine Fund III LP | GBR | NIA | Babson Capital Europe Limited | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 55-0886109 . | | 0001321302 | | Babson Capital High Yield LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 55-0886109 . | | 0001321302 | | Babson Capital High Yield LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 55-0886109 . | | 0001321302 | | Babson Capital High Yield LLC | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | Babson Capital Floating Rate Income Fund, | | | | | | | |
| | | | 27-3330830 . | | 0001521404 | | L.P. | DE | NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| | | | | | | | Babson Capital Floating Rate Income Fund, | | | | | | | |
| 0000 | | | 27-3330830 | | 0001521404 | | L.P. | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | Babson Capital Global Special Situation | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 98-1206017 . | | | | Credit Fund 2 | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | Babson Capital Global Special Situation | | | | | | | |
| 0000 | | | 98-1206017 . | | | | Credit Fund 2 | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 55 1200017 . | | | | Babson Capital Global Special Situation | | | | | | | |
| 0000 | | | 98-1206017 | | | | Credit Fund 2 | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | 30-1200017 . | | | | Babson Capital Global Investment Funds plc | VĽ | NTA | Massachusetts Mutual Life Insurance | manayement | | WWML I U | |
| 0000 | | | | | 0001502146 | | Dauson Capital Giobal Investment FUNOS pic | IRL | NIA | Company | Ownership | 0.500 | MMLIC | |
| | | | | | 0001002140 | | Pahaan Canital Clabal Investment Fund C | I NL | NTA | | ownersnip | | WWWLIC | |
| 0000 | | | | | 0004500504 | | Babson Capital Global Investment Fund 2 | IDI | | Massachusetts Mutual Life Insurance | 0. march i | F 100 | 184 10 | |
| | | | | | 0001582591 | | pic | IRL | NIA | Company | Ownership | | MMLIC | <u></u> |
| 4 | 2 | 3 | 4 | 5 | 6 | 7 | | 9 | 10 | | 12 | 10 | 14 | 15 |
|-------|--------------|---------|--------------|-----------|------------|--------------------|--|---------|------------|--|-------------------|-----------|-----------------------|--------------------|
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| | | | | | | | | | | | | | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relatior | 1- | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reportir | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | | Other) | tage | Entity(ies)/Person(s) | * |
| oouc | Gloup Marine | Out | Number | HOOD | | internationaly | Babson Capital Global Investment Fund 2 | lion | Linuy | (Name of Enary/Ferson) | Gillery | lage | | |
| | | | | | 0001582591 | | babson capital diobal investment rund 2 | IBL | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | 0001582591 | | pic | | NIA | Massachusetts Mutual Life Insurance | management | | | |
| | | | | | | | | | | | | | | |
| 0000 | | | | | 0001515694 | | Babson Capital Global Umbrella Fund plc | | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | | | 0001515694 | | Babson Capital Global Umbrella Fund plc | JRL | NIA | Babson Capital Europe Ltd | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 37-1506417 . | | | | Babson Capital Loan Strategies Fund, L.P | DE | NIA | | Ownership | | MMLIC | |
| 0000 | | | 37-1506417 _ | | | | Babson Capital Loan Strategies Fund, L.P. | DE | NIA | C.M. Life Insurance Company | Ownership | | MILIC | |
| 0000 | | | 37-1506417 . | | | | Babson Capital Loan Strategies Fund, L.P | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| 0000 | | | | | | | Babson CL0 Ltd. 2005-1 | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2005-11 | CYM | NIA | | Influence | | MMLIC | |
| | | | | | | | Babson CLO Ltd. 2005-111 | CYM | NIA | | Influence | | MMLIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2006-1 | CYM | NIA | | Influence | | MILIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2006-11 | CYM | NIA | | Influence | | MILIC | 7 |
| 0000 | | | | | | | Babson CLO Ltd. 2007-1 | CYM | NIA | Babson Capital Management LLC | Influence | | MILIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2007-1 | CYM. | NIA | | Influence | | MILIC | 0 |
| 0000 | | | | | | | Babson CLO Ltd. 2012-1 | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| 0000 | | | | | | | | | | | Influence | | MMLIC | |
| | | | | | | | Babson CLO Ltd. 2012-11 | CYM | NIA | | | | | |
| | | | | | | | Babson CLO Ltd. 2013-1 | CYM | NIA | | Influence | | | |
| | | | 98-1128827 . | | | | Babson CLO Ltd. 2013-II | CYM | NIA | | Influence | | MMLIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2014-1 | CYM | NIA | | Influence | | MMLIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2014-II | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| 0000 | | | | | | | Babson CLO Ltd. 2014-III | CYM | NIA | | Influence | | MMLIC | |
| 0000 | | | | | | | Babson Euro CLO 2014-I BV | NLD | NIA | Babson Capital Management LLC | Influence | | MILIC | |
| 0000 | | | | | | | Babson Euro CLO 2014-II BV | NLD | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | 46-3133952 | | | | Babson Global Floating Rate Fund | MA | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | - | |
| | | | 46-3133952 | | | | Babson Global Floating Rate Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 10 010000E . | | | | Babson Global Income Opportunities Credit | | | | | | | |
| 0000 | | | 46-3119764 | | | | Fund | MA | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | Babson Global Income Opportunities Credit | | | Massachusetts Mutual Life Insurance | management | | | |
| 0000 | | | 46-3119764 . | | | | Fund | MA | NIA | Company | Ownership | 69.000 | MMLIC | |
| 0000 | | | 40-3119/04 . | | | | Babson Mid-Market CLO Ltd. 2007-11 | CYM | NIA NIA | Babson Capital Management LLC | Influence | | MMLIC | 2 |
| | | | 98-0536233 | | | | Babson MIG-Market GLU Ltd. 2007-11 Benton Street Partners I. L.P. | CYM | NIA NIA | Babson Capital Management LLC MassMutual Capital Partners LLC | Ownership | | | |
| | | | | | | | | | | | • | | | |
| 0000 | | | 98-0536233 . | | | | Benton Street Partners I, L.P. | CYM | NIA | Babson Capital Management LLC | Management | | | |
| 0000 | , | | 98-0536233 . | | | | Benton Street Partners I, L.P | CYM | NIA | | Ownership | 0.100 | MMLIC | |
| 1 | , | | | 1 | 1 | | | 0.4 | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 98-0536233 . | | | | Benton Street Partners I, L.P. | CYM | NIA | Company | Ownership | | MMLIC | |
| | | | 98-0536199 . | | | | Benton Street Partners II, L.P. | CYM | NIA | Babson Capital Management LLC | Ownership | | MMLIC | 5 |
| | | | | | | | Clear Lake CLO, Ltd | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | Connecticut Valley Structured Credit CDO | | | | | | | |
| | | | | | | | II, Ltd. | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | | 1 | 1 | | Connecticut Valley Structured Credit CDO | | | | | | | |
| | | | | | | | III. Ltd. | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | Diamond Lake CLO, Ltd. | CYM | NIA | | Influence | | MMLIC | 4 |
| | | | | 4007418 | | | Duchess I CD0 S.A. | GBR | NIA | Babson Capital Management LLC | Influence | | MILIC | ···· ···· 7 ···· |
| 0000 | | | | 4007445 | | | Duchess III CDO S.A. | GBR | NIA | | Influence | | MMLIC | |
| 0000 | | | | . +00/443 | | | Duchess IV CDO S.A. | GBR | NIA | Babson Capital Management LLC | Influence | - | MMLIC | |
| | | | | | | | | | | | Influence | | MMLIC | |
| | | | | 0004044 | | | Duchess V CDO S.A. | GBR | NIA | Babson Capital Management LLC | | | | |
| | | | | 3981641 | | | Duchess VI CLO B.V. | GBR | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | <u> </u> | 4007502 | <u> </u> | | Duchess VII CLO B.V. | GBR | NIA | Babson Capital Management LLC | Influence | <u> </u> | MMLIC | |

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|-------|------------|---------|---------------|---------|------------|--------------------|--|----------|------------|-------------------------------------|-------------------|---------|-----------------------|----------|
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| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence. | Percen- | Ultimate Controlling | |
| Code | Group Name | Company | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | | Entity(ies)/Person(s) | * |
| | Group Name | Code | Number | RSSD | CIK | international) | | | | | | tage | | <u> </u> |
| 0000 | | | | | | | Fugu CLO B.V. | GBR | NIA | Babson Capital Management LLC | Influence | | MMLIC | 6 |
| 0000 | | | | | | | Fugu Credit Plc | GBR | NIA | Babson Capital Management LLC | Influence | | MMLIC | 6 |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 80-0691253 . | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NIA | C.M. Life Insurance Company | Ownership | 10.000 | MMLIC | |
| 0000 | | | 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NIA | MassMutual Holding LLC | Ownership | 8.800 | MMLIC | |
| 0000 | | | 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NIA | Babson Capital Management LLC | Management | | MLIC | |
| 0000 | | | 00 000 1200 . | | | | Gateway Mezzanine Partners Trust | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | valeway wezzannie rarthers r riust | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 00.0001105 | | 0001507514 | | Cataway Managanian Destance 11.10 | DE | NLA | | Quaranahiu | 20,400 | MMLIC | |
| 0000 | | | 90-0991195 . | | 0001597511 | | Gateway Mezzanine Partners II LP | | NIA | Company | Ownership | | | |
| | | | 90-0991195 . | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| 0000 | | | 90-0991195 . | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | MassMutual Holding LLC | Ownership | 6.100 | MMLIC | |
| 0000 | | | 90-0991195 . | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 71-1018134 | | | | Great Lakes II LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 71-1018134 | | | | Great Lakes II LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 37-1708623 | | 0001565779 | | Great Lakes III. L.P. | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 37-1708623 | | 0001565779 | | Great Lakes III. L.P. | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | 37-1708023 . | | 0001000779 | | Great Lakes III, L.P. | | NTA | Massachusetts Mutual Life Insurance | wanagement | | MMLIC | |
| | | | | | | | | | | | | | | |
| | | | 56-2505390 . | | | | Great Lakes LLC | DE | NIA | Company | Ownership | 4.400 | MMLIC | |
| 0000 | | | 56-2505390 . | | | | Great Lakes LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 0.500 | MMLIC | |
| 0000 | | | 46-2344300 . | | | | Intermodal Holdings II LLC | DE | NIA | Wood Creek Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | Malin CLO B.V. | GBR | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| 0000 | | | | | | | Newton CDO Ltd | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| 0000 | | | | | | | Rockall CLO B.V. | GBR | NIA | Babson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | Saint James River CDO. Ltd. | CYM | NIA | Babson Capital Management LLC | Influence. | | MMLIC | |
| 0000 | | | | | | | Sapphire Valley CDO I, Ltd. | CYM | NIA | Babson Capital Management LLC | Influence | | MMLIC | 10 |
| | | | | | | | Sappinie valley ODO 1, Etu. | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 74 0400000 | | | | 0D000 L D | DE | | | 0 m m h i | 100,000 | MMLIC | |
| | | | 74-3182902 . | | | | SDCOS L.P. | | NIA | Company | Ownership | | | |
| 0000 | | | 74-3182902 . | | | | SDCOS L.P. | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-8856877 . | | 0001409910 | | Somerset Special Opportunities Fund L.P | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 20-8856877 . | | 0001409910 | | Somerset Special Opportunities Fund L.P | DE | NIA | C.M. Life Insurance Company | Ownership | 2.100 | MMLIC | |
| | | | 20-8856877 . | | 0001409910 | | Somerset Special Opportunities Fund L.P | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | _ | | | |
| 0000 | | | 04-3722906 | | 0001228752 | | Tower Square Capital Partners, L.P. | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 04-3722906 | | 0001228752 | | Tower Square Capital Partners, L.P. | DE | NIA | C.M. Life Insurance Company | Ownership | 0.700 | | |
| | | | 04-3722906 | | 0001228752 | | Tower Square Capital Partners, L.P. | DE | NIA | Babson Capital Management LLC | Management | | MILIC | |
| 0000 | | | 04-3722906 | | 0001228752 | | Tower Square Capital Partners, L.P. | DE DE | NIA | MassMutual Holding LLC | Ownership | 2.500 | MMLIC | |
| | | | 04-3122900 - | | 0001228/02 | | iowei oquare capitar Partners, L.P. | | NIA | | ownersnip | | INIML I C | |
| | | | | | 0004045050 | | | | | Massachusetts Mutual Life Insurance | | 05 000 | | |
| | | | 30-0336246 _ | | 0001345379 | | Tower Square Capital Partners II, L.P. | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 30-0336246 . | | 0001345379 | | Tower Square Capital Partners II, L.P | DE | NIA | C.M. Life Insurance Company | Ownership | 2.200 | MMLIC | |
| 0000 | | | 30-0336246 . | | 0001345379 | | Tower Square Capital Partners II, L.P | DE | NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | 30-0336246 . | | 0001345379 | | Tower Square Capital Partners II, L.P. | DE | NIA | MassMutual Holding LLC | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P | DE | NIA | Company | Ownership. | | MMLIC | |
| 0000 | | | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P. | DE | NIA | C.M. Life Insurance Company | Ownership | 13.600 | | |
| 0000 | | | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P | | NIA NIA | Babson Capital Management LLC | Management | | MMLIC | |
| | | | | | 0001447547 | | | DE | | | | | | |
| | | | 41-2280127 | | 0001447547 | | Tower Square Capital Partners III, L.P | DE | NIA | Babson Capital Management LLC | Management | | | |
| | | | 41-2280127 . | | 0001447547 | l | Tower Square Capital Partners III, L.P | DE | NIA | MassMutual Holding LLC | Ownership | | MMLIC | <u></u> |

| <u> </u> | | | | | | | | | | | | 10 | | |
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| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| 0 | | | ID | Endowel | | | | | | Dive ether O e esterelle et here | | | | |
| Group | a b | Company | ID | Federal | 0.11/ | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| | | | | | | | | | | assachusetts Mutual Life Insurance | | | | |
| | | | 41-2280127 . | | 0001447547 | ΤΤ | ower Square Capital Partners III, L.P | DE | NIA Co | ompany | Ownership | 18.900 | MMLIC | |
| | | | | | | | | | Ma | assachusetts Mutual Life Insurance | | | | |
| 0000 | | | 41-2280129 | | 0001447548 | Т | ower Square Capital Partners IIIA, L.P | DE | | ompany | Ownership | | MMLIC | |
| 0000 | | | 41-2280129 | | 0001447548 | | ower Square Capital Partners IIIA, L.P. | DE | NIA Ba | bson Capital Management LLC | Management | | MMLIC | |
| 0000 | | | 80-0920340 | | 0001597019 | | ower Square Capital Partners IV, L.P. | DE | | abson Capital Management LLC | Management | | | |
| 0000 | | | 80-0920367 | | 0001598727 | | ower Square Capital Partners IV-A, L.P | DE | | assMutual Holding LLC | Ownership | | MMLIC | |
| | | | | | | | | | | | | | MMLIC | |
| 0000 | | | 80-0920367 _ | | 0001598727 | | ower Square Capital Partners IV-A, L.P | DE | | bson Capital Management LLC | Management | | | |
| 0000 | | | 46-2104352 . | | | | I.S. Trailer Holdings II LLC | DE | | bson Capital Management LLC | Management | | MMLIC | |
| 0000 | | | | | | | inacasa CLO, Ltd | CYM | | abson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | W | hately CDO, Ltd | CYM | | abson Capital Management LLC | Influence | | MMLIC | |
| | | | | | | | | | Ma | assachusetts Mutual Life Insurance | | | | |
| | | | 20-4981369 | | 0001371601 | W | ood Creek Multi Asset Fund. L.P. | DE | NIA Co | ompany | Ownership | .100.000 | MIC | |
| 0000 | | | 20-4981369 | | 0001371601 | | ood Creek Multi Asset Fund. L.P. | DE | | bson Capital Management LLC | Management | | MMLIC | |
| | | | 20 1001000 - | | | | | | | assachusetts Mutual Life Insurance | management | | | |
| 0000 | | | 04-1590850 | | | | lood Creek Venture Fund LLC | DE | | MDANY | Ownership | 40,000 | MMLIC | |
| | | | | | | | | | | | Ownership | | | |
| 0000 | | | 27-3234744 _ | | | | aring ACWI ex US (SRI) Equity Fund | DE | NIA Ba | aring Asset Management Limited | Management | | MMLIC | |
| | | | | | | В | aring All Country World ex US Equity Fund | | | | | | | |
| | | | 45-4184261 . | | 0001547286 | | | DE | NIA Ba | aring Asset Management Limited | Influence | | MMLIC | |
| | | | | | | | | | Ma | ussachusetts Mutual Life Insurance | | | | |
| | | | | | | В | aring Emerging Market Corp Debt Fund | IRL | NIA. Co | ompany | Ownership | | MIC | |
| 0000 | | | | | | | aring Emerging Market Corp Debt Fund | | | aring Asset Management Limited | Management | | MMLIC | |
| | | | | | | | | | | assachusetts Mutual Life Insurance | | | | |
| 0000 | | | 11-3789446 | | | в | aring Focused EAFE Equity Fund | DE | | ompany | Ownership | 43,600 | MMLIC | |
| 0000 | | | 11-3789446 | | | | aring Focused EAFE Equity Fund | DE | | aring Asset Management Limited | Management | | | |
| | | | | | 0001443715 | | | | | | | | MMLIC | |
| 0000 | | | 01-0850479 . | | 0001443/15 | | aring Focused International Equity Fund | DE | | ring Asset Management Limited | Management | | [MMLTC | |
| | | | | | | | aring Global Dynamic Asset Allocation | | | ssachusetts Mutual Life Insurance | | | | |
| | | | 30-0607379 . | | 0001497049 | | und | DE | NIA Co | ompany | Ownership | | MMLIC | |
| | | | | | | | aring Global Dynamic Asset Allocation | | | | | | | |
| | | | 30-0607379 . | | 0001497049 | F | und | DE | NIA Ba | aring Asset Management Limited | Management | | MMLIC | |
| 0000 | | | 39-2059577 . | | 0001491482 | B | aring International Equity Fund | DE | NIA Ba | aring Asset Management Limited | Management | | MMLIC | |
| | | | | | | | aring International Small Cap Equity Fund | | | assachusetts Mutual Life Insurance | | | | |
| 0000 | | | 26-4142796 | | | | | DE | | ompany | Ownership | 100.000 | MMLIC | 1 |
| | | - | | | | | aring International Small Cap Equity Fund | | | ······································ | | | · · · · · · · · · · · · · · · · | |
| 0000 | | | 06 4140700 | | | B | aring international small cap Equity Fund | DF | NIA D. | ving Accet Nonagoment Limited | Nenegement | | MMLIC | 1 |
| | | | 26-4142796 . | | | | · · · · · · · · · · · · · · · · · · · | DE | | ring Asset Management Limited | Management | | | |
| | | | 46-1197222 . | | | | aring World Equity Fund | DE | NIA Ba | aring Asset Management Limited | Influence | | MMLIC | |
| | | | | | | | lulti-Employer Global Aggregate | | | | | | | 1 |
| 0000 | | | 26-1896226 . | | | | viversified Portfolio | DE | | aring Asset Management Limited | Management | | MMLIC | |
| | | | | | | 1 | 2-18 West 55th Street Predevelopment, LLC | | Ma | assachusetts Mutual Life Insurance | | | | 1 |
| | | | 20-2548283 | | | | • * | DE | NIA Co | ompany | Ownership | | MMLIC | |
| | | | | | | 1 | 2-18 West 55th Street Predevelopment. LLC | | | • • | | | | |
| 0000 | | | 20-2548283 | | | | | DE | NIA C. | M. Life Insurance Company | Ownership | 7.700 | MMLIC | |
| | | | 20 20-10200 - | | | | | | | assachusetts Mutual Life Insurance | | | | |
| 0000 | | | 40 4000555 | | | | Liberton Observ Hanken 110 | D/5 | | | 0 m m h i | 04 000 | | 1 |
| | | | 46-4803557 . | | | | Harbor Shore Member LLC | DE | | ompany | Ownership | | MMLIC | |
| | | | 46-4803557 . | | | 2 | Harbor Shore Member LLC | DE | | M. Life Insurance Company | Ownership | 9.000 | MMLIC | |
| | | | | | | | | | | assachusetts Mutual Life Insurance | | | | |
| 0000 | | | 45-2738137 . | | | 2 | 0 Gates Management LLC | NY | NIA Co | ompany | Ownership | | | |
| | | | | | | | . | | | ssachusetts Mutual Life Insurance | • | | | |
| 0000 | | | 45-5257904 | | | 2 | 1 West 86 LLC | DE | | ompany | Ownership | | MILIC | 1 |
| 0000 | | | 45-5257904 | | | | 1 West 86 LLC | DE | | M. Life Insurance Company | Ownership | 4.800 | | |
| | | | 40-020/904 | | | 2 | I WEST OU LLU | VE | | m. Lite insulance company | | | | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---------------|------------|-----------------|------------------------------|----------|------------|----------------------------|--|------------|---------------------|--|---------------------------------|--------------------|-----------------------|----|
| 1 | 2 | 3 | 4 | 5 | 0 | 7 | o | 9 | 10 | 11 | Type | lf | 14 | 15 |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | ' | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | | Provide | | |
| Crown | | - | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | | Directly Controlled by | Attorney-in-Fact, Influence, | Provide Percen- | Ultimate Controlling | |
| Group Code | Group Name | Company Code | Number | RSSD | СІК | (0.5. or International) | Or Affiliates | tion | Reporting Entity | Directly Controlled by (Name of Entity/Person) | Other) | | Entity(ies)/Person(s) | * |
| Code | Gloup Name | Code | Number | N33D | CIK | international) | Of Anniales | lion | Entity | Massachusetts Mutual Life Insurance | Other) | tage | Entity(les)/Person(s) | |
| 0000 | | | 45-2779931 . | | | | AT Mid-Atlantic Office Portfolio LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 45-2779931 | | | | AT Mid-Atlantic Office Portfolio LLC | | | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 45-2119951 | | | | AT MIG-ALTAILLIC OTTICE FOILIOTTO LLC | | NIA | Massachusetts Mutual Life Insurance | owner simp | | WWLTC | |
| | | | 20-4570515 . | | 0001362970 | | Babson Mezzanine Realty Investors I | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20-4570515 | | 0001362970 | | Babson Mezzanine Realty Investors I | | | C.M. Life Insurance Company | Ownership | | MMLIC | |
| 0000 | | | 20-4570515 | | 0001362970 | | Babson Mezzanine Realty Investors I | DE | NIA | Cornerstone Real Estate Advisers LLC | Management. | | MMLIC | |
| | | | 20 40/0010 - | | 0001302370 | | Dabson wezzannie nearty nivestors i | | | Massachusetts Mutual Life Insurance | management | | | |
| 0000 | | | 24-1446970 | | 0001362970 | | Babson Mezzanine Realty Investors II | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 24-1446970 . | | 0001362970 | | Babson Mezzanine Realty Investors II | | NIA | Cornerstone Real Estate Advisers LLC | Management | | MMLTC | |
| | | | LT 17703/0 . | | | | Dabson mezzanne nearty nivestors IT | <i>U</i> L | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-1590850 | | | | CHC/RFP VI Core LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 27-1701733 | | 0001481753 | | Cornerstone Core Mortgage Fund I LP | DE | | Cornerstone Real Estate Advisers LLC | Management. | | | |
| | | | | | | | service service of the regulation of the regulat | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 27-1701622 | | 0001481752 | | Cornerstone Core Mortgage Venture LP | DE | NIA | Company | Ownership | 50,000 | MMLIC | |
| 0000 | | | 27-1701622 | | 0001481752 | | Cornerstone Core Mortgage Venture I LP | DE | NIA | Cornerstone Real Estate Advisers LLC | Management | | MILIC | |
| 0000 | | | 45-3751572 | | 0001534877 | | Cornerstone Enhanced Mortgage Fund I LP | DE | | Cornerstone Real Estate Advisers LLC | Ownership | 15.900 | MMLIC | |
| | | | 10 0101012 | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 56-2630592 | | | | Cornerstone Fort Pierce Development LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 56-2630592 | | | | Cornerstone Fort Pierce Development LLC | DE | | C.M. Life Insurance Company | Ownership | | MILIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | NIA | Company | Ownership. | .92.300 | MMLIC | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | | C.M. Life Insurance Company | Ownership | | MMLIC | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | NIA | Cornerstone Real Estate Advisers LLC | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | 5 | | | |
| 0000 | | | 36-4770946 | | 0001590049 | | Cornerstone High Yield Venture LP | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 36-4770946 . | | 0001590049 | | Cornerstone High Yield Venture LP | DE | NIA | Cornerstone Real Estate Advisers LLC | Management | | MMLIC | |
| | | | | | | | Cornerstone Hotel Income & Equity Fund II | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 26-1828760 . | | 0001423638 | | LP | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-5578089 . | | | | Cornerstone Patriot Fund LP | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 27-0547156 . | | | | Cornerstone Real Estate Fund VIII LP | DE | NIA | Cornerstone Real Estate Advisers LLC | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | 1 | | | |
| 0000 | | | 45-2632610 . | | | | Cornerstone Permanent Mortgage Fund | MA | NIA | Company | Ownership | 100.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | L | | | |
| | | | 46-5001122 . | | | | CREA 330 Third LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 46-5001122 . | | | | CREA 330 Third LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 8.000 | MMLIC | |
| 0000 | | | 10 100700 | | | | | 55 | | Massachusetts Mutual Life Insurance | | 400.005 | | |
| 0000 | | | 46-4367364 . | | | | CREA FMF Nashville LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 00.0000500 | | | | | D7 | | Massachusetts Mutual Life Insurance | 0 m m h i | F4 000 | 100.10 | |
| 0000 | | | 26-2399532 | | | | CREA/LYON West Gateway, LLC | DE | NIA | Company | Ownership | | | |
| 0000 | | | 26-2399532 _ | | | | CREA/LYON West Gateway, LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 6.000 | MMLIC | |
| 0000 | | | 00 0040470 | | | | | D | NIL A | Massachusetts Mutual Life Insurance | 0 | 00 400 | | |
| 0000 | | | 20-0348173 . 20-0348173 . | | | | CREA/PPC Venture LLC | DE DE | NIA NIA | Company | Ownership | | MMLIC MMLIC | |
| 0000 | | | 20-03481/3 . | | | | CREA/PPC Venture LLC | | NIA | C.M. Life Insurance Company | Ownership | 6.600 | | |
| 0000 | | | 26-1611591 . | 3956836 | | | | DE | NIA | Massachusetts Mutual Life Insurance | 0 march in | | MMLIC | |
| 0000 | | | | 3956836 | | | Fallon Cornerstone One MPD LLC Fallon Cornerstone One MPD LLC | DE DE | | Company | Ownership Ownership. | | IMMLIC | |
| | | | 26-1611591 . | JAD0030 | | | ration cornerstone one MPD LLC | | NIA | C.M. Life Insurance Company Massachusetts Mutual Life Insurance | uwnersnip | | | |
| 0000 | | | 20 2247004 | | | | Ean Riar Development LLC | DE. | NLA | | Ownership | 00 000 | MMLIC | |
| | | | 20-3347091 | | | | Fan Pier Development LLC | DE DE | NIA | Company | Ownership | | MMLIC MMLIC | |
| 0000 | | | 20-3347091 . | <u> </u> | | | Fan Pier Development LLC | | NIA | C.M. Life Insurance Company | Ownership | | ₩₩∟IU | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------|------------|---------|--------------|---------|------------|--------------------|---|---------|-----------|--------------------------------------|-------------------|---------|-----------------------|----|
| 1 | 2 | 5 | 4 | 5 | 0 | 1 | 8 | 9 | 10 | 11 | Type | lf | 14 | 15 |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| 0000 | aloup Name | Out | Number | HOOD | 011 | internationaly | Of Athildes | uon | Linuty | Massachusetts Mutual Life Insurance | Other) | iage | | |
| 0000 | | | 46-3880526 | | | | Frankraden Lender Heldings 110 | DE | ALL A | | 0 | | MMLIC | |
| | | | | | | | Farringdon London Holdings LLC | | NIA | Company | Ownership | | | |
| 0000 | | | 46-3880526 . | | | | Farringdon London Holdings LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 5.500 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 46-1586427 . | | | | Gracechurch London Holdings LLC | DE | NIA | Company | Ownership | | | |
| | | | 46-1586427 . | | | | Gracechurch London Holdings LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | | | | | Infinity SCD Ltd | GBR | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 20-4819358 | | | | Johnston Groves LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20-4019330 - | | | | Johnston droves LLC | UE | | Massachusetts Mutual Life Insurance | ownership | | WWWETC | |
| 0000 | | | 00 5004750 | | | | Maturalitan Atlanter | DE | NEA | | Quanta his | 00 500 | | |
| | | | 20-5984759 . | | | | Metropolitan At Lorton | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 20-5984759 . | | | | Metropolitan At Lorton | DE | NIA | C.M. Life Insurance Company | Ownership | 6.500 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-3317841 . | | | | MM Greenhill Office LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 46-3317841 | | | | MM Greenhill Office LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 46-5347643 | | | | MMI/Hines Harrison LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 46-5347643 | | | | MMI/Hines Harrison LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 40 0047040 . | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 46-4077059 | | | | MM Woodfield Martingale LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | | | | | |
| 0000 | | | 46-4077059 . | | | | MM Woodfield Martingale LLC | | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | Salomon Brothers Commercial Mortgage Trust | | | | | | | |
| 0000 | | | | | | | 2001-MM | DE | NIA | Cornerstone Real Estate Advisers LLC | Influence | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 27-2977720 . | | | | Sawgrass Village Shopping Center LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 27-2977720 . | | | | Sawgrass Village Shopping Center LLC | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| 0000 | | | 46-3465271 . | | | | SBNP SIA LLC | DE | NIA | Cornerstone Real Estate Advisers LLC | Influence | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 35-2484550 . | | | | Twenty Two Liberty LLC | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 35-2484550 | | | | Twenty Two Liberty LLC | MA | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 33-2404330 . | | | | I wenty I wo Liberty LLC | MA | | | Owner Simp | | | |
| 0000 | | | 15 1000517 | | | | | 55 | | Massachusetts Mutual Life Insurance | | 4 000 | | |
| | | | 45-4606547 . | | | | UK LIW Manager LLC | DE | NIA | Company | 0wnership | 1.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 45-4606547 . | | | | UK LIW Member LLC | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 45-5401109 . | | | | Washington Gateway Apartments Venture LLC _ | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 45-5401109 | | | | Washington Gateway Apartments Venture LLC _ | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 20-2970495 | | | | Waterford Development Associates | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 20 2310433 - | | | | naterioru beveropment Associates | DL | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 47-1993493 | | | | Waterlag London Haldings 110 | DE | NEA | | Ownorshin | 100,000 | MMLIC | |
| | | | 47-1993493 | | | | Waterloo London Holdings LLC | | NIA | Company | Ownership | | MMLTC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 46-3122029 . | | | | WeHo Domain LLC | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 46-3122029 . | | | | WeHo Domain LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 14.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 20-5481477 . | | | | Ygnatio Valley Funding | DE | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | MassMutual Barings Dynamic Allocation Fund | | | Massachusetts Mutual Life Insurance | | | 1 | |
| 0000 | | | 45-3168892 | | | 00 | massimateuri barringo bynamio Arrosatton rand | MA | NIA | Company | Ownership | | MMLIC | |
| | | | -100092 - | | | V¥ | | NP4 | NIA | | | | | |
| | | | | | | | | l | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3212054 . | | 0000927972 | 00 | MassMutual Premier Balanced Fund | MA | NIA | Company | Ownership | 6.800 | MMLIC | |

| | <u> </u> | _ | | - | | _ | 2 | | 1.0 | | 10 | 10 | | |
|-------|------------|---------|----------------|---------|-------------|--------------------|--|---------|-----------|-------------------------------------|--|---------|-----------------------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.Ś. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Éntity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | Ŭ | | |
| | | | 04-3277549 | | 0000927972 | 0 | MassMutual Premier Core Bond Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | ~~ | | | | Massachusetts Mutual Life Insurance | •••••••••••••••••••••••••••••••••••••• | | | |
| 0000 | | | 04-3539083 | | 0000927972 | 0 | MassMutual Premier Disciplined Value Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | . 04 0000000 . | | 0000321312 | , | MassMutual Premier Disciplined Growth Fund | | | Massachusetts Mutual Life Insurance | 0 whet ship | | | |
| 0000 | | | 04-3539084 | | 0000927972 | 10 | massimutual fremter biscipitileu drowth fund | МА | NIA | Company | Ownership | 10.600 | MMLIC | |
| | | | 04 000004 . | | 0000321312 | | | m. | | Massachusetts Mutual Life Insurance | ownership | | | |
| 0000 | | | 04-3464165 | | 0000927972 | 0 | MassMutual Premier Diversified Bond Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 04-3404 103 | | 0000921912 | N | | MA | NTA | | Owner snip | | | |
| 0000 | | | 00.0754070 | | 000007070 | | MassMutual Premier Focused International | | | Massachusetts Mutual Life Insurance | | 0.000 | 144 10 | |
| 0000 | | | . 02-0754273 . | | 0000927972 | JQ | Fund | MA | NIA | Company | Ownership | 0.000 | MMLIC | |
| 0000 | | | F4 050000 C | | 0000007070 | | | MA | | Massachusetts Mutual Life Insurance | | 57 400 | | |
| 0000 | | | 51-0529334 . | | 0000927972 |)Q | MassMutual Premier Global Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3520009 . | | 0000927972 | DQ | MassMutual Premier High Yield Fund | MA | NIA | Company | Ownership | 16.700 | | |
| | | | | | | | MassMutual Premier Inflation-Protected and | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 03-0532475 . | | 0000927972 |)Q | Income Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | MassMutual Premier International Equity | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3212044 . | | 0000927972 |)Q | Fund | MA | NIA | Company | Ownership | 4. 100 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 51-0529328 | | 0000927972 |)Q | MassMutual Premier Main Street Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | MassMutual Premier Short-Duration Bond | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-3212057 . | | 0000927972 | 0 | Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | ~~ | MassMutual Premier Small/Mid Cap | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3224705 | | 0000927972 | 0 | Opportunities Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 04 0224700 . | | 0000321312 | | MassMutual Premier Strategic Emerging | | | Massachusetts Mutual Life Insurance | 0 whet ship | | | |
| 0000 | | | 26-3229251 . | | 0000927972 | 0 | Markets Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | 20-3229231 . | | 0000921912 | /v/ | | MA | INTA | Massachusetts Mutual Life Insurance | Owner snip | | . WWWLIG | |
| | | | 04-3277550 | | 0000927972 | 0 | MassMutual Premier Value Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | . 04-3277550 . | | 0000921912 | N | | MA | INTA | Massachusetts Mutual Life Insurance | Uwner simp | | | |
| 0000 | | | 27-1028263 | | 0000916053 | 20 | MassMutual Select Blackrock Global | | NUA | | 0 m m h i | 00.100 | 144 10 | |
| | | | . 27-1028263 . | | 0000916053 | JQ | Allocation Fund | MA | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | | | 0000040050 | | | | | Massachusetts Mutual Life Insurance | | 5 400 | | |
| 0000 | | | . 04-3556992 . | | 0000916053 | JQ | MassMutual Select Blue Chip Growth Fund | MA | NIA | Company | Ownership | 5. 100 | MMLIC | |
| | | | | | | | MassMutual Select Diversified | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 14-1980900 . | | 0000916053 |)Q | International Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 01-0821120 . | | 0000916053 |)Q | MassMutual Select Diversified Value Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | . 04-3512590 . | | 0000916053 | Q | MassMutual Select Focused Value Fund | MA | NIA | Company | Ownership | 3.600 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3512593 | | 0000916053 |)Q | MassMutual Select Fundamental Growth Fund _ | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-3584138 | | 0000916053 |)Q | MassMutual Select Fundamental Value Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | [| | MassMutual Select Growth Opportunities | 1 T | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3512589 . | | 0000916053 | Q | Fund | MA | NIA | Company | Ownership | 1.800 | MMLIC | |
| |] | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 04-3513019 . | | 0000916053 | 00 | MassMutual Select Large Cap Value Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | MassMutual Select Mid Cap Growth Equity II | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3512596 | | 0000916053 | 0 | Fund | МА | NIA | Company | Ownership | 1.600 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | 0"""""""""""""""""""""""""""""""" | | | |
| 0000 | | | 42-1710935 | | 0000916053 | 00 | MassMutual Select Mid-Cap Value Fund | ΜΔ | NIA | Company | Ownership | 99.800 | MMLIC | ' |
| | | | | | 00009100000 | /ч | massmutual select with-bap value rund | | | συπρατιγ | | | | <u> </u> |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 If | 14 | 15 |
|-------|------------|---------|--------------------|-----------------|-------------|---------------------------------------|---|---------|-----------------|--|--|----------|-----------------------|-----------|
| | | | | | | | | | | | Type | | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | Name of Securities | | | Relation- | | (Ownership, | is | | |
| | | | | | | | | Dami | | | Board, | Owner- | | |
| | | NAIC | | | | Exchange | Nama af | Domi- | ship | | Management, | ship | | |
| Crown | | | ID | Federal | | if Publicly Traded | Names of Parent, Subsidiaries | ciliary | to Departing | Directly Controlled by | Attorney-in-Fact, | Provide | Liltimate Controlling | |
| Group | Crown Name | Company | ID Number | Federal RSSD | СІК | (U.S. or | Or Affiliates | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | * |
| Code | Group Name | Code | Number | R22D | CIK | International) | | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | |
| 0000 | | | 45 5057407 | | 0000040050 | 00 | MassMutual Select MSCI EAFE International | | | Massachusetts Mutual Life Insurance | 0. march i | 0.000 | | |
| | | | 45-5357167 . | | 0000916053 | 00 | Index Fund | MA | | Company Massachusetts Mutual Life Insurance | Ownership | 0.900 | MMLIC | |
| | | | 04-3557000 . | | 0000916053 | 00 | MassMutual Select Overseas Fund | MA | | Company | Ownership | | MMLIC | |
| | | | 04-3337000 . | | 0000910055 | 04 | Massmutual Select Overseas Fund | MA | | Massachusetts Mutual Life Insurance | ownership | | | |
| 0000 | | | 27-2377446 | | 0000916053 | 00 | MassMutual Select PIMCO Total Return Fund | MA | | Company | Ownership. | | MMLIC | |
| | | | 21-2311440 | | 00009100000 | 00 | MassMutual Select Russell 2000 Small Cap | | | Massachusetts Mutual Life Insurance | ownership | 0.300 | | |
| 0000 | | | 45-5366542 | | 0000916053 | 00 | Index Fund | MA | | Company | Ownership | | MMLIC | |
| | | | 40 000004 <u>2</u> | | 00000100000 | ···· | | | | Massachusetts Mutual Life Insurance | owner strip | | | |
| | | | 04-3410047 | | 0000916053 | 00 | MassMutual Select S&P 500 Index Fund | MA | | Company | Ownership | | MMLIC | |
| | | | 04 04 10047 . | | 0000310000 | ···· | MassMutual Select Sal Soo Hidex Fund | | | Massachusetts Mutual Life Insurance | ownership | | | |
| 0000 | | | 04-3464205 . | | 0000916053 | 00 | Fund | MA | | Company | Ownership | | MMLIC | |
| | | | 04 0404200 . | | 00000100000 | · · · · · · · · · · · · · · · · · · · | MassMutual Select Small Capital Value | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 02-0769954 . | | 0000916053 | 00 | Equity Fund | MA | | Company | Ownership | | MMLIC | |
| | | | 02 0700001 . | | | | MassMutual Select Small Company Growth | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 04-3584141 | | 0000916053 | 00 | Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | · · · · · · · · · · · · · · · · · · · | MassMutual Select Small Company Value Fund | | | Massachusetts Mutual Life Insurance | •••••••••••••••••••••••••••••••••••••• | | | |
| | | | 04-3584140 . | | 0000916053 | 00 | indomatual obtoblionalli obmpany farao fana | MA | | Company | Ownership | | MMLIC | |
| | | | | | | •• | | | | Massachusetts Mutual Life Insurance | •••••••••••••••••••••••••••••••••••••• | | | |
| | | | 45-5349772 . | | 0000916053 | 00 | MassMutual Select S&P Mid Cap Index Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | ······································ | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 26-0099965 . | | 0000916053 | 00 | MassMutual Select Strategic Bond Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-4257056 . | | 0000067160 | | MML International Equity Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 03-0532456 . | | 0000916053 | | MassMutual RetireSMART 2010 Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 27-1933828 . | | 0000916053 | | MassMutual RetireSMART 2015 Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 03-0532467 . | | 0000916053 | | MassMutual RetireSMART 2020 Fund | MA | | Company | Ownership | 0.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 27-1933753 _ | | 0000916053 | | MassMutual RetireSMART 2025 Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 27-1933389 . | | 0000916053 | | MassMutual RetireSMART 2035 Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 03-0532471 . | | 0000916053 | | MassMutual RetireSMART 2040 Fund | MA | | Company | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 27-1932769 . | | 0000916053 | | MassMutual RetireSMART 2045 Fund | MA | | Company | Ownership | 13.800 | MMLIC | |
| 0000 | | | 00 1015000 | | 0000040050 | | | | | Massachusetts Mutual Life Insurance | | 10,000 | | |
| | | | 26-1345332 . | | 0000916053 | | MassMutual RetireSMART 2050 Fund | MA | | Company | Ownership | | MMLIC | |
| 0000 | | | 40,0000007 | | 0000040050 | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-3289207 _ | | 0000916053 | | MassMutual RetireSMART 2055 Fund | MA | | Company | Ownership | | MMLIC | |
| 0000 | | | 45 4040455 | | 0000040050 | | | | | Massachusetts Mutual Life Insurance | 0. march i | 00,000 | | |
| | | | 45-1618155 . | | 0000916053 | | MassMutual RetireSMART Conservative Fund | MA | | Company | Ownership | | MMLIC | |
| 0000 | | | 15 1610000 | | 0000010050 | | Necellutural DetireSMADE Crowth Fund | МА | | Massachusetts Mutual Life Insurance | Ownership | 60 600 | | |
| | | | 45-1618222 . | | 0000916053 | | MassMutual RetireSMART Growth Fund | MA | | Company Massachusetts Mutual Life Insurance | Ownership | | MMLIC | |
| 0000 | | | 03-0532464 | | 0000916053 | | MassMutual RetireSMART In Retirement Fund | MA | | | Owporchin | 0 000 | MMLIC | |
| | | | 03-0332404 . | | 0000910053 | | massimutual Retiresmaki in Retirement Fund | MA | | Company Massachusetts Mutual Life Insurance | Ownership | 0.000 | | |
| 0000 | | | 45-1618262 | | 0000916053 | | MassMutual RetireSMART Moderate Fund | MA | | Massachusetts mutual Lite insurance Company | Ownership | 23,400 | MMLIC | |
| | | | 4J-1010202 _ | | 0000910003 | | massmutual netileomani mouelate FUNU | | NIA | oumpany | | | | <u> </u> |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------|------------|---------|----------------|---------|------------|--------------------|--|---------|-----------|-------------------------------------|-------------------|---------|-----------------------|----|
| | | | | | | | | | | | Туре | lf | | |
| | | | | | | | | | | | of Control | Control | | |
| | | | | | | | | | | | (Ownership, | is | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | * |
| | | | | | - | | MassMutual RetireSMART Moderate Growth | | | Massachusetts Mutual Life Insurance | | | | |
| | | | 45-1618046 | | 0000916053 | | Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | HarbourView CLO 2006-1 Limited | CYM | NIA | OppenheimerFunds, Inc. | Influence | | MMLIC | |
| | | | | | | | HarbourView CLO VII, Ltd. | CYM | NIA | OppenheimerFunds, Inc. | Influence | | MMLIC | |
| | | | 45-3417590 . | | 0001530245 | | Oppenheimer Global High Yield Fund | DE | NIA | OppenheimerFunds, Inc. | Ownership | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 46-1604428 | | 0001562689 | | Oppenheimer Global Real Estate Fund | DE | NIA | Company | Ownership | | MMLIC | |
| 0000 | | | 46-1604428 | | 0001562689 | | Oppenheimer Global Real Estate Fund | DE | NIA | C.M. Life Insurance Company | Ownership | | MMLIC | |
| | | | 46-1604428 | | 0001562689 | | Oppenheimer Global Real Estate Fund | DE | NIA | OppenheimerFunds, Inc. | Management | | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | - | | | |
| | | | 13-3867060 . | | 0001005728 | | Oppenheimer International Growth Fund | MA | NIA | Company | Ownership | 0.000 | MMLIC | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| | | | . 84-1073463 . | | 0001116894 | | Oppenheimer Main Street Fund | MA | NIA | Company | Ownership | | MMLIC | |
| | | | | | | | Oppenheimer Global Multi-Asset Income Fund | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 47-1714929 . | | | | | DE | NIA | Company | Ownership | | MMLIC | |
| | | | 1 | | | | | | | Massachusetts Mutual Life Insurance | | | | |
| 0000 | | | 22-3849391 | | 0001163166 | | Oppenheimer Real Estate Fund | MA | NIA | Company | Ownership | 1.900 | MMLIC | |
| 1 | | | | | | | | | | | | | | |

| Asterisk | Explanation |
|----------|---|
| 1 | Massachusetts Mutual Life Insurance Company owns 4.05% of the affiliated debt of Jefferies Finance LLC |
| 2 | Debt investors own 18.8% and include Connecticut Valley Structured Credit CDO IV, Ltd., Babson CLO Ltd. 2006-11, Babson CLO Ltd. 2007-1, Babson Capital Loan Strategies Fund, L.P., and Sapphire Valley CDO I, Ltd. |
| 3 | Debt investors own 21.6% and include Connecticut Valley Structured Credit CDO III, Ltd.I, Babson Capital Loan Strategies Fund, L.P., Babson CLO Ltd. 2007-II, and Babson Mid-Market CLO Ltd. 2007-II |
| 4 | Debt investors own 1.5% and include Sapphire Valley CDD I, Ltd. |
| 5 | Partnership investors own 99% and include Babson Loan Strategies Fund, L.P. |
| 6 | Fugu Credit Plc owns 100% of the Fugu CLO B.V. assets |
| 7 | Debt investors own 12.8% and include Sapphire Valley, Babson Capital Loan Strategies Fund, L.P., Babson CLO Ltd. 2007-1, and Babson Mid-Market CLO Ltd. 2007-11 |
| 8 | Debt investors own 10.0% and include Connecticut Valley CLO Fund IV, Ltd. and Babson Capital Loan Strategies Fund, L.P. |
| 9 | Debt investors own 91.8% and include Connecticut Valley Structured Credit CDO III, Ltd. and Connecticut Valley CLO Fund IV, Ltd. |
| 10 | Debt investors own 53.7% and includes only Babson Capital Loan Strategies Fund, L.P. |
| 11 | Debt investors own 5.2% and include Great Lakes III, L.P. and Babson Capital Loan Strategies Fund, L.P. |
| 12 | Debt investors own 6.5% and include Great Lakes III, L.P. |
| | |

SUPPLEMENTAL EXHIBITS AND SCHEDULES INTERROGATORIES

The following supplemental reports are required to be filed as part of your statement filing. However, in the event that your company does not transact the type of business for which the special report must be filed, your response of NO to the specific interrogatory will be accepted in lieu of filing a "NONE" report and a bar code will be printed below. If the supplement is required of your company but is not being filed for whatever reason enter SEE EXPLANATION and provide an explanation following the interrogatory questions.

| | _ | Response |
|----|---|----------|
| | | |
| 1. | Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement? | NO |
| 2. | Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement? | NO |
| 3. | Will the Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC? | NO |
| 4. | Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV be filed with the state of domicile and electronically with the NAIC? | NO |
| 5. | Will the Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI be filed with the state of domicile and electronically with the NAIC? | NO |
| 6. | Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Average Market Value) be filed with the state of domicile and electronically with the NAIC? | NO |
| 7. | Will the Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) be filed with the state of domicile and electronically with the NAIC? | NO |

Explanation:

- 1. Not required.
- 2. This line of business is not written by the Company.
- 3. Not required.
- 4. Not required.
- 5. Not required.
- 6. Not required.
- 7. Not required.
 - Bar Code:
- 1. Trusteed Surplus Statement [Document Identifier 490]
- 2. Medicare Part D Coverage Supplement [Document Identifier 365]
- 3. Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
- Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 446]
- Reasonableness of Assumptions Certification for Implied Guaranteed Rate Method required by Actuarial Guideline XXXVI [Document Identifier 447]
- 6. Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI [Document Identifier 448]
- Reasonableness and Consistency of Assumptions Certification required by Actuarial Guideline XXXVI (Updated Market Value) [Document Identifier 449]



NONE

SCHEDULE A - VERIFICATION Real Estate

| | | 1 | 2 Deise Vase Feadad |
|-----|---|--------------|------------------------|
| | | | Prior Year Ended |
| | | Year to Date | December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | | |
| 2. | Cost of acquired: | | |
| | 2.1 Actual cost at time of acquisition | | |
| | 2.2 Additional investment made after acquisition | | |
| 3. | Current year change in encumbrances | | |
| 4. | Total gain (loss) on disposals | | |
| 5. | Deduct amounts received on disposals | | |
| 6. | Total foreign exchange change in book/adjusted erryin value | | |
| 7. | Deduct current year's other than temporary impair ment removized | | |
| 8. | Deduct current year's depreciation | | |
| 9. | Book/adjusted carrying value at the end of current period (Lines 1+2+3+4-5+6-7-8) | | |
| 10. | Deduct total nonadmitted amounts | | |
| 11. | Statement value at end of current period (Line 9 minus Line 10) | | |

SCHEDULE B - VERIFICATION

| | Mortgage Loans | 1 | 2 |
|-----|--|--------------|------------------|
| | | | Prior Year Ended |
| | | Year to Date | December 31 |
| 1. | Book value/recorded investment excluding accrued interest, December 31 of prior year | 4, 170, 281 | 4,680,443 |
| 2. | Cost of acquired: | | |
| | 2.1 Actual cost at time of acquisition | | |
| | 2.2 Additional investment made after acquisition | | |
| 3. | Capitalized deferred interest and other | | |
| 4. | Accrual of discount | | 1,054 |
| 5. | Unrealized valuation increase (decrease) | | |
| 6. | Total gain (loss) on disposals | | |
| 7. | Deduct amounts received on disposals | | |
| 8. | Deduct amortization of premium and mortgage interest points and commitment fees | | |
| 9. | Total foreign exchange change in book value/recorded investment excluding accrued interest | | |
| 10. | Total foreign exchange change in book value/recorded investment excluding accrued interest Deduct current year's other than temporary impairment recognized | | |
| 11. | Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10) | 4,048,491 | 4, 170, 281 |
| 12. | Total valuation allowance | | |
| 13. | Subtotal (Line 11 plus Line 12) | 4,048,491 | 4,170,281 |
| 14. | Deduct total nonadmitted amounts | | |
| 15. | Statement value at end of current period (Line 13 minus Line 14) | 4,048,491 | 4,170,281 |

SCHEDULE BA - VERIFICATION

| | Other Long-Term Invested Assets | | |
|-----|--|--------------|-------------------------|
| | | 1 | 2 Deize View Frederi |
| | | Veer te Dete | Prior Year Ended |
| | | Year to Date | December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | | |
| 2. | Cost of acquired: | | |
| | 2.1 Actual cost at time of acquisition | | |
| | 2.2 Additional investment made after acquisition | | |
| 3. | Capitalized deferred interest and other | | |
| 4. | Accrual of discount | | |
| 5. | Unrealized valuation increase (decrease) | | |
| 6. | Total gain (loss) on disposals | | |
| 7. | Deduct amounts received on disposals | | |
| 8. | Deduct amortization of premium and depreciation | | |
| 9. | Total foreign exchange change in book/adjusted carrying value | | |
| 10. | Deduct current year's other than temporary impairment recognized | | |
| 11. | Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5+6-7-8+9-10) | | |
| 12. | Deduct total nonadmitted amounts | | |
| 13. | Statement value at end of current period (Line 11 minus Line 12) | | |

SCHEDULE D - VERIFICATION

Bonds and Stocks

| | | 1 | 2 |
|-----|---|--------------|------------------|
| | | | Prior Year Ended |
| | | Year to Date | December 31 |
| 1. | Book/adjusted carrying value of bonds and stocks, December 31 of prior year | | |
| 2. | Cost of bonds and stocks acquired | | |
| 3. | Accrual of discount | | |
| 4. | Unrealized valuation increase (decrease) | | |
| 5. | Total gain (loss) on disposals | | |
| 6. | Deduct consideration for bonds and stocks disposed of | | |
| 7. | Deduct amortization of premium | | |
| 8. | Total foreign exchange change in book/adjusted carrying value | | |
| 9. | Deduct current year's other than temporary impairment recognized | | |
| 10. | Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) | | |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 160,875,599 | 144,280,400 |

SCHEDULE D - PART 1B

Showing the Acquisitions, Dispositions and Non-Trading Activity During the Current Quarter for all Bonds and Preferred Stock by NAIC Designation

| | During the Current Quarter to | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------------------------------------|-------------------------------|------------------------|-----------------|----------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| | Book/Adjusted | Acquisitions | Dispositions | Non-Trading Activity | Book/Adjusted Carrying Value | Book/Adjusted Carrying Value | Book/Adjusted Carrying Value | Book/Adjusted Carrying Value |
| | Carrying Value Beginning | Acquisitions During | Dispositions | During | End of | End of | End of | December 31 |
| NAIC Designation | of Current Quarter | Current Quarter | Current Quarter | Current Quarter | First Quarter | Second Quarter | Third Quarter | Prior Year |
| | | | | | | | | |
| | | | | | | | | |
| BONDS | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 1. NAIC 1 (a) | | | | | | | | |
| 2. NAIC 2 (a) | | 414,352,608 | 401,564,828 | (543,550) | | | | |
| 3. NAIC 3 (a) | | | | | 1,328,956 | | | |
| 4. NAIC 4 (a) | | | | | | | | 1,000,000 |
| 5. NAIC 5 (a) | | | | (1,112) | | | | |
| 6. NAIC 6 (a) | | | | | | | | |
| 7. Total Bonds | 256,917,955 | 423,685,161 | 402,555,294 | 170,582 | 278,218,404 | | | 256,917,955 |
| | | | | | | | | |
| | | | | | | | | |
| PREFERRED STOCK | | | | | | | | |
| FREFERRED STOCK | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 8. NAIC 1 | | | | | | | | |
| 9. NAIC 2 | | | | | | | | |
| 10. NAIC 3 | | | | | | | | |
| 11. NAIC 4 | | | | | | | | |
| 12. NAIC 5 | | | | | | | | |
| 13. NAIC 6 | | | | | | | | |
| 14. Total Preferred Stock | | | | | | | | |
| 15. Total Bonds and Preferred Stock | 256,917,955 | 423,685,161 | 402,555,294 | 170,582 | 278,218,404 | | | 256,917,955 |

SCHEDULE DA - PART 1

| Short-Term Investments | | | | | | | |
|------------------------|---------------------------------|-----------|-------------|------------------------------------|--|--|--|
| | 1 | 2 | 3 | 4 | 5 | | |
| | Book/Adjusted Carrying Value | Par Value | Actual Cost | Interest Collected Year-to-Date | Paid for Accrued Interest Year-to-Date | | |
| 9199999 Totals | 5,998,345 | XXX | 5,979,982 | | | | |

SCHEDULE DA - VERIFICATION Short-Term Investments

| | | 1 | 2 |
|-----|---|----------------|---------------------------------|
| | | Year To Date | Prior Year Ended December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | 16 , 484 , 333 | 17 , 489 , 374 |
| 2. | Cost of short-term investments acquired | 2,996,436 | |
| 3. | Accrual of discount | 17,541 | |
| 4. | Unrealized valuation increase (decrease) | | |
| 5. | Total gain (loss) on disposals | 10 | |
| 6. | Deduct consideration received on disposals | 13,499,975 | |
| 7. | Deduct amortization of premium | | |
| 8. | Total foreign exchange change in book/adjusted carrying value | | |
| 9. | Deduct current year's other than temporary impairment recognized | | |
| 10. | Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) | 5,998,345 | |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 5,998,345 | 16,484,333 |

Schedule DB - Part A - Verification - Options, Caps, Floors, Collars, Swaps and Forwards $N \ O \ N \ E$

Schedule DB - Part B - Verification - Futures Contracts NONE

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open $N\ O\ N\ E$

Schedule DB-Part C-Section 2-Reconciliation of Replication (Synthetic Asset) Transactions Open $N \ O \ N \ E$

Schedule DB - Verification - Book/Adjusted Carrying Value, Fair Value and Potential Exposure of Derivatives

ΝΟΝΕ

SCHEDULE E - VERIFICATION (Cash Equivalents)

| | (Cash Equivalents) | | 2 |
|-----|---|---------------|------------------|
| | | | 2 |
| | | Maria Ta Data | Prior Year Ended |
| | | Year To Date | December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | | |
| 2. | Cost of cash equivalents acquired | 402,241,249 | 1,607,984,285 |
| 3. | Accrual of discount | | |
| 4. | Unrealized valuation increase (decrease) | | |
| 5. | Total gain (loss) on disposals | (1) | 54 |
| 6. | Deduct consideration received on disposals | 387, 171, 874 | 1,585,413,329 |
| 7. | Deduct amortization of premium | | |
| 8. | Total foreign exchange change in book/adjusted carrying value | | |
| 9. | Deduct current year's other than temporary impairment recognized | | |
| 10. | Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) | 111,344,461 | |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 111,344,461 | 96,153,220 |

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