QUARTERLY STATEMENT

OF THE

C.M. Life Insurance Company

TO THE

Insurance Department

OF THE

STATE OF

FOR THE QUARTER ENDED MARCH 31, 2017

LIFE AND ACCIDENT AND HEALTH

2017

ASSETS

| | | | Current Statement Date | | 4 |
|-------|--|-----------------|-------------------------|---|--|
| | | 1 Assets | 2 Nonadmitted Assets | 3 Net Admitted Assets (Cols. 1 - 2) | December 31 Prior Year Net Admitted Assets |
| 1. | Bonds | 3,997,151,684 | | 3,997,151,684 | 4,077,217,996 |
| | Stocks: | | | | |
| | 2.1 Preferred stocks | 25,593,246 | | 25,593,246 | 25,449,045 |
| | 2.2 Common stocks | 312,560,294 | | 312,560,294 | 311,699,638 |
| 3. | Mortgage loans on real estate: | | | | |
| | 3.1 First liens | 952,094,992 | | 952,094,992 | 966,656,414 |
| | 3.2 Other than first liens | | | | |
| 4. | Real estate: | | | | |
| | 4.1 Properties occupied by the company (less \$encumbrances) | | | | |
| | 4.2 Properties held for the production of income (less | | | | |
| | \$ encumbrances) | | | | |
| | 4.3 Properties held for sale (less \$ encumbrances) | | | | |
| 5. | Cash (\$16,668,959), cash equivalents | | | | |
| | (\$325,312,312) and short-term | | | | |
| | investments (\$16, 162, 028) | 358,143,299 | | 358,143,299 | 161,298,905 |
| 6. | Contract loans (including \$ premium notes) | 144,104,087 | | 144, 104, 087 | 143,876,200 |
| 7. | Derivatives | 460 , 194 , 761 | | 460,194,761 | 508,857,982 |
| 8. | Other invested assets | 186,489,231 | 1,438,500 | 185,050,731 | 200,388,085 |
| 9. | Receivables for securities | 197,047,397 | | 197,047,397 | 207,318,099 |
| 10. | Securities lending reinvested collateral assets | | | | |
| | Aggregate write-ins for invested assets | | | | |
| 12. | Subtotals, cash and invested assets (Lines 1 to 11) | 6,633,378,991 | 1,438,500 | 6,631,940,491 | 6,602,762,364 |
| 13. | Title plants less \$ charged off (for Title insurers | | | | |
| | only) | | | | |
| 14. | Investment income due and accrued | 97,350,928 | 1,755,081 | 95,595,847 | 95,388,468 |
| | Premiums and considerations: | | | | |
| | 15.1 Uncollected premiums and agents' balances in the course of collection | 114,875 | | 114,875 | 124,575 |
| | 15.2 Deferred premiums, agents' balances and installments booked but | | | | |
| | deferred and not yet due (including \$ | | | | |
| | earned but unbilled premiums) | (13,297,113) | | (13,297,113) | (25,502,651) |
| | 15.3 Accrued retrospective premiums (\$ | | | | |
| | contracts subject to redetermination (\$) | | | | |
| | Reinsurance: | | | | |
| | 16.1 Amounts recoverable from reinsurers | | | | 28,958,578 |
| | 16.2 Funds held by or deposited with reinsured companies | | | | |
| | 16.3 Other amounts receivable under reinsurance contracts | | | | (3,777,509) |
| | Amounts receivable relating to uninsured plans | | | | |
| | Current federal and foreign income tax recoverable and interest thereon | | | | 2,905,366 |
| | Net deferred tax asset | | | 49,258,942 | |
| | Guaranty funds receivable or on deposit | | | 967,563 | 987,213 |
| 20. | Electronic data processing equipment and software | | | | |
| 21. | Furniture and equipment, including health care delivery assets (\$ | | | | |
| | Net adjustment in assets and liabilities due to foreign exchange rates | | | | |
| | Receivables from parent, subsidiaries and affiliates | | | 274,951 | 273,263 |
| | Health care (\$) and other amounts receivable | | | | |
| | Aggregate write-ins for other than invested assets | 3,574,982 | 3,512,351 | 62,631 | 61,242 |
| | Total assets excluding Separate Accounts, Segregated Accounts and Protected Cell Accounts (Lines 12 to 25) | 6,941,239,620 | 118,836,524 | 6,822,403,096 | 6,744,260,890 |
| 27. | From Separate Accounts, Segregated Accounts and Protected Cell Accounts | 1,776,581,694 | | 1,776,581,694 | 1,717,971,465 |
| 28. | Total (Lines 26 and 27) | 8,717,821,314 | 118,836,524 | 8,598,984,790 | 8,462,232,355 |
| | 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 | 65,575 | 2,944 | 62,631 | 61,242 |
| | Cash advanced to agents | | 3,509,407 | | |
| 2503. | | | | | |
| 2598. | Summary of remaining write-ins for Line 25 from overflow page | | | | |
| 2599. | Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) | 3,574,982 | 3,512,351 | 62,631 | 61,242 |
| | , | | | | , |

LIABILITIES, SURPLUS AND OTHER FUNDS

| December December Commonth December | | LIABILITIES, SUNPLUS AND OTHER PU | 1 | |
|--|-------|--|---------------------------------------|------------------|
| 1. Aggregate reserve for the contractes \$ | | | 1 Current | 2 December 31 |
| fercicling S | | | Statement Date | Prior Year |
| 2. A Lapting for depositive contract including \$ Modeo Reserve). \$0,389,776 79,25 4. Colling for depositive contract including \$ Modeo Reserve). \$0,389,776 77,25 5. Published for depositive contract including \$ mrd coupons \$ due and unpend | 1. | Aggregate reserve for life contracts \$4,004,444,352 less \$ included in Line 6.3 | 4 004 444 050 | 4 000 710 001 |
| 1. Listing for departably per contracts (including \$ Muctoo Reserve) | | | | |
| 4.1 Lies or an Frankh 4.1 Lies or an Frankh 5. Polyconforter of Polycone of the Control of State and support 1.1, 146, 100. 5. Provision for polycone of the Control of State and support 1.1, 146, 100. 6. Provision for polycone of the Control of State and support 1.1, 146, 100. 6. Provision for polycone of the Control of State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Dividence of the State and support 1.1, 146, 100. 6. Comment Inabilities and including the liability of State and health control of the State and health control of the State and the State and health support 1.1, 146, 100. 6. Dividence of the Control of the State and the State and health support 1.1, 146, 100. 6. Dividence of the Control of the State and the State and health support 1.1, 146, 100. 6. Dividence of the Control of the State and the Sta | | | | |
| 4 1 Life. 4 12 Accident and health 5 Prolity of Lorent Control Control of Lorent Control of Lorent Control of Lorent Control of Lorent Control Control of Lorent Control of Lorent Control Contr | _ | | | 70,202,000 |
| 5 Provision for option (sharings) and coupron passing in following calendar year - estimated amounts: 6 1 Division of appoint calendar occupron passing in following calendar year - estimated amounts: 6 1 Division of appoint calendar occupron passing in following calendar year - estimated amounts: 6 3 Occupron and animals branefast including 8 Mococo) 7 Amount provisionally held for deferred dividend policies not included in time 6 8 Premiuma and animals branefast including 8 mocobers and health control secretics in advanced less 9 9 I Summoner regulate on calendar of the set of appoints of the set appoints on the set appoint of the set | | | 11,416,104 | 17,495,061 |
| 6. Provision for polisyholders' dividends and coopone pagable in following clerkodar year - estimated emounts: 6.1 Dividends approtricted for private (including \$ | | | | |
| 6 - Dividencis apportuned for payment (including \$ Modos) 6. 20 Dividendia not yet apportuned including \$ Modos) 6. 3 Congrous and similar benefits (including \$ Modos) 6. 3 Congrous and similar benefits (including \$ Modos) 6. 4 Amount providensity left for determed including position not included III Like \$ determined including the including and applications of the state encoursed in advance lests 6. 5 determined including determined including the liability of \$ accident and health premiums 7. 5 Contract liabilities not included deservative. 9. 1 Survenciev values on connected contracts 9. 2 Purpose of the state of which \$ accident and health premiums 9. 2 Purpose of the state of which \$ accident and health premiums 9. 3 Other amounts possible on retiremance, including \$ accident and health \$ accident a | 5. | | | |
| 6. 3. Obcorders and yet approximent (including \$ 6. 3. Obcorders and withing horselfs including \$ 7. Amount provisionally had be determed devided and published in Line \$ 8. Secretary of the provisional published by the provisional published on the published of | 6. | | | |
| 6 S Coupons and aiminar branchis including S 7. Amount provisionally held or following collision on Included in Linux B 8. Recommendation of the first and account and health contracts received in advance less 9. Provision between the develowmen: 9.1 Surrender values on canceled contracts 9.2 Provision for experience aiming relunds, including the liability of 3 accident and health experience relain practures, or which is a contract or | | | | |
| 7. Amount provisionally held for deferred dividend policies not included in Line 6. Permittina and annulty contribution to fill the advantage of the annult policies and multiple contribution to fill the advantage of the annult policies and the annult policies annult policies and the annult policies a | | | | |
| 8. Permitters and annuity considerations for life and accident and health contracts scowers in advance less \$ society and control testings \$ accident and health premiume. 5,945 9. Commet liabilities not discluded essewhers: 9.2 Provision for experimentary grants and including the liability of \$ accident and health experience mining refunds of which \$ is for medical loss ratio related por the Public Health experience may be an experimental production of the provision of the public of the provision of the public of | 7 | | | |
| \$ discount includings accident and health premiuma 5,0,65 \$ Contract liabilities and included extendence 5 \$ 1 | | · · · · · · · · · · · · · · · · · · · | | |
| 9. Contract liabilities not included elsewhere: 9.1 Surred values or cancello contacts 9.1 Surred values or cancello contacts 9.3 Service Act 9.3 Other amounts payable on reinsurance, including \$ seasuraned and \$ 190,288 9.3 Other amounts payable on reinsurance, including \$ seasuraned and \$ 190,288 9.3 Other amounts payable on reinsurance, including \$ seasuraned and \$ 190,288 9.4 Interest Maintenance Reserve 10. Commissions and expense allowances payable on reinsurance assumed 11. Commissions and expense allowances payable on reinsurance assumed 12. Cameral expense and expense allowances payable on reinsurance assumed 13. Transfers to Separate Accounts due or accound (feet) (including \$ (5,964,301) accrued for expense allowances, expense on the reserve of the contact transfers allowances, expense of the reserve, red of reinsurance assumed 14. Transfers to Separate Accounts due or accound (excluding) \$ (5,964,301) accrued for expense allowances recognized in reserve, red of reinsurance management and transfers allowances, red of reinsurance assumed allowances recognized in reserve, red of reinsurance management transfers transfers to Separate Accounts, due or account, devoluting footeral incommissions of transfers and trans | | \$ discount; including \$ accident and health premiums | 5,045 | 4,548 |
| 9.2 Provision for experience rating rethinal, including the liability of \$ is for medical loss ratio robusts per the Public Health Solvice Act 9.3 Other morning payable on reinsurance, including \$ is for medical loss ratio robusts per the Public Health Solvice Act 9.3 Other morning payable on reinsurance, including \$ is for medical loss ratio robusts per the Public Health \$ 190, 286 19.3 Other morning payable on reinsurance search \$ 190, 286 19.3 Other morning payable or accrued life and annually contracts \$ is and deposit lyte contract funds \$ is an end deposit fund funds \$ is an end deposit fund funds \$ is an end deposit fund funds \$ is an end fund fund funds \$ is an end fund funds \$ is an end fund funds \$ is an end funds \$ is an end fund funds \$ is an end f | 9. | Contract liabilities not included elsewhere: | | |
| experience rating relunds of which 5 | | | | |
| Service Act | | | | |
| 9.3 Other amounts psyable on reinsurance, including \$ assumed and \$ 190,286 2. 9.4 Interest Maintenance Reserve | | · · · · · · · · · · · · · · · · · · · | | |
| Section 190.286 22 | | | | |
| 3 4 Interest Maintenance Reserve | | 9.3 Other amounts payable on reinsurance, including \$ assumed and \$ 190,200 | 190 286 | 22 721 |
| 10. Commissions to agents due or account-die and annuity contracts of a summary of the commissions and expense allowance spapible on reinsurance assumed 11. Commissions and expense allowance spapible on reinsurance assumed 12. General expenses allowance spapible on reinsurance assumed 13. Transfers to Separate Accounts due or account (rein) (including \$ 1,5,44,301) account for expense 14. Transes, isomese and fees due or account, excluding folderal income taxes 15. Outwent foreids and foreign income taxes, including \$ 1,5,44,301) account for expense 16. Fig. 15. Outwent foreids and foreign income taxes, including \$ 1,5,44,301,301,301,301,301,301,301,301,301,301 | | 9.4 Interest Maintenance Reserve | 37 839 637 | 36 885 767 |
| \$ and deposit-type contract funds \$ 1.00 | 10. | | 3.,500,007 | 55,000,101 |
| 1.1 Commissions and expense allowances payable on reinsurance assumed 1,099 1,01 | 1 | | | |
| 1.05 1.07 | 11. | Commissions and expense allowances payable on reinsurance assumed | | |
| 13. Transfers to Separate Accounts due or accrued (net) (including \$ | | General expenses due or accrued | | |
| allowances recognized in reserves, net of reinsured allowances) 16,977,788 1.5,94 | 13. | Transfers to Separate Accounts due or accrued (net) (including \$(5,954,301) accrued for expense | | |
| 15.1 Current lederal and foreign income taxes, including \$ 18.090,844 on realized capital gains (losses) 9,994,550 | | allowances recognized in reserves, net of reinsured allowances) | (6,797,788) | (5,948,356) |
| 15.2 Not deferred tax ibility 1.5 Unamend investment income 1.5 Unamend income 1.5 Unamen | | Taxes, licenses and fees due or accrued, excluding federal income taxes | 1,114,881 | 1,344,045 |
| 10 Linearmed investment income (654, 287) (58 17 18 18 18 18 18 18 1 | | | | |
| 17. Amounts withheld or retained by company as agent or fusitee (654, 287) | | · · · · · · · · · · · · · · · · · · · | | |
| 18. Amounts held for agents' account, including \$ agents' credit balances 9,497,469 14,84 20. Net adjustment in assets and liabilities due to foreign exchange rates 1. Liability for benefits for employees and agents' find included above 22. Borrowed money \$ and interest thereon \$ 23. Dividends to stockholders declared and unpaid 24. Miscellaneous liabilities: 24.01 Sast valuation reserve 87,442,640 81,22 24.02 Reinsurance in unauthorized and certified (\$) companies 24.09 Papsible to parent, subsidiaries and affiliates 24.04 Payable to parent, subsidiaries and affiliates 24.05 Patrios tristanding 24.05 Liability for amounts held under uninsured plans 24.07 Payable for sociotiss and employees 24.09 Derivatives 24.09 D | | | | |
| 19. Remittances and items not allocated 9, 437, 469 14, 84 20. Not adjustment in assets and liabilities due to foreign exchange rates 21. Liability for benefits for employees and agents if not included above 22. Borrowed money \$ | | | | |
| 20. Net adjustment in assets and liabilities due to foreign exchange rates | | | | |
| 22 Borrowed money \$ | | | | |
| 23. Dividends to stockholders declared and unpaid | 21. | , and the second se | | |
| Miscellaneous liabilities: 24.01 Asset valuation reserve 24.02 Reinsurance in unauthorized and certified (\$) companies 24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers 24.04 Payable to parent, subscilaires and affiliates 24.05 Drafts outstanding 24.06 Liability for amounts held under uninsured plans 24.07 Funds held under uninsured plans 24.07 Funds held under coinsurance 24.08 Derivatives 469, 201, 213 501, 11 24.09 Payable for securities ending 24.11 Capital notes \$ 469, 201, 213 501, 11 24.09 Payable for securities lending 24.11 Capital notes \$ 469, 201, 213 501, 11 24.10 Payable for securities lending 24.11 Capital notes \$ 418, 314, 622 421, 57 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5, 257, 430, 126 5, 197, 58 27. From Separate Accounts Statement 1, 176, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 176, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 171, 79 27. From Separate Accounts Statement 1, 276, 581 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 276, 281 (64) 1, 277, 79 1, 277, 79 1, 277, 79 1, 277, 79 1, 277, 79 1, 277, | 22. | Borrowed money \$ and interest thereon \$ | | |
| 24.01 Asset valuation reserve 24.02 Finisurance in unauthorized and certified (\$) companies 24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers 24.04 Payable to parent, subsidiaries and affiliates 24.05 Drafts outstanding 24.06 Liability for amounts held under uninsured plans 24.07 Funds held under coinsurance 24.07 Funds held under coinsurance 24.08 Derivatives 24.08 Derivatives 24.09 Payable for securities lending 24.10 Payable for securities lending 24.10 Payable for securities lending 24.11 Capital notes \$ 1418,314,622 421,57 24.10 Payable for securities lending 24.11 Capital notes \$ 1418,314,622 421,57 25. Aggregate write-ins for liabilities 25. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5,257,430,126 5,197,58 27. From Separate Accounts Statement 1,1776,581,694 1,717,97 28. Total liabilities cylinding Separate Accounts business (Lines 1 to 25) 5,257,430,126 5,197,58 29. Common capital stock 20. On Prefered capital stock 21. Aggregate write-ins for other than special surplus funds 23. Surplus notes 24. Aggregate write-ins for other than special surplus funds 24. Aggregate write-ins for other than special surplus funds 25. Unassigned funds (surplus) 26. Lass treasury stock, at cost: 27. Surplus official Lines 31+32+33+34+35-38 (including \$ 1,564,72,970 1,564,72,970 1,564,72,970 1,564,72,970 1,564,72,970 1,564,72,750 1,754,754 1,755 1, | 23. | Dividends to stockholders declared and unpaid | | |
| 24.02 Reinsurance in unauthorized and certified (\$) companies 24.04 Payable to parent, subsidiaries and affiliates 24.05 Payable to parent, subsidiaries and affiliates 24.06 Liability for amounts held under uninsured plans 24.07 Funds held under coinsurance 24.08 Derivatives 24.09 Payable for securities 24.10 Payable for securities lending 24.11 Capital notes \$ 469, 201.213 501.11 24.19 Payable for securities lending 24.11 Capital notes \$ and interest thereon \$ 418, 314, 622 421, 57 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5, 257, 409, 126 5, 197, 58 27. From Separate Accounts Statement 1.1776, 581, 604 1.7177, 97 28. Total liabilities (Lines 26 and 27) 7,034 (111, 820 6, 915, 55 29. Common capital stock 30. Preferred capital stock 31. Aggregate write-ins for other than special surplus funds 32. Surplus notes 33. Gross paid in and contributed surplus funds 34. Aggregate write-ins for special surplus funds 35. Unassigned funds (surplus) 36. Less treasury stock, at cost: 36. 1 shares preferred (value included in Line 29 \$ 36.1 shares preferred (value included in Line 29 \$ 36.1 shares preferred (value included in Line 29 \$ 36.1 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.1 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 shares preferred (value included in Line 29 \$ 36.2 s | 24. | | 07.440.040 | 04 004 000 |
| 24.03 Funds held under reinsurance treaties with unauthorized and certified (\$) reinsurers | | | | |
| 24.04 Payable to parent, subsidiaries and affiliates. 24.05 Drafas outstanding 24.06 Liability for amounts held under uninsured plans 24.07 Funds held under coinsurance 24.08 Derivatives 489,201,213 501,11 24.09 Payable for securities lending 24.11 Capital notes \$ 489,201,213 501,11 24.19 Payable for securities lending 24.11 Capital notes \$ 418,314,622 421,57 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 7. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 8. Total liabilities (Lines 26 and 27) 8. Total liabilities (Lines 26 and 27) 9. Todal visibilities (Lines 26 and 27) 9. Preferred capital stock 10. Preferred capital stock 11. Todal visibilities (Lines 26 and 27) 12. Todal visibilities (Lines 26 and 27) 13. Aggregate write-ins for other than special surplus funds 14. Aggregate write-ins for other than special surplus funds 15. Unassigned funds (surplus) 16. Less treasury stock, at cost: 36. 1 36. 1 37. Surplus (Total Lines 31-32-33+34+35-36) (including \$ 38. Totals of Lines 29, 30 and 37 39. Totals of Lines 29, 30 and 37 70 totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8. Surplus for total Lines 31-32-33+34+35-36) (including \$ 8. Surplus for total Lines 31-32-33+34+35-36) (including \$ 8. Surplus for total Lines 31-32-33+34+35-36) (including \$ 9. Surplus (Total Lines 31-32-35+34+35-36) (including \$ 9. Surplus (Total Lines 31-32-35+34+35-36) (including \$ 9. Surplus (Total Lines 31-32-35+34+35-36) | | | | |
| 24.05 Drafts outstanding 24.06 Liability for amounts held under uninsured plans 24.07 Funds held under coinsurance 24.07 Funds held under coinsurance 24.08 Payable for securities 24.10 Payable for securities lending 24.11 Capital notes \$ 24.10 Payable for securities lending 24.11 Capital notes \$ 24.10 Payable for securities lending 24.11 Capital notes \$ 34.18,314,622 421,57 25. Aggregate write-ins for liabilities 25. Aggregate virte-ins for liabilities 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 27. From Separate Accounts Statement 28. Total liabilities (Lines 26 and 27) 29. Common capital stock 29. Common capital stock 20. 2,500,000 20. 7,034,011,820 6,915,55 29. Common capital stock 20. 2,500,000 20. 7,034,011,820 6,915,55 29. Common capital stock 20. 2,500,000 20. 2,50 21. Aggregate write-ins for other than special surplus funds 22. Surplus notes 23. Gross paid in and contributed surplus 24. 10,112,196,762 25. 11,112,196,762 26. Less treasury stock, at cost: 26. Less treasury stock, at cost: 27. 36. Less treasury stock, at cost: 28. Surplus for the streasury stock, at cost: 29. Surplus for the streasury stock, at cost: 29. Common capital stock 20. Less treasury stock, at cost: 20. Less treasury stock, at cost treasure stock, and treasure stock, at cost treasure stock, and treas | | 24.03 Funds nels under reinsurance treaties with unautinorized and certified (\$) reinsurers | 43 302 057 | 10 622 615 |
| 24.07 Funds held under uninsured plans 24.07 Funds held under coinsurance 34.09 Payable for securities 34.09 Payable for securities 34.09 Payable for securities lending 24.11 Capital notes \$ 91.627,670 24.10 Payable for securities lending 24.11 Capital notes \$ and interest thereon \$ 418,314,622 421,57 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5,257,430, 126 5,197,58 27. From Separate Accounts Statement 1,776,581,694 1,717,97 28. Total liabilities (Lines 26 and 27) 7,034,011,820 6,915,52 29. Common capital stock 9,250,000 2,50 30. Preferred capital stock 9,250,000 2,50 31. Aggregate write-ins for other than special surplus funds 9,250,000 1,250 32. Surplus notes 9,300,000 1,300 | | 24.04 r ayaule to pareiri, substitiaries and animates | | 10,022,010 |
| 24.07 Funds held under coinsurance 24.08 Derivatives 24.08 Derivatives 34.69 201,213 3.501,11 24.09 Payable for securities 24.10 Payable for securities lending 24.11 Capital notes \$ and interest thereon \$ 25. Aggregate write-ins for liabilities 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 27. From Separate Accounts Statement 28. Total liabilities (Lines 26 and 27) 28. Total liabilities (Lines 26 and 27) 29. Common capital stock 20. Common capital stock 20. Surplus notes 20. Surplus notes 21. Aggregate write-ins for other than special surplus funds 22. Surplus notes 23. Gross paid in and contributed surplus 24. Less treasury stock, at cost: 36. Less treasury stock, at cost: 36. Less treasury stock, at cost: 36. Less treasury stock, at cost: 36.1 shares preferred (value included in Line 29 \$) 36.2 surplus notes 37. Surplus (Total Lines 31+32+33+34+35-56) (including \$ in Separate Accounts Statement) 38. Totals of Lines 29, 30 and 37 39. Totals of Lines 29, 30 and 37 30. Totals of Lines 29, 30 and 37 31. Totals of Li | | | | |
| 24.10 Payable for securities 91,627,570 | | · | | |
| 24.10 Payable for securities lending 24.11 Capital notes \$ | | 24.08 Derivatives | 469,201,213 | 501,115,465 |
| 24.11 Capital notes \$ | | 24.09 Payable for securities | 91,627,570 | |
| 25 Aggregate write-ins for liabilities 418,314,622 421,57 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5,257,430,126 5,197,58 27. From Separate Accounts Statement 1,776,581,694 1,777,97 28. Total liabilities (Lines 26 and 27) 7,034,011,820 6,915,55 29. Common capital stock 2,500,000 2,50 30. Preferred capital stock 2,500,000 2,50 31. Aggregate write-ins for other than special surplus funds 32. Surplus notes 450,276,208 450,27 34. Aggregate write-ins for special surplus funds 450,276,208 450,27 35. Unassigned funds (surplus) 1,112,196,762 1,093,88 36. Less treasury stock, at cost: 36.1 shares common (value included in Line 29 \$) 36.2 shares preferred (value included in Line 30 \$) 36.2 shares preferred (value included in Line 30 \$) 1,562,472,970 1,544,17 38. Totals of Lines 29, 30 and 37 5,366,37 5,367 | | , | | |
| 26. Total liabilities excluding Separate Accounts business (Lines 1 to 25) 5,257, 430, 126 5,197, 58 27. From Separate Accounts Statement 1,776, 581, 694 1,777, 97 28. Total liabilities (Lines 26 and 27) 7,034,011,820 6,915,55 29. Common capital stock 2,500,000 2,500 30. Preferred capital stock 2,500,000 2,500 31. Aggregate write-ins for other than special surplus funds 450,276,208 450,27 32. Surplus notes 450,276,208 450,27 33. Gross paid in and contributed surplus 450,276,208 450,27 34. Aggregate write-ins for special surplus funds 1,112,196,762 1,093,88 35. Unassigned funds (surplus) 1,112,196,762 1,093,88 36. Less treasury stock, at cost: 36.1 shares common (value included in Line 29 \$) 36.2 shares preferred (value included in Line 29 \$) 36.2 shares preferred (value included in Line 30 \$) 1,564,472,970 1,544,17 38. Totals of Lines 29, 30 and 37 1,564,972,970 1,546,67 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 DETAILS OF WRITE-INS 233,627,805 237,30 2500. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2503. Der Ivat i ves 1,562,472,970 1,546,67 2,500,487 96,19 2504,472,473,473,473,473,473,473,473,473,473,473 | | | | |
| 27. From Separate Accounts Statement | | | | 421,571,924 |
| 28. Total liabilities (Lines 26 and 27) 7,034,011,820 6,915,55 29. Common capital stock 2,500,000 2,500 30. Preferred capital stock 31. Aggregate write-ins for other than special surplus funds 32. Surplus notes 450,276,208 450,277 34. Aggregate write-ins for special surplus funds 450,276,208 450,277 35. Unassigned funds (surplus) 1,112,196,762 1,093,89 36. Less treasury stock, at cost: 36.1 shares common (value included in Line 29 \$ | | | | |
| 29. Common capital stock .2,500,000 .2,500 .30 .2,500,000 .2,500 .30 | | | | |
| 30. Preferred capital stock 31. Aggregate write-ins for other than special surplus funds 32. Surplus notes 33. Gross paid in and contributed surplus 450,276,208 450,276 450,2 | | Total rabilities (Lifes 20 and 27) | 2 500 000 | |
| 31. Aggregate write-ins for other than special surplus funds 32. Surplus notes 33. Gross paid in and contributed surplus 450,276,208 450,277 34. Aggregate write-ins for special surplus funds 35. Unassigned funds (surplus) 1,112,196,762 1,093,88 36.1 Shares common (value included in Line 29 \$ 36.1 Shares preferred (value included in Line 30 \$) 36.2 Shares preferred (value included in Line 30 \$) 37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) 1,562,472,970 1,544,17 38. Totals of Lines 29, 30 and 37 1,564,972,970 1,546,67 39. Totals of Lines 29 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 250. Detriutive Statements 233,627,805 237,30 250. Derivative collateral 52,500,487 96,19 2503. Derivative collateral 61,425,172 85,52 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. 3102. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | | | | 2,300,000 |
| 32. Surplus notes 33. Gross paid in and contributed surplus 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 \$) 37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) 38. Totals of Lines 29, 30 and 37 39. Totals of Lines 29, 30 and 37 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) DETAILS OF WRITE-INS 2501. Repur chase agreements 203,627,805 2502. Der i vat i ve col lateral 2503. Der i vat i ve col lateral 2504. Summary of remaining write-ins for Line 25 from overflow page 3103. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | | · | | |
| 33. Gross paid in and contributed surplus 34. Aggregate write-ins for special surplus funds 35. Unassigned funds (surplus) 36. Less treasury stock, at cost: 36.1 shares preferred (value included in Line 29 \$) 37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) 38. Totals of Lines 29, 30 and 37 39. Totals of Lines 29, 30 and 37 2501 Repurchase agreements 2501 Der ivat ives Der ivat ive collateral 2502 Der ivat ives Der ivat ive collateral 561, 425, 172 57. Summary of remaining write-ins for Line 25 from overflow page 3101 3101 3101 3198. Summary of remaining write-ins for Line 31 from overflow page 3401 3402 | | Surplus notes | | |
| 35. Unassigned funds (surplus) | | Gross paid in and contributed surplus | 450,276,208 | 450,276,208 |
| 36. Less treasury stock, at cost: 36.1 shares common (value included in Line 29 \$) 36.2 shares preferred (value included in Line 30 \$) | | | | |
| 36.1 shares common (value included in Line 29 \$ 36.2 shares preferred (value included in Line 30 \$) | | | 1 , 112 , 196 , 762 | 1,093,897,587 |
| 36.2 shares preferred (value included in Line 30 \$ 37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) 1,562,472,970 1,544,17 38. Totals of Lines 29, 30 and 37 1,564,972,970 1,546,67 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 DETAILS OF WRITE-INS 2501. Repurchase agreements 233,627,805 237,30 2502. Der i vat i ves 105,250,487 96, 19 2503. Der ivat i ve col lateral 61,425, 172 85,52 2598. Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,555 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. 3102. 3103. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | 36. | | | |
| 37. Surplus (Total Lines 31+32+33+34+35-36) (including \$ in Separate Accounts Statement) 1,562,472,970 1,544,17 38. Totals of Lines 29, 30 and 37 1,564,972,970 1,546,67 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 DETAILS OF WRITE-INS 2501. Repurchase agreements 233,627,805 237,30 2502. Der ivat ives 105,250, 487 96, 19 2503. Der ivat ive collateral 61,425, 172 85,52 2598. Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,55 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. 3102. 3103. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | | | | |
| 38. Totals of Lines 29, 30 and 37 1,564,972,970 1,546,67 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 DETAILS OF WRITE-INS 2501. Repurchase agreements 233,627,805 237,30 2502. Derivatives 105,250,487 96,19 2503. Derivative collateral 61,425,172 85,52 2598. Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,55 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. 3102. 3103. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | 27 | | | 1,544,173,795 |
| 39. Totals of Lines 28 and 38 (Page 2, Line 28, Col. 3) 8,598,984,790 8,462,23 | | | | 1,546,673,795 |
| DETAILS OF WRITE-INS 233,627,805 237,305 2501. Repurchase agreements 233,627,805 237,305 2502. Derivatives 105,250,487 96,19 2503. Derivative collateral 61,425,172 85,52 2598. Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,55 2599 Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. 3102. 3103. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | | | | 8,462,232,355 |
| 2501. Repurchase agreements 233,627,805 237,305 2502. Derivatives 105,250,487 96,195 96,195 2503. Derivative collateral 61,425,172 85,525 2598. Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,555 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,575 3101. | | | 2,000,001,100 | 2, .52,252,000 |
| 2502 Derivatives 105,250,487 96,19 2503 Derivative collateral 61,425,172 85,52 2598 Summary of remaining write-ins for Line 25 from overflow page 18,011,158 2,55 2599 Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101 3102 3103 3198 Summary of remaining write-ins for Line 31 from overflow page 3199 Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401 3402 3402 3402 3403 3404 3404 3404 3405 3406 3407 | 2501. | | 233,627,805 | 237,307,712 |
| 2598. Summary of remaining write-ins for Line 25 from overflow page | | · · · · · · · · · · · · · · · · · · · | | 96, 192, 412 |
| 2599. Totals (Lines 2501 through 2503 plus 2598)(Line 25 above) 418,314,622 421,57 3101. | | | | 85,521,623 |
| 3101 | | | | |
| 3102 | | | , , , , , , , , , , , , , , , , , , , | 421,571,924 |
| 3103. 3198. Summary of remaining write-ins for Line 31 from overflow page 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401. 3402. | | | | |
| 3198. Summary of remaining write-ins for Line 31 from overflow page | | | | |
| 3199. Totals (Lines 3101 through 3103 plus 3198)(Line 31 above) 3401 | | | | |
| 3401. 3402. | | · | | |
| 3402. | | | + | |
| | | | | |
| | | | | |
| | | | | |
| 3499. Totals (Lines 3401 through 3403 plus 3498)(Line 34 above) | | · | | |

SUMMARY OF OPERATIONS

| | | 1 | 2 | 3 |
|----------|--|---------------------------------------|---------------|---|
| | | Current Year | Prior Year | Prior Year Ended |
| | | To Date | To Date | December 31 |
| 1. | Premiums and annuity considerations for life and accident and health contracts | 77,292,057 | 77,517,898 | (79,937,671) |
| 2. 3. | Considerations for supplementary contracts with life contingencies | | | 850,099 299,047,027 |
| 3. 4. | Amortization of Interest Maintenance Reserve (IMR) | 3 049 081 | | 13.124.666 |
| 5. | Separate Accounts net gain from operations excluding unrealized gains or losses | | | 10, 121,000 |
| | Commissions and expense allowances on reinsurance ceded | 4 , 122 , 593 | 4,666,694 | 105,200,132 |
| 7. | Reserve adjustments on reinsurance ceded | | | |
| 8. | Miscellaneous Income: | | | |
| | 8.1 Income from fees associated with investment management, administration and contract | 0.044.400 | 0 507 500 | 00 004 400 |
| | guarantees from Separate Accounts | | 9,507,502 | 38,301,429 |
| | 8.2 Charges and fees for deposit-type contracts 8.3 Aggregate write-ins for miscellaneous income | | 599,945 | 2,175,902 |
| 9. | Totals (Lines 1 to 8.3) | 174.872.379 | 168.178.789 | 378,761,584 |
| 10. | Death benefits | | 20,347,785 | 105,310,788 |
| 11. | Matured endowments (excluding guaranteed annual pure endowments) | | 20,047,700 | |
| 12. | Annuity benefits | | | 102,128,619 |
| 13. | Disability benefits and benefits under accident and health contracts | 113,371 | 103,060 | 487,971 |
| 14. | Coupons, guaranteed annual pure endowments and similar benefits | | | |
| 15. | Surrender benefits and withdrawals for life contracts | 101,684,165 | 87,718,281 | 385,325,513 |
| 16. | Group conversions | | | |
| 17. | Interest and adjustments on contract or deposit-type contract funds | 927,954 | 522,804 | 2,564,585 |
| 18. | Payments on supplementary contracts with life contingencies | | 209,648 | 967,425 |
| 19. | Increase in aggregate reserves for life and accident and health contracts | | (10,156,403) | (407,371,221) |
| 20. | Totals (Lines 10 to 19) | 138,565,247 | 126,313,864 | 189,413,680 |
| 21. | Commissions on premiums, annuity considerations, and deposit-type contract funds (direct | 5 540 467 | 8, 122,477 | 64, 129,687 |
| 22. | business only) Commissions and expense allowances on reinsurance assumed | | 0, 122,4// | 04, 129,087 |
| 23. | General insurance expenses | | 7,269,590 | 46,273,949 |
| 24. | Insurance taxes, licenses and fees, excluding federal income taxes | | | 8.692.466 |
| 25. | Increase in loading on deferred and uncollected premiums | 141.288 | 3,593,783 | 5,046,298 |
| 26. | Net transfers to or (from) Separate Accounts net of reinsurance | | | (101, 153, 377) |
| 27. | Aggregate write-ins for deductions | (1,633,275) | 217,809 | 76,525,952 |
| 28. | Totals (Lines 20 to 27) | 134,542,138 | 128,092,265 | 288,928,655 |
| 29. | Net gain from operations before dividends to policyholders and federal income taxes (Line 9 minus | | | |
| | Line 28) | 40,330,241 | 40,086,524 | 89,832,929 |
| 30. | Dividends to policyholders | | | |
| 31. | Net gain from operations after dividends to policyholders and before federal income taxes (Line 29 | | | |
| | minus Line 30) | | 40,086,524 | 89,832,929 |
| 32. | Federal and foreign income taxes incurred (excluding tax on capital gains) | 11,603,694 | 9,620,010 | 23,469,815 |
| 33. | Net gain from operations after dividends to policyholders and federal income taxes and before | 28,726,547 | 30,466,514 | 66,363,114 |
| 34. | realized capital gains or (losses) (Line 31 minus Line 32) | 20,720,047 | | 00,000,114 |
| 04. | gains tax of \$ | | | |
| | transferred to the IMR) | 939 . 158 | (3,415,999) | (4,642,416) |
| 35. | Net income (Line 33 plus Line 34) | 29.665.705 | 27.050.515 | 61.720.698 |
| 00. | CAPITAL AND SURPLUS ACCOUNT | 20,000,700 | 21,000,010 | 01,720,000 |
| 36. | Capital and surplus, December 31, prior year | 1,546,673,795 | 1,395,991,896 | 1,395,991,896 |
| 37. | Net income (Line 35) | | 27,050,515 | 61,720,698 |
| 38. | Change in net unrealized capital gains (losses) less capital gains tax of \$(4, 196, 186) | | | |
| 39. | Change in net unrealized foreign exchange capital gain (loss) | | | (23,588,824) |
| 40. | Change in net deferred income tax | 1,336,323 | (12,279,225) | 9,079,359 |
| 41. | Change in nonadmitted assets | | 28,604,725 | (15,637,331) |
| 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 | (6,218,547) | 4, 195, 637 | (4,528,370) |
| 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) | | | |
| | 50.3 Transferred to surplus | | | |
| 51. | Surplus adjustment: | | | |
| J | 51.1 Paid in | | | |
| | 51.2 Transferred to capital (Stock Dividend) | | | |
| | 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 | (10,271,401) | (4,297,273) | 76,237,328 |
| 54. | Net change in capital and surplus for the year (Lines 37 through 53) | 18,299,175 | 74,725,698 | 150,681,899 |
| 55. | Capital and surplus, as of statement date (Lines 36 + 54) | 1,564,972,970 | 1,470,717,594 | 1,546,673,795 |
| | DETAILS OF WRITE-INS | | | |
| l l | Administrative fee and other income | · · · · · · · · · · · · · · · · · · · | , | 2,175,902 |
| | | | | |
| | | | | |
| | Summary of remaining write-ins for Line 8.3 from overflow page | | | |
| 08.399. | Totals (Lines 08.301 through 08.303 plus 08.398) (Line 8.3 above) | 538,469 | 599,945 | 2,175,902 |
| | Miscellaneous charges to operations | | 217,809 | (4,471,445) |
| | Reinsurance ceded adjustment | | | 80,997,397 |
| | Summary of ramaining write-ine for Line 27 from overflow page | | | |
| | Summary of remaining write-ins for Line 27 from overflow page | (1,633,275) | 217,809 | 76,525,952 |
| | | . , , , | | |
| | Reinsurance ceded adjustment | | (4,291,213) | |
| | · | | | |
| | Summary of remaining write-ins for Line 53 from overflow page | | | |
| | Totals (Lines 5301 through 5303 plus 5398)(Line 53 above) | (10,271,401) | (4,297,273) | 76,237,328 |
| | | | | , |

CASH FLOW

| | | 1 Current Year To Date | 2 Prior Year To Date | 3 Prior Year Ended December 31 |
|--|--|---|----------------------------|--------------------------------------|
| | Cash from Operations | | | |
| Premiums collected net of reinsura | nce | 67,276,027 | 69,077,134 | (83,809,319 |
| 2. Net investment income | | | 85,668,039 | 303,620,327 |
| Miscellaneous income | | 14,574,291 | 10,975,910 | 155,427,406 |
| 4. Total (Lines 1 to 3) | | 168, 136, 289 | 165,721,083 | 375,238,414 |
| 5. Benefit and loss related payments | | 192,066,092 | 147, 142,960 | 600,771,349 |
| 6. Net transfers to Separate Accounts | s, Segregated Accounts and Protected Cell Accounts | (30,538,969) | (20,432,637) | (101,583,290 |
| 7. Commissions, expenses paid and | aggregate write-ins for deductions | 12,507,541 | 19,008,545 | 99,061,993 |
| 8. Dividends paid to policyholders | | | | |
| 9. Federal and foreign income taxes | paid (recovered) net of \$ tax on capital | | | |
| gains (losses) | | | 1,647,382 | 36,006,306 |
| 10. Total (Lines 5 through 9) | | 174,034,664 | 147,366,250 | 634,256,358 |
| 11. Net cash from operations (Line 4 n | ninus Line 10) | (5,898,375) | 18,354,833 | (259,017,944 |
| | Cash from Investments | | | |
| 12. Proceeds from investments sold, r | natured or repaid: | | | |
| 12.1 Bonds | | 322,726,884 | 103,874,877 | 881,884,688 |
| 12.2 Stocks | | 5,109,450 | 6,301,699 | 15,312,374 |
| 12.3 Mortgage loans | | 17,851,001 | 28,659,377 | 133,341,871 |
| 12.4 Real estate | | | | |
| 12.5 Other invested assets | | 22,483,746 | 15,957,031 | 53, 113, 131 |
| 12.6 Net gains or (losses) on cash | cash equivalents and short-term investments | (243, 122) | (543, 173) | (1,915,371 |
| 12.7 Miscellaneous proceeds | | 18,156,693 | (18,162) | 5,094,588 |
| 12.8 Total investment proceeds (L | nes 12.1 to 12.7) | 386,084,652 | 154,231,649 | 1,086,831,281 |
| 13. Cost of investments acquired (long | -term only): | | | |
| 13.1 Bonds | , | 233, 124, 019 | 260,764,618 | 779,997,024 |
| | | | , , | 9,461,733 |
| | | | | 123,326,082 |
| | | | , ,,, | |
| | | | | 37 , 524 , 167 |
| | | (91,627,570) | (15,060,919) | 1,960,941 |
| | ines 13.1 to 13.6) | 148,737,829 | 295,908,134 | 952,269,947 |
| . , | ract loans and premium notes | 289,291 | 731,627 | (9,653,575 |
| , | 2.8 minus Line 13.7 and Line 14) | 237,057,532 | (142,408,112) | 144,214,909 |
| Cash from | Financing and Miscellaneous Sources | | | |
| 16. Cash provided (applied): | g andoons | | | |
| , | | | | |
| | | | | |
| | ss treasury stock | | | |
| | | | | 11 COD E41 |
| | contracts and other insurance liabilities | | | |
| | | | | |
| | | (35,020,047) | 51,751,970 | (49,399,219 |
| | Ilaneous sources (Line 16.1 through Line 16.4 minus Line 16.5 | (34,314,763) | 53,366,405 | (37,790,678 |
| RECONCILIATION OF CASH, | CASH EQUIVALENTS AND SHORT-TERM INVESTMENTS | | | |
| 18. Net change in cash, cash equivale | nts and short-term investments (Line 11, plus Lines 15 and 17) | 196,844,394 | (70,686,874) | (152,593,713 |
| 19. Cash, cash equivalents and short- | erm investments: | | | |
| 19.1 Beginning of year | | 161,298,905 | 313,892,618 | 313,892,618 |
| 19.2 End of period (Line 18 plus Li | ne 19.1) | 358,143,299 | 243,205,744 | 161,298,905 |
| ote: Supplemental disclosures of cash flow | r information for non-cash transactions: | 0 060 006 | 10.520.642 | 21.303.729 |
| | Ing | , | 10,520,642 | 849,21 |
| | ong-term debt | | 274,486 | 84,894 |
| | in-kind bonds | | 99,332 | 446,220 99,332 |
| | k | | | 134,636 13,835,566 |
| 20.0008. Transfer of mortgage loan to | other than invested assets | | | 1,357,792 |
| | S | | | 345,36 |

Note: Supplemental disclosures of cash flow information for non-cash transactions:

| 20.0010. Stock conversions to other invested assets | | 55,852 |
|---|------|--------|
| | | i |

EXHIBIT 1

DIRECT PREMIUMS AND DEPOSIT-TYPE CONTRACTS

| Current Year Prior Year P | | DIRECT PREMIUMS AND DEPOSIT-TYPE C | ONTRACTS | 2 | 3 |
|--|-------|---|---------------|-------------|---------------|
| To Date To Date December 31 | | | Current Vear | | |
| 1. Industrial life 59,263,603 60,338,910 228,947,613 3. Ordinary life insurance 59,263,603 60,338,910 228,947,613 3. Ordinary individual annuities 52,888,474 56,890,578 218,167,919 4. Credit life (group and individual) 30,405 16,025 650,373 6. Group annuities 30,405 16,025 650,373 7. A & H - group 8. A & H - credit (group and individual) 9. A & H - other 10. Aggregate of all other lines of business 111,162,482 117,045,511 447,765,905 12. Deposit-type contracts 111,162,482 117,045,511 447,765,905 DETAILS OF WRITE-INS 111,162,482 117,045,511 447,765,905 1001. 1002. 1003. 1009. | | | | | |
| 2. Ordinary life insurance | | | 10 Date | 10 Date | December of |
| 2. Ordinary life insurance | | | | | |
| 3. Ordinary individual annuities | 1. | Industrial life | | | |
| 3. Ordinary individual annuities | | | | | |
| 4. Credit life (group and individual) 5. Group life insurance | 2. | Ordinary life insurance | 58,263,603 | 60,338,910 | 228,947,613 |
| 4. Credit life (group and individual) 5. Group life insurance | | | | | |
| 4. Credit life (group and individual) 5. Group life insurance | 3 | Ordinary individual annuities | 52 868 474 | 56 690 576 | 218 167 919 |
| 5. Group life insurance | 0. | Ordinary marvioud dimension | | | 210, 101, 010 |
| 5. Group life insurance | | | | | |
| 6. Group annuities | 4. | Credit life (group and individual) | | | |
| 6. Group annuities | | | | | |
| 7. A & H - group | 5. | Group life insurance | 30,405 | 16,025 | 650,373 |
| 7. A & H - group | | | | | |
| 7. A & H - group | 6. | Group annuities | | | |
| 8. A & H - credit (group and individual) | | | | | |
| 8. A & H - credit (group and individual) | 7 | A & H. group | | | |
| 9. A & H - other | /. | A α Π - group | | | |
| 9. A & H - other | | | | | |
| 10. Aggregate of all other lines of business | 8. | A & H - credit (group and individual) | | | |
| 10. Aggregate of all other lines of business | | | | | |
| 11. Subtotal .111, 162, 482 .117,045,511 .447,765,905 12. Deposit-type contracts | 9. | A & H - other | | | |
| 11. Subtotal .111, 162, 482 .117,045,511 .447,765,905 12. Deposit-type contracts | | | | | |
| 11. Subtotal .111, 162, 482 .117,045,511 .447,765,905 12. Deposit-type contracts | 10 | Aggregate of all other lines of business | | | |
| 12. Deposit-type contracts | 10. | riggiogate of all other lines of sacinose | | | |
| 12. Deposit-type contracts | | | 111 160 400 | 117 045 511 | 447 7CE 00E |
| 13. Total 111,162,482 117,045,511 447,765,905 DETAILS OF WRITE-INS 1001. 1002. | 11. | Sudiotal | 111, 102,462 | 117,040,011 | 447,765,905 |
| 13. Total 111,162,482 117,045,511 447,765,905 DETAILS OF WRITE-INS 1001. 1002. | | | | | |
| DETAILS OF WRITE-INS 1001. 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | 12. | Deposit-type contracts | | | |
| DETAILS OF WRITE-INS 1001. 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | | | | |
| DETAILS OF WRITE-INS 1001. 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | 13. | Total | 111, 162, 482 | 117,045,511 | 447,765,905 |
| 1001. 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | | , , | , , | , , |
| 1001. 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | DETAILS OF MOITE INC | | | |
| 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | DETAILS OF WHITE-INS | | | |
| 1002. 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | | | | |
| 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | 1001. | | | | |
| 1003. 1098. Summary of remaining write-ins for Line 10 from overflow page | | | | | |
| 1098. Summary of remaining write-ins for Line 10 from overflow page | 1002. | | | | |
| 1098. Summary of remaining write-ins for Line 10 from overflow page | | | | | |
| 1098. Summary of remaining write-ins for Line 10 from overflow page | 1003 | | | | |
| | | | | | |
| | 1000 | Commence of commence in the last feed blank 40 from a complete commence | | | |
| 1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above) | 1098. | Summary or remaining write-ins for Line 10 from overflow page | | | |
| 1099. Totals (Lines 1001 through 1003 plus 1098)(Line 10 above) | | | | | |
| | 1099. | Totals (Lines 1001 through 1003 plus 1098)(Line 10 above) | | | |

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Note 1 - Summary of Significant Accounting Policies and Going Concern

Accounting practices:

The accompanying financial statements of C.M. Life Insurance Company (the Company) have been prepared in conformity with the Statutory Accounting Practices (SAP) of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the State of Connecticut Insurance Department (the Department).

A reconciliation of the Company's net income and capital and surplus between NAIC SAP and practices prescribed and permitted by the State of Connecticut is shown below:

| | | F/S | F/S | | |
|---|----------|------|--------|---------------------|---------------------|
| | SSAP# | Page | Line # | 2017 | 2015 |
| NET INCOME | | | | | |
| (1) State basis (Page 4, Line 35, Columns 1 & 3) | XXX | XXX | XXX | \$ 27,050,515 | \$ 61,720,698 |
| (2) State prescribed practices that increase/(decrease) NAIC SAP: | ; N/A | N/A | N/A | - | - |
| (3) State permitted practices that increase/(decrease) NAIC SAP: | N/A | N/A | N/A | | <u> </u> |
| (4) NAIC SAP (1-2-3=4) | XXX | XXX | XXX | \$ 27,050,515 | \$ 61,720,698 |
| SURPLUS | | | | | |
| (5) State basis (Page 3, Line 38, Columns 1 & 2) | XXX | XXX | XXX | \$ 1,557,357,201 | \$ 1,546,673,795 |
| (6) State prescribed practices that increase/(decrease) NAIC SAP: | ; N/A | N/A | N/A | - | - |
| (7) State permitted practices that increase/(decrease) NAIC SAP: | N/A | N/A | N/A | | <u>-</u> _ |
| (8) NAIC SAP (5-6-7=8) | XXX | XXX | XXX | \$ 1,557,357,201 | \$ 1,546,673,795 |

- Use of estimates in the preparation of the financial statements No change
- Accounting policy:
 - (1-5) No change
 - (6) For loan-backed and structured securities, such as asset-backed securities (ABS), mortgage-backed securities (MBS), including residential mortgage-backed securities and commercial mortgage-backed securities, and structured securities, including collateralized debt obligations (CDOs), amortization or accretion is revalued quarterly based on the current estimated cash flows, using either the prospective or retrospective adjustment methodologies.

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 change

Going concern - No change

Note 2 – Accounting Changes and Corrections of Errors

a. For the three months ended 2017, corrections of prior year errors were recorded in shareholder's equity:

| | | Increase (D | ecrease | e) to: | Correction | | | | |
|--|---------------|-------------|---------------|-------------|-------------------|--|---------------|--|----------|
| | Prior Current | | Prior Current | | Prior Current | | Prior Current | | of Asset |
| | | Years | | Year | or Liability | | | | |
| | | Net Income | | Surplus | Balances | | | | |
| Other than invested assets | \$ | (2,921,931) | \$ | (2,921,931) | \$ (2,921,931) | | | | |
| Partnerships and limited liability companies | | = | | (227,387) | (227,387) | | | | |
| Total | \$ | (2,921,931) | \$ | (3,149,318) | \$ (3,149,318) | | | | |

Of the \$3,149,318 increase to surplus for prior year errors, \$2,921,931 was recorded as prior period adjustments with an offset of \$227,387 was recorded as a change in nonadmitted assets in the Statutory Statements of Changes in Surplus.

For the three months ended March 31, 2016, corrections of prior year errors were recorded in shareholder's equity, net of tax:

| | Increase (Decrease) to: | | | | Correction | |
|-------------------------------|-------------------------|----|-------------|--------------|------------|--|
| | Prior Current | | | | of Asset | |
| | Year | | Year | or Liability | | |
| | Net Income | | Surplus | | Balances | |
| Federal income tax receivable | \$ (3,572,808) | \$ | (3,572,808) | \$ | 3,572,808 | |
| Total | \$ (3,572,808) | \$ | (3,572,808) | \$ | 3,572,808 | |

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

Adoption of new accounting standards

In April and August 2016, the NAIC adopted and made effective modifications to SSAP No. 1, Accounting Policies, Risks & Uncertainties, and Other Disclosures. The modifications clarify that the disclosure presentation for permitted and prescribed practices

should include practices that result in different statutory accounting reporting (such as gross or net) presentations that differ from the Accounting Practices and Procedures (AP&P) Manual. The modifications also clarified that disclosure of restricted assets should be included in the annual financial statements, and, pursuant to the AP&P manual preamble, in the interim financial statements if significant changes have occurred since the annual statement. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted and made effective modifications to SSAP No. 97, Investments in Subsidiary, Controlled and Affiliated Entities. The modifications clarify which entities are subject to the subsidiary, controlled and affiliated (SCA) disclosure and add a new appendix detailing the filing guidance that was previously included within the Purposes and Procedures Manual of the NAIC Investment Analysis Office for SCA entities. These modifications did not have an impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 2, Cash, Drafts and Short-Term Investments, SSAP No. 26, Bonds, Excluding Loan-backed and Structured Securities, and SSAP No. 30, Unaffiliated Common Stock, which were effective September 30, 2016. These modifications clarify the accounting for short-term investments and the classification of Money Market Mutual Funds registered under the Investment Company Act of 1940 (the Act) and regulated under rule 2a-7 of the Act as short-term investments under SSAP No. 2. While retaining the short-term classification, Money Market Mutual Funds may be accounted for under SSAP No. 26 or SSAP No. 30. These modifications did not have a significant impact on the Company's financial statements.

In June 2016, the NAIC adopted modifications to SSAP No. 1, Accounting Policies, Risks & Uncertainties, and Other Disclosures, which are effective December 31, 2016. These modifications require the reporting entity to disclose the amount and nature of any assets reflected within the reporting entity's financial statements that were received as collateral and the recognized liability to return these collateral assets. The Company has adopted these modifications.

In August 2016, the NAIC adopted and made effective modifications to SSAP No. 86, Derivatives. The modifications incorporate swaptions which are contracts granting the owner the right but not the obligation to enter into an underlying swap, as an example of a derivative instrument. This modification did not have an impact on the Company's financial statements.

In August 2016, the NAIC adopted and made effective modifications to SSAP No. 51, Life Contracts. These modifications clarify that annual assumption changes from reserving methods used in principles-based reserving (PBR) would not qualify as a change in valuation basis. Changes in valuation basis are recorded directly to surplus instead of through income. This modification was made to accommodate PBR which becomes effective January 1, 2017. This modification did not have an impact on the Company's financial statements.

Note 3 - Business Combinations and Goodwill - No change

Note 4 - Discontinued Operations - No change

Note 5 - Investments

- a. Mortgage loans, including mezzanine real estate loans No change
- b. Debt restructuring No change
- c. Reverse mortgages No change

- d. Loan-backed and structured securities:
 - Prepayment assumptions for loan-backed and structured securities are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience.
 - (2) The following contains loan-backed and structured securities that recognized OTTI classified on the following bases for recognizing OTTI:

| | | | (1) | | | (2) | | | (3) |
|------|--|----|--------------|---------------------------------------|-----|--------------|---------|----------|-------------|
| | | | A | | _ | OTTI | | | |
| | | | Amortized | | | cognized | | | |
| | | ŀ | Cost Basis | (0-) | | in Loss | | | Fair Malara |
| | | | Before | (2a) | | (2b) | | | Fair Value |
| | | | OTTI | Intere | est | Non-in | iterest | | 1-(2a+2b) |
| OT | I recognized in the first quarter | | | | | | | | |
| a. | Intent to sell | \$ | _ | \$ | _ | \$ | _ | \$ | _ |
| b. | Inability or lack of intent to retain the investment | Ψ | | Ψ | | Ψ | | Ψ | |
| ٠. | in the security for a period of time sufficient to | | | | | | | | |
| | recover the amortized cost basis | | 4,815,924 | | _ | | 31,502 | | 4,784,422 |
| C. | Total first quarter | \$ | 4,815,924 | \$ | _ | \$ | 31,502 | \$ | 4,784,422 |
| ٠. | rotal mot quality. | Ť | .,0.0,02. | * | | * | 0.,002 | <u> </u> | .,, |
| OTT | I recognized in the second quarter | | | | | | | | |
| d. | Intent to sell | \$ | - | \$ | - | \$ | - | \$ | - |
| e. | Inability or lack of intent to retain the investment | | | | | | | | |
| | in the security for a period of time sufficient to | | | | | | | | |
| | recover the amortized cost basis | | | | - | | | | |
| f. | Total second quarter | \$ | _ | \$ | - | \$ | - | \$ | - |
| | | _ | - | · · · · · · · · · · · · · · · · · · · | | | | | |
| OTT | ΓI recognized in the third quarter | | | | | | | | |
| g. | Intent to sell | \$ | - | \$ | - | \$ | - | \$ | - |
| h. | Inability or lack of intent to retain the investment | | | | | | | | |
| | in the security for a period of time sufficient to | | | | | | | | |
| | recover the amortized cost basis | _ | - | | _ | | | | - |
| i. | Total third quarter | \$ | | \$ | | \$ | _ | \$ | |
| | | | | | | | | | |
| | I recognized in the fourth quarter | | | | | | | | |
| j. | Intent to sell | \$ | - | \$ | - | \$ | - | \$ | - |
| k. | Inability or lack of intent to retain the investment | | | | | | | | |
| | in the security for a period of time sufficient to | | | | | | | | |
| | recover the amortized cost basis | _ | | | | | | _ | |
| I. | Total fourth quarter | \$ | - | \$ | | \$ | | \$ | <u> </u> |
| m. | Annual aggregate total | | | \$ | | \$ | 31,502 | | |
| 111. | Annual aggregate total | | | Ψ | | Ψ | 01,002 | | |

All impairments were taken due to the present value of cash flows expected to be collected being less than the amortized cost

(3) The following is a CUSIP detail list of impaired structured securities where the present value of cash flows expected to be collected is less than the amortized cost basis.

| CUSIP | Amortized Cost before OTTI | Projected Cash Flow | Recognized OTTI | Amortized Cost after OTTI | Fair Value at Time of OTTI | Date of Financial Instrument Where Reported |
|-----------|----------------------------------|------------------------|--------------------|---------------------------|----------------------------|---|
| 22541QJR4 | \$ 3,126.29 | \$ 15.01 | \$ (3,111.28) | \$ 15.01 | \$ 1,926.23 | March 31, 2017 |
| 45660LYW3 | 130,210.18 | 121,919.75 | (8,290.43) | 121,919.75 | 118,232.29 | March 31, 2017 |
| 86358RA23 | 224,855.80 | 212,420.66 | (12,435.14) | 212,420.66 | 218,429.62 | March 31, 2017 |
| 88157QAL2 | 39,747.30 | 36,415.86 | (3,331.44) | 36,415.86 | 89,960.46 | March 31, 2017 |
| 77277LAF4 | 2,504,112.68 | 2,501,621.14 | (2,491.54) | 2,501,621.14 | 3,522,211.89 | March 31, 2017 |
| 77277LAH0 | 126,242.42 | 126,120.88 | (121.54) | 126,120.88 | 295,836.23 | March 31, 2017 |
| 77277LAJ6 | 1,787,629.01 | 1,785,908.32 | (1,720.69) | 1,785,908.32 | 2,216,416.26 | March 31, 2017 |
| Totals | \$ 4,815,923.68 | \$ 4,784,421.62 | \$ (31,502.06) | \$ 4,784,421.62 | \$ 6,463,012.98 | |

- As of March 31, 2017, the gross unrealized losses and fair values for investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings follow:
 - The aggregate amount of unrealized losses: a.

| 1. Less than 12 months | \$ | (992,789) |
|--|---------|-------------|
| 2. 12 months or longer | \$ | (4,281,998) |
| The aggregate related fair value of securities with unrealized | losses: | |

b.

Less than 12 months 72,770,419 2. 12 months or longer 210,946,532

- (5) No change
- Repurchase agreements:
 - (1-2) No change
 - The Company does not have any securities lending transactions administered by an affiliated agent.

(4-6) No change

- f. Real estate No change
- g. Low income housing tax credit properties No change
- h. Restricted assets No change
- Working capital finance investments: The Company did not invest in working capital finance investments.
- j. Offsetting and netting of assets and liabilities: The Company reports derivative and repurchase agreement assets and liabilities as gross in the financial statements without offsetting.
- k. Structured notes No change
- 5* Securities No change

Note 6 - Joint Ventures, Partnerships and Limited Liability Companies - No change

Note 7 - Investment Income - No change

Note 8 - Derivative Instruments - No change

Note 9 - Income Taxes - No change

Note 10 - Information Concerning Parent, Subsidiaries and Affiliates

a-I. No change

Note 11 - Debt

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

Note 12 – Retirement Plans, Deferred Compensation, Postemployment Benefits and Compensated Absences and Other Postretirement Benefit Plans

a. Defined Benefit Plan

(1-3) No change

(4) The company did not have any defined benefit pension plans for which the reporting entity is directly liable.

(5-21) No change

b-j. No change

Note 13 - Capital and Surplus, Shareholders' Dividend Restrictions and Quasi-Reorganizations - No change

Note 14 - Liabilities, Contingencies and Assessments

- a. Contingent commitments No change
- b. Assessments No change
- c. Gain contingencies No change
- d. Claims related to extra contractual obligations No change
- e. All other contingencies:

The Company is involved in litigation arising in the normal course of business, which seeks compensatory damages, 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 we are 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 results of operations for the period.

Note 15 - Leases - No change

Note 16 – Information About Financial Instruments With Off-Balance Sheet Risk and Financial Instruments With Concentrations of Credit Risk - No change

Note 17 - Sale, Transfer and Servicing of Financial Assets and Extinguishments of Liabilities

- a. Transfers of receivables reported as sales No change
- b. Transfer and Servicing of Financial Assets:
 - (1) No change
 - (2) The Company did not have any servicing assets or liabilities in 2017 or 2016.
 - (3) No change
 - (4) The Company did not have interests that continue to be held by a transferor in securitized financial assets in 2017 or 2016.
 - (5-7) No change
- c. Wash sales:
 - (1) In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days to enhance the Company's yield on its investment portfolio.
 - (2) The Company did not sell any securities with the NAIC Designation 3 or below through the first quarter ended March 31, 2017 that were reacquired within 30 days of the sale date.

Note 18 - Gain or Loss to the Reporting Entity from Uninsured Plans and the Uninsured Portion of Partially Insured Plans - No change

Note 19 - Direct Premium Written/Produced By Managing General Agents/Third Party Administrators - No change

Note 20 - Fair Value Measurements

- a. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The authoritative guidance around fair value establishes a measurement framework that includes a hierarchy used to classify the inputs used in measuring fair value. The hierarchy prioritizes the inputs to valuation techniques into three levels. Each level reflects a unique description of the inputs that are significant to the fair value measurements. The levels of the fair value hierarchy are as follows:
 - Level 1 Observable inputs in the form of quoted prices for identical instruments in active markets.
 - Level 2 Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be derived from observable market data for substantially the full term of the assets or liabilities.
 - Level 3 One or more unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using internal models, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

When available, the Company generally uses unadjusted quoted market prices from independent sources to determine the fair value of investments, and classifies such items within Level 1 of the fair value hierarchy. If quoted prices are not available, prices are derived from observable market data for similar assets in an active market or obtained directly from brokers for identical assets traded in inactive markets. Investments that are priced using these inputs are classified within Level 2 of the fair value hierarchy. When some of the necessary observable inputs are unavailable, fair value is based upon internally developed models. These models use inputs not directly observable or correlated with observable market data. Typical inputs, which are integrated in the Company's internal discounted cash flow models and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings and benchmark yields such as the LIBOR, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

The Company has established and maintains policies and guidelines that govern its valuation methodologies and their consistent application. These policies and guidelines address the use of inputs, price source hierarchies and provide controls around the valuation processes. These controls include appropriate review and analysis of prices against market activity or indicators for reasonableness, approval of price source changes, price overrides, methodology changes and classification of fair value hierarchy levels. The valuation policies and guidelines are reviewed and updated as appropriate.

Annually, the Company reviews the primary pricing vendor to validate that the inputs used in that vendor's pricing process are deemed to be market observable as defined above. While the Company was not provided access to proprietary models of the vendor, the reviews have included on-site walk-throughs of the pricing process, methodologies and control procedures for each asset class and level for which prices are provided. The review also included an examination of the underlying inputs and assumptions for a sample of individual securities across asset classes. In addition, the Company and its pricing vendors have an established challenge process in place for all security valuations, which facilitates identification and resolution of prices that fall outside expected ranges. The Company believes that the prices received from the pricing vendors are representative of prices that would be received to sell the assets at the applicable measurement date (exit prices) and are classified appropriately in the hierarchy.

The fair value of individual annuity and supplementary contracts is determined using one of several methods based on the specific contract type. For short-term contracts, generally less than 30 days, the fair value is assumed to be the book value. For investment-type contracts, the fair value is determined by calculating the present value of future cash flows discounted at current market interest rates, the risk-free rate or a current pricing yield curve based on pricing assumptions using assets of a comparable corporate bond quality. Annuities are valued using cash flow projections from the Company's asset-liability management analysis.

1. The following presents the Company's fair value hierarchy for assets and liabilities that are carried at fair value:

| | March 31, 2017 | | | | | | | | |
|---|------------------|----|-------------|----|-----------|----|---------------|--|--|
| | Level 1 | | Level 2 | | Level 3 | | Total | | |
| Financial assets: | | | | | | | | | |
| Bonds: | | | | | | | | | |
| Industrial and miscellaneous | \$ - | \$ | 35,578 | \$ | 721,254 | \$ | 756,832 | | |
| Parent, subsidiaries and affiliates | - | | 1,229,785 | | 5,911,602 | | 7,141,387 | | |
| Preferred stocks | 32,087 | | - | | 317,359 | | 349,446 | | |
| Common stock - subsidiary and affiliate | 16,300,565 | | = | | - | | 16,300,565 | | |
| Common stock - unaffiliated | 387,120 | | - | | 2,799,321 | | 3,186,441 | | |
| Derivatives: | | | | | | | | | |
| Interest rate swaps | - | | 390,885,669 | | - | | 390,885,669 | | |
| Options | - | | 24,245,727 | | - | | 24,245,727 | | |
| Currency swaps | - | | 44,359,052 | | - | | 44,359,052 | | |
| Forward contracts | - | | 704,313 | | - | | 704,313 | | |
| Separate account assets | 1,776,580,942 | | 752 | | - | | 1,776,581,694 | | |
| Total financial assets carried | | | | | | | | | |
| at fair value | \$ 1,793,300,714 | \$ | 461,460,876 | \$ | 9,749,536 | \$ | 2,264,511,126 | | |
| Financial liabilities: | | | | | | | | | |
| Derivatives: | | | | | | | | | |
| Interest rate swaps | \$ - | \$ | 467,096,281 | \$ | - | \$ | 467,096,281 | | |
| Currency swaps | - | | 863,573 | | - | | 863,573 | | |
| Forward contracts | - | | 1,193,244 | | - | | 1,193,244 | | |
| Credit default swaps | | | 48,115 | | - | | 48,115 | | |
| Total financial liabilities carried | | _ | | _ | | _ | | | |
| at fair value | \$ - | \$ | 469,201,213 | \$ | - | \$ | 469,201,213 | | |

For the period ended March 31, 2017, there were no significant transfers between Level 1 and Level 2.

| | December 31, 2016 | | | | | | | | | |
|---|-------------------|----|----------------|----|-----------|----|---------------|--|--|--|
| | Level 1 | | Level 2 | | Level 3 | | Total | | | |
| Financial assets: | | | | | | | | | | |
| Bonds: | | | | | | | | | | |
| Industrial and miscellaneous | \$ | - | \$ 220,000 | \$ | 759,384 | \$ | 979,384 | | | |
| Parent, subsidiaries and affiliates | | - | 1,481,879 | | 5,773,679 | | 7,255,558 | | | |
| Preferred stocks | 1,230,8 | 51 | - | | 357,219 | | 1,588,070 | | | |
| Common stock - subsidiary and affiliate | 20,771,58 | 36 | - | | - | | 20,771,586 | | | |
| Common stock - unaffiliated | 398,1 | 31 | - | | 2,235,432 | | 2,633,613 | | | |
| Derivatives: | | | | | | | | | | |
| Interest rate swaps | | - | 426,368,022 | | - | | 426,368,022 | | | |
| Options | | - | 26,052,843 | | - | | 26,052,843 | | | |
| Currency swaps | | - | 54,642,404 | | - | | 54,642,404 | | | |
| Forward contracts | | - | 1,794,714 | | - | | 1,794,714 | | | |
| Separate account assets | 1,717,971,4 | 24 | 41 | | - | | 1,717,971,465 | | | |
| Total financial assets carried | | | | | | | | | | |
| at fair value | \$ 1,740,372,0 | 12 | \$ 510,559,903 | \$ | 9,125,714 | \$ | 2,260,057,659 | | | |
| Financial liabilities: | | | | | | | | | | |
| Derivatives: | | | | | | | | | | |
| Interest rate swaps | \$ | - | \$ 497,544,408 | \$ | - | \$ | 497,544,408 | | | |
| Currency swaps | | - | 814,610 | | - | | 814,610 | | | |
| Forward contracts | | - | 2,696,585 | | - | | 2,696,585 | | | |
| Credit default swaps | | - | 59,862 | | - | | 59,862 | | | |
| Total financial liabilities carried | | | | | | | | | | |
| at fair value | \$ | - | \$ 501,115,465 | \$ | - | \$ | 501,115,465 | | | |

For the year ended December 31, 2016, there were no significant transfers between Level 1 and Level 2.

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

| | Balance | | | | | (Losses) | (Losses) | | | | | | | Balance |
|-------------------------------------|-----------------|-----------------|------|------------------|----|------------|---------------|---------------|-----------|----------------|----|-------------|----|------------|
| | as of | Tran | sfer | s ⁽¹⁾ | | Gains in | Gains in | | | | | | | as of |
| | 01/01/2017 | In | | Out | 1 | Net Income | Surplus | Purchases | Issuances | Sales | S | Settlements | (| 03/31/2017 |
| Financial assets: | | | | | | | | | | | | | | |
| Bonds: | | | | | | | | | | | | | | |
| Industrial and miscellaneous | \$ 759,384 | \$ 716,135 | \$ | (833,748) | \$ | (158) | \$ 177,080 | \$ 1,789 | \$ - | \$ (96,944) | \$ | (2,284) | \$ | 721,254 |
| Parent, subsidiaries and affiliates | 5,773,679 | - | | - | | - | 137,923 | - | - | - | | - | | 5,911,602 |
| Preferred stocks | 357,219 | 317,359 | | (357,219) | | - | - | - | - | - | | - | | 317,359 |
| Common stocks - unaffiliated | 2,235,432 | 56,454 | | (137,516) | | - | 289,186 | 418,665 | - | - | | (62,900) | | 2,799,321 |
| Total financial assets | \$ 9,125,714 | \$ 1,089,948 | \$ | (1,328,483) | \$ | (158) | \$ 604,189 | \$ 420,454 | \$ _ | \$ (96,944) | \$ | (65,184) | \$ | 9,749,536 |

⁽¹⁾ Transfers include assets that are either no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but change in lower of cost or market carrying basis.

| | Balance as of 01/01/2016 | Transi In | fers ⁽¹⁾ Out | Gains (Losses) ir Net Income | | Purchases | Issuances | Sales | Settlements | Balance as of 12/31/2016 |
|-------------------------------------|--------------------------------|--------------|----------------------------|------------------------------------|----------------|------------|------------|--------------|--------------|--------------------------------|
| Financial assets: | | | | | | | | | | |
| Bonds: | | | | | | | | | | |
| Industrial and miscellaneous | \$ 173,966 | \$ 1,392,338 | \$ | - \$ 39,42 | 0 \$ (815,360) | \$ 4,848 | \$ 76,462 | \$ (4,667) | \$ (107,623) | \$ 759,384 |
| Parent, subsidiaries and affiliates | 4,998,577 | - | | - (1,5 | 5) 775,102 | 217,005 | 217,005 | - | (432,495) | 5,773,679 |
| Preferred stock | 270,437 | - | (173,89 | ") | - (10,271) | 270,950 | - | - | - | 357,219 |
| Common stock - unaffiliated | 2,209,554 | - | | - (69,72 | 2) 106,882 | 307,898 | - | (171,914) | (147,266) | 2,235,432 |
| Total financial assets | \$ 7,652,534 | \$ 1,392,338 | \$ (173,89 | ") \$ (31,8° | 7) \$ 56,353 | \$ 800,701 | \$ 293,467 | \$ (176,581) | \$ (687,384) | \$ 9,125,714 |

¹⁾ Transfers include assets that are either no longer carried at fair value, or have just begun to be carried at fair value, such as assets with no level changes but change in lower of cost or market carrying basis.

3. The Company reviews the fair value hierarchy classifications at each reporting period. Overall, reclassifications between levels occur when there are changes in the observability of inputs and market activity used in the valuation of a financial asset or liability. Such reclassifications are reported as transfers between levels at the beginning fair value for the reporting period in which the changes occur. Given the types of assets classified as Level 1 (primarily equity securities and mutual fund investments), transfers between Level 1 and Level 2 measurement categories are expected to be infrequent. Transfers into and out of Level 3 are summarized in the schedule of changes in Level 3 assets and liabilities.

4. Valuation Techniques and Inputs

The Company determines the fair value of its investments using primarily the market approach or the income approach. The use of quoted prices for identical assets and matrix pricing or other similar techniques are examples of market approaches, while the use of discounted cash flow methodologies is an example of the income approach. The Company attempts to maximize the use of observable inputs and minimize the use of unobservable inputs in selecting whether the market or the income approach is used.

A description of the significant valuation techniques and inputs to the determination of estimated fair value for the more significant asset and liability classes measured at fair value on a recurring basis and categorized within Level 2 and Level 3 of the fair value hierarchy is as follows:

Separate account assets - These assets primarily include bonds (industrial and miscellaneous; U.S. government and agencies) and derivatives. Their fair values are determined as follows:

Bonds (Industrial and miscellaneous) - These securities are principally valued using the market or the income approaches. Level 2 valuations are based primarily on quoted prices in markets that are not active, broker quotes, matrix pricing or other similar techniques that use standard market observable inputs such as benchmark yields, spreads versus benchmark yields, new issuances, issuer rating, duration, and trades of identical or comparable securities. Privately placed securities are valued using discounted cash flow models using standard market observable inputs, and inputs derived from, or corroborated by, market observable data including market yield curve, duration, call provisions, observable prices and spreads for similar publicly traded or privately traded issuances that incorporate the credit quality and industry sector of the issuer. This level also includes securities priced by independent pricing services that use observable inputs. Valuations based on matrix pricing or other similar techniques that utilize significant unobservable inputs or inputs that cannot be derived principally from, or corroborated by, observable market data, including adjustments for illiquidity, delta spread adjustments or spreads to reflect industry trends or specific credit-related issues are classified as Level 3. In addition, inputs including quoted prices for identical or similar securities that are less liquid and based on lower levels of trading activity than securities classified in Level 2 are classified as Level 3.

Bonds (U.S. government and agencies) - These securities are principally valued using the market approach. Level 2 valuations are based primarily on quoted prices in markets that are not active, or using matrix pricing or other similar techniques using standard market observable inputs such as the benchmark U.S. Treasury yield curve, the spreads versus the U.S. Treasury yield curve for the identical security and comparable securities that are actively traded.

Derivative assets and liabilities - These financial instruments are primarily valued using the market approach. The estimated fair value of derivatives is based primarily upon quotations obtained from counterparties and independent sources, such as quoted market values received from brokers. These quotations are compared to internally derived prices and a price challenge is lodged with the counterparties and an independent source when a significant difference cannot be explained by appropriate adjustments to the internal model. When quoted market values are not reliable or available, the value is based upon an internal valuation process using market observable inputs that other market participants would use. Significant inputs to the valuation of derivative financial instruments include overnight index swaps and LIBOR basis curves, interest rate volatility, swap yield curve, currency spot rates, cross currency basis curves and dividend yields. Due to the observability of the significant inputs to these fair value measurements, they are classified as Level 2.

The use of different assumptions or valuation methodologies may have a material impact on the estimated fair value amounts. For the periods presented, there were no significant changes to the Company's valuation techniques.

- 5. Derivative assets and liabilities fair value disclosures on a gross basis are included in paragraph 1 above. Since there are no derivative assets or liabilities classified in Level 3, the reconciliation disclosures required under paragraphs 2 through 4 are not applicable.
- b. The Company provides additional fair value information in Note 21. "Other Items".
- c. The following presents a summary of the carrying values and fair values of the Company's financial instruments:

March 31, 2017

| | Aggregate Fair Value | Admitted Assets | Level 1 | Level 2 | Level 3 | Not Practicable (Carrying Value) |
|--|-------------------------|--------------------|---------------|----------------|---------------|----------------------------------|
| Financial assets: | - | | | | | |
| Bonds: | | | | | | |
| U. S. government and agencies | \$ 286,557,897 | | \$ - | \$ 286,557,897 | \$ - | \$ - |
| All other governments | 1,381,368 | 1,416,780 | - | 1,381,368 | - | - |
| States, territories and possessions | 36,124,494 | 32,806,362 | - | 36,124,494 | - | - |
| Political subdivisions | 16,996,914 | 15,720,349 | - | 16,996,914 | - | - |
| Special revenue | 136,444,720 | 124,487,115 | - | 136,444,720 | - | - |
| Industrial and miscellaneous | 3,427,932,339 | 3,280,651,601 | - | 1,762,545,932 | 1,665,386,407 | - |
| Parent, subsidiaries and affiliates | 275,097,632 | 268,590,657 | - | 28,698,074 | 246,399,558 | - |
| Preferred stocks | 26,325,857 | 30,346,390 | 17,464,888 | - | 8,860,969 | - |
| Common stock - subsidiary and affiliate ⁽¹⁾ | 16,300,565 | 16,300,565 | 16,300,565 | - | - | - |
| Common stock - unaffiliated | 3,186,441 | 3,186,441 | 387,120 | - | 2,799,321 | - |
| Mortgage loans - commercial | 836,779,817 | 810,651,125 | - | - | 836,779,817 | - |
| Mortgage loans - residential | 137,111,191 | 141,443,867 | - | - | 137,111,191 | - |
| Cash, cash equivalents and | | | | | | |
| short-term investments | 358,143,299 | 358,143,299 | 16,668,959 | 341,474,340 | - | - |
| Derivatives: | | | | | | |
| Interest rate swaps | 390,885,669 | 390,885,669 | - | 390,885,669 | - | - |
| Options | 24,245,727 | 24,245,727 | - | 24,245,727 | - | - |
| Currency swaps | 44,359,052 | 44,359,052 | - | 44,359,052 | - | - |
| Forward contracts | 704,313 | 704,313 | - | 704,313 | - | - |
| Separate account assets | 1,776,581,694 | 1,776,581,694 | 1,776,580,942 | 752 | - | - |
| Financial liabilities: | | | | | | |
| Repurchase agreements | 233,312,500 | 233,312,500 | - | 233,312,500 | - | - |
| Individual annuity contracts | 3,631,116,514 | 3,066,673,607 | - | - | 3,631,116,514 | - |
| Supplementary contracts | 66,753,845 | 66,092,916 | - | - | 66,753,845 | - |
| Derivatives: | | | | | | |
| Interest rate swaps | 467,096,281 | 467,096,281 | - | 467,096,281 | - | - |
| Currency swaps | 863,573 | 863,573 | - | 863,573 | - | - |
| Forward contracts | 1,193,244 | 1,193,244 | - | 1,193,244 | - | - |
| Credit default swaps | 48,115 | 48,115 | - | 48,115 | - | - |

⁽¹⁾ Common stocks - affiliates do not include MML Bay State, which had a statutory carrying value of \$293,073,288.

| | | | December 3 | 31, 2016 | | |
|---|-------------------------|--------------------|---------------|----------------|---------------|---|
| | Aggregate Fair Value | Admitted Assets | Level 1 | Level 2 | Level 3 | Not Practicable (Carrying Value) |
| Financial assets: | | | | | | |
| Bonds: | | | | | | |
| U. S. government and agencies | \$ 286,239,873 | \$ 271,782,823 | \$ _ | \$ 286,239,873 | \$ _ | \$ _ |
| All other governments | 1,375,579 | 1,424,435 | - | 1,375,579 | - | - |
| States, territories and possessions | 36,138,133 | 32,845,567 | - | 36,138,133 | - | - |
| Political subdivisions | 16,330,724 | 15,255,335 | - | 16,330,724 | - | - |
| Special revenue | 137,597,172 | 126,129,789 | - | 137,292,072 | 305,100 | - |
| Industrial and miscellaneous | 3,495,414,794 | 3,360,947,164 | - | 1,850,041,065 | 1,645,373,729 | - |
| Parent, subsidiaries and affiliates | 275,213,009 | 268,832,883 | - | 35,476,429 | 239,736,580 | - |
| Preferred stocks | 25,078,956 | 25,449,045 | 15,943,224 | - | 9,135,732 | - |
| Common stock - subsidiary and affiliate ⁻¹ | 20,771,586 | 20,771,585 | 20,771,586 | - | - | - |
| Common stock - unaffiliated | 2,633,613 | 2,633,613 | 398,181 | - | 2,235,432 | - |
| Mortgage loans - commercial | 839,408,170 | 816,137,821 | - | - | 839,408,170 | - |
| Mortgage loans - residential | 146,402,827 | 150,518,593 | - | - | 146,402,827 | - |
| Cash, cash equivalents and | | | | | | |
| short-term investments | 313,892,618 | 313,892,618 | 23,604,457 | 290,288,161 | - | - |
| Derivatives: | | | | | | |
| Interest rate swaps | 426,368,022 | 426,368,021 | - | 426,368,022 | - | - |
| Options | 26,052,843 | 26,052,843 | - | 26,052,843 | - | - |
| Currency swaps | 54,642,404 | 54,642,404 | - | 54,642,404 | - | - |
| Forward contracts | 1,794,714 | 1,794,714 | - | 1,794,714 | - | - |
| Separate account assets | 1,717,971,465 | 1,717,971,465 | 1,717,971,424 | 41 | - | - |
| Financial liabilities: | | | | | | |
| Repurchase agreements | 236,963,235 | 236,963,235 | - | 236,963,235 | - | - |
| Individual annuity contracts | 3,635,969,026 | 3,089,363,030 | - | - | 3,635,969,026 | - |
| Supplementary contracts | 65,978,799 | 65,325,544 | - | - | 65,978,799 | - |
| Derivatives: | | | | | | |
| Interest rate swaps | 497,544,408 | 497,544,408 | - | 497,544,408 | - | - |
| Currency swaps | 814,610 | 814,610 | - | 814,610 | - | - |
| Forward contracts | 2,696,585 | 2,696,585 | - | 2,696,585 | - | - |
| Credit default swaps | 59,862 | 59,862 | - | 59,862 | - | - |

⁽¹⁾ Common stocks - affiliates do not include MML Bay State, which had a statutory carrying value of \$288,294,439.

d. For the period ended March 31, 2017, the Company had no investments where it was not practicable to estimate fair value.

Note 21 - Other Items

- a. Unusual or infrequent items No change
- b. Troubled debt restructuring No change
- c. Other disclosures and unusual items

Business risks

The Company operates in a business environment subject to various risks and uncertainties. The principal risks include insurance and underwriting risks, investment and interest rate risks, currency exchange risk and credit risk. The combined impact of these risks could have a material, adverse effect on the Company's financial statements or result in operating losses in future periods. The Company employs the use of reinsurance, portfolio diversification, asset/liability management processes and other risk management techniques to mitigate the impact of these risks. This condensed risks and uncertainties disclosure should be read in conjunction with the disclosure in the Company's 2015 Annual Statement.

Insurance and underwriting risks

The Company prices its products based on estimated benefit payments reflecting assumptions with respect to mortality, morbidity, longevity, persistency, interest rates and other factors. If actual policy experience emerges that is significantly and adversely different from assumptions used in product pricing, the effect could be material to the profitability of the Company. The Company reinsures certain life insurance policies to mitigate the impact of its underwriting risk.

Investment and interest rate risks

The fair value, cash flows and earnings of investments can be influenced by a variety 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. By effectively matching the market sensitivity of assets with the liabilities they support, the impact of interest rate changes is addressed, on an economic basis, as the change in the value of the asset is offset by a corresponding change in the value of the supported liability. The Company uses derivatives, such as interest rate swaps and swaptions, as well as synthetic assets to reduce interest rate and duration imbalances determined in asset/liability analyses.

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 amortization or prepayment speeds that are slower than those 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.

Interest rates also have an impact on the Company's products with guaranteed minimum payouts and on interest credited to account holders. As interest rates decrease, investment spreads may contract as crediting rates approach minimum guarantees, resulting in an increased liability.

In periods of increasing interest rates, policy loans, surrenders and withdrawals may increase as policyholders seek investments with higher perceived returns. This could result in cash outflows requiring the Company to sell invested assets at a time when the prices of those assets are adversely affected by the increase in market interest rates, which could cause the Company to realize investment losses.

Currency exchange risk

The Company has currency risk due to its non-U.S. dollar investments. The Company mitigates currency risk through the use of cross-currency swaps and forward contracts. Cross-currency swaps are used to minimize currency risk for certain non-U.S. dollar assets and liabilities through a pre-specified exchange of interest and principal. Forward contracts are used to hedge movements in exchange rates.

Credit and other market risks

The Company manages its investments to limit credit and other market risks by diversifying its portfolio among various security types and industry sectors as well as purchasing credit default swaps to transfer some of the risk.

Stressed conditions, volatility and disruptions in global capital markets or in particular markets or financial asset classes can have an adverse effect on the Company, in part because the Company has a large investment portfolio and assets supporting the Company's insurance liabilities are sensitive to changing market factors. Global market factors, including interest rates, credit spread quality, equity prices, real estate markets, foreign currency exchange rates, consumer spending, business investment, government spending, the volatility and strength of the capital markets, deflation and inflation, all affect the business and economic environment and, ultimately, the profitability of the Company's business. Disruptions in one market or asset class can also spread to other markets or asset classes. Upheavals in the financial markets can also affect the Company's business through their effects on general levels of economic activity, employment and customer behavior.

Significant volatility in the financial markets, and government actions taken in response, may exacerbate some of the risks the Company faces. The Company holds investments in energy and certain other commodity sectors, which have experienced similar overall market volatility and declines. With the continued weaker economic outlook in these sectors, there may be an increase in reported default rates or potential downgrades to the ratings of companies exposed to these sectors. In addition, concerns over the solvency of certain countries and sovereignties and the entities that have significant exposure to their debt have created market volatility. This volatility may continue to affect the performance of various asset classes until there is an ultimate resolution of the sovereign debt related concerns.

Asset-based fees calculated as a percentage of the separate account assets are a source of revenue to the Company. Gains and losses in the investment markets may result in corresponding increases and decreases in the Company's separate account assets and related revenue.

Political Uncertainties

Political events, such as the ongoing volatility with respect to the European Union, may trigger or exacerbate the risk factors described above. Whether those underlying risk factors are driven by politics or not, the Company's dynamic approach to managing risks enables us to utilize the mitigating actions described above to attempt to reduce the potential impact of each underlying risk factor on the Company.

- d. Business interruption insurance recoveries No change
- e. State transferrable tax credits No change
- f. Subprime mortgage related risk exposure:
 - (1) No change
 - (2) No change
 - (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:

| _ | | M | arch 31, 2017 | | e Months Ended arch 31, 2017 |
|--|------------|----|---------------|------------------|----------------------------------|
| | Actual | | Carrying | Fair | |
| Alt-A: | Cost | | Value | Value | OTTI |
| a. Residential mortgage-backed securities \$ | 22,014,080 | \$ | 23,160,283 | \$ 27,363,177 | \$ 11,401 |
| b. Commercial mortgage-backed securities | - | | - | - | - |
| c. Collateralized debt obligations | - | | - | - | - |
| d. Structured securities | - | | - | - | - |
| e. Equity investments in SCAs * | 1,183,210 | | 1,208,451 | 1,482,655 | 7,000 |
| f. Other assets | - | | - | - | |
| g. Total \$ | 23,197,290 | \$ | 24,368,734 | \$ 28,845,832 | \$ 18,401 |

| | | Ma | arch 31, 2017 | | Months Ended rch 31, 2017 |
|--|------------|----|---------------|------------------|-------------------------------|
| | Actual | | Carrying | Fair | _ |
| Subprime: | Cost | | Value | Value | OTTI |
| a. Residential mortgage-backed securities \$ | 11,752,447 | \$ | 12,565,894 | \$ 13,510,976 | \$ 3,331 |
| b. Commercial mortgage-backed securities | - | | - | - | - |
| c. Collateralized debt obligations | - | | - | - | - |
| d. Structured securities | - | | - | - | - |
| e. Equity investments in SCAs * | 1,422,023 | | 1,774,837 | 2,180,252 | - |
| f. Other assets | - | | - | - | <u> </u> |
| g. Total \$ | 13,174,470 | \$ | 14,340,731 | \$ 15,691,228 | \$ 3,331 |

^{*} The Company's SCA, MML Bay State, has investments in Alt-A and subprime mortgages. These investments comprise less than 1% of the Company's invested assets.

| | | | | | | | Year Ended |
|--|------------|-----|----------------|----|------------|-----|-----------------|
| | | Dec | ember 31, 2010 | 6 | | Dec | cember 31, 2016 |
| | Actual | | Carrying | | Fair | | |
| Alt-A: | Cost | | Value | | Value | | OTTI |
| a. Residential mortgage-backed securities \$ | 33,327,210 | \$ | 23,689,332 | \$ | 28,469,080 | \$ | 3,053 |
| b. Commercial mortgage-backed securities | - | | - | | - | | - |
| c. Collateralized debt obligations | - | | - | | - | | - |
| d. Structured securities | - | | - | | - | | - |
| e. Equity investments in SCAs * | 2,025,204 | | 1,322,448 | | 1,746,541 | | 19 |
| f. Other assets | - | | - | | - | | - |
| g. Total | 35,352,414 | \$ | 25,011,780 | \$ | 30,215,621 | \$ | 3,072 |
| | | | | | | | |

| | | | | | Υ | ear Ended |
|---|------------|-------|------------|------------------|----|-----------|
| _ | | Decem | Dece | mber 31, 2016 | | |
| | Actual | Ca | arrying | Fair | | |
| Subprime: | Cost | ١ | √alue | Value | | OTTI |
| a. Residential mortgage-backed securities S | 17,695,407 | \$ | 13,922,234 | \$ 14,902,278 | \$ | 5,497 |
| b. Commercial mortgage-backed securities | - | | - | - | | - |
| c. Collateralized debt obligations | - | | - | - | | - |
| d. Structured securities | - | | - | - | | - |
| e. Equity investments in SCAs * | 3,193,121 | | 1,803,842 | 2,235,591 | | 6,452 |
| f. Other assets | - | | - | - | | = |
| g. Total | 20,888,528 | \$ | 15,726,076 | \$ 17,137,869 | \$ | 11,949 |

The Company's SCA, MML Bay State, has investments in Alt-A and subprime mortgages. These investments comprise less than 1% of the Company's invested assets.

Retained asset accounts - No change

Note 22 - Events Subsequent

Management of the Company has evaluated subsequent events through May 10, 2017, the date the financial statements were available to be issued. No events have occurred subsequent to the date of the statement of financial position and before the date of evaluation that would require disclosure.

Note 23 - Reinsurance - No change

Note 24 - Retrospectively Rated Contracts and Contracts Subject to Redetermination

a - d. No change.

The Company does not write any accident and health insurance premium that is subject to the Affordable Care Act risk-sharing provisions.

Note 25 – Change in Incurred Losses and Loss Adjustment Expenses

There was no increase to reserves in 2017 for incurred losses and loss adjustment expenses attributable to insured events of prior years, which were considered corrections of prior year errors.

Note 26 - Intercompany Pooling Arrangements - No change

Note 27 - Structured Settlements - No change

Note 28 - Health Care Receivables - No change

Note 29 - Participating Policies - No change

Note 30 - Premium Deficiency Reserves - No change

⁽²⁾ The Company has no underwriting exposure to subprime mortgage risk through Mortgage Guaranty or Financial Guaranty insurance coverage.

Note 31 – Reserves for Life Contracts and Annuity Contracts - No change

Note 32 - Analysis of Annuity Actuarial Reserves and Deposit Type Liabilities by Withdrawal Characteristics - No change

Note 33 – Premium and Annuity Considerations Deferred and Uncollected - No change

Note 34 - Separate Accounts - No change

Note 35 - Loss/Claim Adjustment Expenses - No change

GENERAL INTERROGATORIES

PART 1 - COMMON INTERROGATORIES

GENERAL

| 1.1 | Did the reporting entity experience any material transactions requiring 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 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 is an insurer? If yes, complete Schedule Y, Parts 1 and 1A. | | | | Yes [X |] No [] |
| 3.2 | Have there been any substantial changes in the organizational char | t since the prior quarter end? | | | Yes [|] No [X] |
| 3.3 | If the response to 3.2 is yes, provide a brief description of those cha | nges. | | | | |
| 4.1 | Has the reporting entity been a party to a merger or consolidation of | luring the period covered by this statemer | nt? | | Yes [|] No [X] |
| 4.2 | If yes, provide the name of the entity, NAIC Company Code, and staceased to exist as a result of the merger or consolidation. | ate of domicile (use two letter state abbrev | riation) for any entity the | at has | | |
| | 1 Name of Entity | 2 NAIC Company Code | 3 State of Domicile | | | |
| | | | | | | |
| 5. | If the reporting entity is subject to a management agreement, includ in-fact, or similar agreement, have there been any significant chan If yes, attach an explanation. | | | | [] No [| X] N/A [] |
| 6.1 | State as of what date the latest financial examination of the reportin | | . 12/3 | 31/2014 | | |
| 6.2 | State the as of date that the latest financial examination report beca date should be the date of the examined balance sheet and not the | ume available from either the state of dom e date the report was completed or releas | icile or the reporting en | itity. This | 12/3 | 31/2014 |
| 6.3 | State as of what date the latest financial examination report became the reporting entity. This is the release date or completion date of date). | the examination report and not the date of | f the examination (bala | nce sheet | 05/3 | 31/2016 |
| 6.4 6.5 | By what department or departments? State of Connecticut Insurance Department Have all financial statement adjustments within the latest financial estatement filed with Departments? | | | Yes | [] No [|] N/A [X] |
| 6.6 | Have all of the recommendations within the latest financial examina | tion report been complied with? | | Yes | [X] No [|] N/A [] |
| 7.1 | Has this reporting entity had any Certificates of Authority, licenses or revoked by any governmental entity during the reporting period? | | | | |] No [X] |
| 7.2 | If yes, give full information: | | | | | |
| 8.1 | Is the company a subsidiary of a bank holding company regulated b | y the Federal Reserve Board? | | | Yes [|] No [X] |
| 8.2 | If response to 8.1 is yes, please identify the name of the bank holding | ng company. | | | | |
| 8.3 | Is the company affiliated with one or more banks, thrifts or securities | s firms? | | | Yes [X |] No [] |
| 8.4 | If response to 8.3 is yes, please provide below the names and locat regulatory services agency [i.e. the Federal Reserve Board (FRB), Insurance Corporation (FDIC) and the Securities Exchange Comm | the Office of the Comptroller of the Curre | ncy (OCC), the Federa | l Deposit | | |
| | 1 Affiliate Name | 2 Location (City, State) | 3 FRB C | 4 5 | | |
| | Baring International Investment Limited | | | 700 10 | YES | |
| | Barings Securities, LLC | Poston MA | | | | |
| | MML Distributors, LLC | Boston, MAEnfield, CT | | | YES YES | |
| | MML Investment Advisers, LLC | | | | YES | |
| | MML Investors Services, LLC | | | | YES | |
| | MML Strategic Distributors, LLC | | | | YES | |
| | MMLISI Financial Alliances, LLC | | | | \/ F 0 | |
| | OppenheimerFunds Distributor, Inc. | | | | \/F0 | |
| | The MassMutual Trust Company, FSB | | | YES | | |
| | THE massmutual flust company, rob | | | · LV | | |

GENERAL INTERROGATORIES

| 9.1 | Are the senior officers (principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions) of the reporting entity subject to a code of ethics, which includes the following standards? (a) Honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships; (b) Full, fair, accurate, timely and understandable disclosure in the periodic reports required to be filed by the reporting entity; (c) Compliance with applicable governmental laws, rules and regulations; (d) The prompt internal reporting of violations to an appropriate person or persons identified in the code; and (e) Accountability for adherence to the code. | Yes [X] No [] |
|--------------|---|---|
| 9.11 | If the response to 9.1 is No, please explain: | |
| 9.2 9.21 | Has the code of ethics for senior managers been amended? If the response to 9.2 is Yes, provide information related to amendment(s). | Yes [] No [X] |
| 9.3 9.31 | Have any provisions of the code of ethics been waived for any of the specified officers? | Yes [] No [X] |
| | FINANCIAL | |
| 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: \$_\$ | |
| | INVESTMENT | |
| | Were any of the stocks, bonds, or other assets of the reporting entity loaned, placed under option agreement, or otherwise made available for use by another person? (Exclude securities under securities lending agreements.) If yes, give full and complete information relating thereto: Repurchase agreements, Letter stock or securities restricted as to sale - excluding FHLB Capital Stock, On deposit with states and Pledged | Yes [X] No [] |
| 12. 13. | as collateral - excluding collateral pledged to an FHLB. Amount of real estate and mortgages held in other invested assets in Schedule BA: Amount of real estate and mortgages held in short-term investments: | |
| 14.1 14.2 | Does the reporting entity have any investments in parent, subsidiaries and affiliates? | |
| | 1 Prior Year-End Book/Adjusted Carrying Value | 2 Current Quarter Book/Adjusted Carrying Value |
| | Bonds \$ 268,832,887 Preferred Stock \$ | \$258,690,407 |
| | Common Stock \$ 288,294,439 | \$ \$293.073.287 |
| | Short-Term Investments \$ | \$ |
| 14.25 | Mortgage Loans on Real Estate\$ | \$ |
| 14.26 | All Other\$97,541,966 | \$80,238,586 |
| 14.27 | Total Investment in Parent, Subsidiaries and Affiliates (Subtotal Lines 14.21 to 14.26) | \$632,002,280 |
| 14.28 | Total Investment in Parent included in Lines 14.21 to 14.26 above\$ | \$ |
| 15.1 15.2 | Has the reporting entity entered into any hedging transactions reported on Schedule DB? | |

GENERAL INTERROGATORIES

| | | ir value of reinve | | | | | | | | |
|---|--|--|---|--|--|---|--|-------------------|---|------------------------------|
| | 100 T 111 | ii value ol lellive | ested collateral assets repo | orted on Sch | nedule DL, Parts 1 and | 2 | | \$ | | |
| | 16.2 lotal bo | ook adjusted/car | rrying value of reinvested c | ollateral ass | sets reported on Schedi | ule DL, Parts 1 | and 2 | .\$ | | |
| | | | ities lending reported on the | | | | | | | |
| office custo Outse | es, vaults or safety depo odial agreement with a co ourcing of Critical Func | osit boxes, were qualified bank or tions, Custodial | cial Deposits, real estate, n all stocks, bonds and othe r trust company in accorda or Safekeeping Agreemen irements of the NAIC Finan | er securities, ance with Se ats of the NA | owned throughout the ection 1, III - General Ex IC Financial Condition | current year he amination Cons Examiners Han | ld pursuant to a siderations, F. dbook? | Yes | [X] No |) [|
| | | 1 | | | | 2 | | | | |
| 0:1:1 | Nai | me of Custodian | n(s) | 200 111 1 | Cus | todian Address | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| State | Street Global Service | es | | 801 Penr | nsylvania Avenue, Kans | as City, MO 64 | 105 | | | |
| | agreements that do no ion and a complete exp | | ne requirements of the NAIC | C Financial | Condition Examiners H | andbook, provid | de the name, | | | |
| | 1 | | 2 | | | 3 | | | | |
| | Name(s) | | Location(s) | | Com | plete Explanation | on(s) | | | |
| | there been any change: give full information rel | | ne changes, in the custodia | an(s) identifie | ed in 17.1 during the cu | rrent quarter? | | Yes [|] No | [X |
| | 1 | | 2 | | 3 | | 4 | | | |
| | Old Custodian | | New Custodian | | Date of Change | | Reason | | | |
| | | | | | | | | | | |
| make | e investment decisions | on behalf of the | nent advisors, investment r reporting entity. For assets | s that are m | | | | | | |
| make such | e investment decisions . ["that have access Na gs LLC | on behalf of the to the investmer 1 ume of Firm or In | | s that are mocurities"] | anaged internally by en | | | | | |
| Barin IFM 1 | e investment decisions . ["that have access Na gs LLC nvestors Pty Ltd 97 For those firms/indiv designated with a "U 98 For firms/individuals | on behalf of the to the investmen 1 mme of Firm or In riduals listed in the process of the manage more unaffiliated with | reporting entity. For assets nt accounts"; "handle sed ndividual the table for Question 17.5, at than 10% of the reporting on the reporting entity (i.e. decorated). | s that are modurities"] A | anaged internally by en | d with the repor | ting entity (i.e. | as Yes | [] No | - |
| Barin IFM I 17.509 | e investment decisions . ["that have access Na gs LLC nvestors Pty Ltd 97 For those firms/indiv designated with a "U 98 For firms/individuals total assets under m | on behalf of the to the investmen 1 Imme of Firm or In Viduals listed in the process of the proc | reporting entity. For assets nt accounts"; "handle sed ndividual | s that are mocurities"] A A Cumum A Cumum A Cumum A Cumum A Cumum Cumum A Cumum Cumum | anaged internally by en | d with the repor | ting entity (i.e. | as Yes Yes | | - |
| Barin IFM I 17.509 | e investment decisions . ["that have access Na gs LLC | on behalf of the to the investmen 1 Imme of Firm or In Viduals listed in the process of the proc | reporting entity. For assets nt accounts"; "handle sed ndividual the table for Question 17.5, at than 10% of the reporting on the reporting entity (i.e. de pregate to more than 50% of the reporting than 150% of the reporting entity (i.e. de pregate to more than 50% of the reporting entity (i.e. de pre | s that are mocurities"] A A Cumum A Cumum A Cumum A Cumum A Cumum Comum C | anaged internally by en | d with the repor | ting entity (i.e. | as Yes Yes | [] No | - [) |
| Barin IFM 1 17.509 17.509 | e investment decisions . ["that have access Na gs LLC | on behalf of the to the investmen 1 Ime of Firm or In Viduals listed in the investmen of the investment and inv | reporting entity. For assets nt accounts"; "handle sed ndividual the table for Question 17.5, at than 10% of the reporting on the reporting entity (i.e. de pregate to more than 50% of the for 17.5 with an affiliation | s that are mocurities"] A | anaged internally by en 2 Affiliation S/individuals unaffiliated sets? ith a "U") listed in the taing entity's assets? " (affiliated) or "U" (una 3 | d with the repor | ting entity (i.e. n 17.5, does the le the information for | as Yes Yes | [] No | nent |
| Barin IFM I 17.509 17.509 | e investment decisions . ["that have access Na gs LLC | on behalf of the to the investmen 1 ume of Firm or In riduals listed in the "") manage more unaffiliated with anagement agg listed in the table | reporting entity. For assets nt accounts"; "handle see advidual the table for Question 17.5, at than 10% of the reporting on the reporting entity (i.e. de regate to more than 50% of the reporting and the reporting entity (i.e. de regate to more than 50% of the for 17.5 with an affiliation at the reporting entity (i.e. de regate to more than 50% of the for 17.5 with an affiliation at the reporting entity (i.e. de regate to more than 50% of the | s that are mcurities"] A | anaged internally by en 2 Affiliation s/individuals unaffiliatesets? ith a "U") listed in the taing entity's assets? " (affiliated) or "U" (una 3 | d with the repor | ting entity (i.e. 17.5, does the le the information for | Yes Yes the | 5 Investn Manage Agreen (IMA) F | nent ment ment |
| Barin IFM I 17.509 For the table C I 10600 | e investment decisions . ["that have access Na gs LLC | on behalf of the to the investment of the invest | reporting entity. For assets nt accounts"; "handle sed ndividual the table for Question 17.5, at than 10% of the reporting on the reporting entity (i.e. de pregate to more than 50% of the for 17.5 with an affiliation | s that are mcurities"] A | anaged internally by en 2 Affiliation s/individuals unaffiliatesets? ith a "U") listed in the taing entity's assets? " (affiliated) or "U" (una 3 | d with the reportable for Question (ffiliated), provided (i.i.) | ting entity (i.e. 17.5, does the the information for 4 Registered With | Yes Yes the | [] No | nent ment ment iled |

GENERAL INTERROGATORIES

PART 2 - LIFE & HEALTH

| | Treport the statement value of mortgage loans at the end of this reporting period for the following categories. | Amount |
|----|---|------------------|
| | 1.1 Long-Term Mortgages In Good Standing | Allount |
| | 1.11 Farm Mortgages | S |
| | 1.12 Residential Mortgages | 141,443,867 |
| | 1.13 Commercial Mortgages | 810,651,126 |
| | 1.14 Total Mortgages in Good Standing | 952,094,993 |
| | | |
| | 1.2 Long-Term Mortgages In Good Standing with Restructured Terms | |
| | 1.21 Total Mortgages in Good Standing with Restructured Terms | <u> </u> |
| | 1.3 Long-Term Mortgage Loans Upon which Interest is Overdue more than Three Months | |
| | 1.31 Farm Mortgages | S |
| | 1.32 Residential Mortgages | S |
| | 1.33 Commercial Mortgages | |
| | 1.34 Total Mortgages with Interest Overdue more than Three Months | |
| | | |
| | 1.4 Long-Term Mortgage Loans in Process of Foreclosure | |
| | 1.41 Farm Mortgages | |
| | 1.42 Residential Mortgages | |
| | 1.43 Commercial Mortgages | |
| | 1.44 Total Mortgages in Process of Foreclosure | |
| | 1.44 Total Mortgages III Frocess of Foreclosure |) |
| .5 | Total Mortgage Loans (Lines 1.14 + 1.21 + 1.34 + 1.44) (Page 2, Column 3, Lines 3.1 + 3.2) | 952,094,993 |
| .6 | Long-Term Mortgages Foreclosed, Properties Transferred to Real Estate in Current Quarter | |
| | 1.61 Farm Mortgages | S |
| | 1.62 Residential Mortgages | S |
| | 1.63 Commercial Mortgages | S |
| | 1.64 Total Mortgages Foreclosed and Transferred to Real Estate | S |
| 2. | Operating Percentages: | |
| | 2.1 A&H loss percent | % |
| | 2.2 A&H cost containment percent | % |
| | 2.3 A&H expense percent excluding cost containment expenses | % |
| .1 | Do you act as a custodian for health savings accounts? | Yes [] No [X] |
| .2 | If yes, please provide the amount of custodial funds held as of the reporting date | S |
| .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 ______\$

SCHEDULE S - CEDED REINSURANCE Showing All New Reinsurance Treaties - Current Year to Date

| | | | S | showing All New Reinsurance Treaties | - Current Yea | ar to Date | | |
|---------|--------|-----------|-------------------|--------------------------------------|---------------|-------------------|---------------|-----------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | | | _ | | | <u> </u> | | Effective |
| | | | | | | | Certified | Date of |
| NAIC | | | | | T√of | | Reinsurer | Effective Date of Certified |
| Company | ID | Effective | | D ic. v | Rein | | Rating | Reinsurer |
| Code | Number | Date | Name of Reinsurer | Ju dict | C | Type of Reinsurer | (1 through 6) | Reinsurer Rating |
| | | | | | | | | |
| | | | | | | | | |

SCHEDULE T - PREMIUMS AND ANNUITY CONSIDERATIONS

Current Year To Date - Allocated by States and Territories

| | | Ouricin I car | To Bate 7 moot | alca by Olaics a | and Territories | inone Only | | |
|------------|--|------------------|----------------|------------------|---------------------------------|----------------------|-----------------------|---------------------------|
| | | 1 | Lifo Co | ontracts | Direct Bus | iness Only 5 | 6 | 7 |
| | | ' | 2 | ntracts 3 | Accident and | J | O | ′ |
| | | | _ | | Health Insurance | | | |
| | | | | | Premiums, | | Total | |
| | | Active | Life Insurance | Annuity | Including Policy, Membership | Other | Total Columns | Deposit-Type |
| | States, Etc. | Status | Premiums | Considerations | and Other Fees | Considerations | 2 Through 5 | Deposit-Type Contracts |
| 1. | AlabamaAL | L | | 560,850 | | | 1,425,201 | |
| 2. | Alaska AK | L | 16,019 | 2, 100 | | | 18 , 119 | |
| 3. | Arizona | L | 827,026 | 86,228 | | | 913,254 | |
| 4. | Arkansas AR | L | 147,645 | 45,498 | | | 193 , 143 | |
| 5. | California CA | L | 6,334,959 | 2.887.091 | | | 9,222,050 | |
| 6. | Colorado CC | Ī | 675.326 | 518,553 | | | 1, 193, 879 | |
| 7. | Connecticut | L | 1,515,162 | 1,828,636 | | | 3,343,798 | |
| 8. | Delaware DE | L | 66,476 | 64,274 | | | 130,750 | |
| 9. | District of Columbia DC | | 527,252 | 1.860 | | | | |
| | FloridaFL | LL | | 5,506,531 | | | , | |
| 10. | | | 6,288,014 | | | | 11,794,545 | |
| 11. | Georgia GA | ļ | 1,617,299 | 262,423 | | | 1,879,722 | |
| 12. | Hawaii HI | <u>-</u> | 589,685 | 208,506 | | | 798 , 191 | |
| 13. | IdahoID | L | 117,033 | 242,344 | | | 359,377 | |
| 14. | IllinoisIL | L | 1,886,844 | 1,503,070 | | | 3,389,914 | |
| 15. | Indiana IN | L | 923,073 | 1,031,518 | | | 1,954,591 | |
| 16. | lowa IA | L | 463,471 | 63,816 | | | 527,287 | |
| 17. | KansasKS | L | 381,283 | 340,782 | | | 722,065 | |
| 18. | Kentucky KY | L | 305,905 | 330,381 | | | 636,286 | |
| 19. | Louisiana LA | L | 417,046 | 3,278,083 | | | 3,695,129 | |
| 20. | Maine ME | L | 133,738 | 32,600 | | | 166,338 | |
| 21. | Maryland ME | | 1,912,609 | 1,247,988 | | | 3, 160, 597 | |
| 22. | Massachusetts MA | | 1,454,246 | 5,028,889 | | | 6,483,135 | |
| 23. | Michigan MI | L | 1,136,450 | 3,004,787 | | | 4,141,237 | |
| 24. | Minnesota MN | l | 1,469,721 | 723,757 | | | 2, 193, 478 | |
| | Mississippi MS | | 759,608 | | <u> </u> | | 2, 193, 478 | |
| 25. | | | , | | | | , | |
| 26. | Missouri MC | | 822,044 | 1,987,565 | | | 2,809,609 | |
| 27. | Montana | <u>-</u> | 133,999 | 216, 123 | } | | 350, 122 | |
| 28. | Nebraska NE | ļ | 595,682 | 99,314 | | | 694,996 | |
| 29. | Nevada NV | L | 415,856 | 249, 117 | | | 664,973 | |
| 30. | New HampshireNH | L | 410,704 | 386,283 | | | 796,987 | |
| 31. | New Jersey NJ | L | 2,758,760 | 2,008,326 | | | 4,767,086 | |
| 32. | New Mexico NM | L | 133,293 | 81,481 | | | 214,774 | |
| 33. | New York NY | N | 1,598,962 | 83,709 | | | 1,682,671 | |
| 34. | North CarolinaNC | L | 2,345,305 | 976,024 | | | 3,321,329 | |
| 35. | North DakotaND | L | 9,740 | | | | 9,740 | |
| 36. | Ohio OH | L | 1,345,488 | 3,804,312 | | | 5, 149, 800 | |
| 37. | Oklahoma Ok | L | 567,257 | 181,677 | | | 748.934 | |
| 38. | Oregon OF | Ĺ | 306,938 | 199,374 | | | 506,312 | |
| 39. | Pennsylvania PA | L | 2,409,189 | 4,734,307 | | | 7,143,496 | |
| 40. | Rhode IslandRI | | 252,365 | 500,627 | | | 752,992 | |
| 41. | South CarolinaSO | L | 1.105.898 | 181,262 | | | | |
| | South Dakota | LL | | | | | | |
| 42. | | ļ | 32,144 | 61,000 | | | 93 , 144 | |
| 43. | Tennessee TN | <u>-</u> | 1,220,603 | 811,954 | | | 2,032,557 | |
| 44. | Texas TX | LL | 3,936,627 | 3,433,501 | | | 7 , 370 , 128 | |
| 45. | Utah UT | L | 512,454 | 611,381 | | | 1, 123,835 | |
| 46. | Vermont VT | L | 143 , 187 | 394,574 | | | 537,761 | |
| 47. | VirginiaVA | L | 2, 143, 609 | 940,016 | | | 3,083,625 | |
| 48. | Washington WA | L | 791,948 | 326,301 | | | 1, 118, 249 | |
| 49. | West Virginia WV | L | 195, 191 | 94,087 | | | 289,278 | |
| 50. | Wisconsin WI | L | 496,356 | 1,422,323 | | | 1,918,679 | |
| 51. | WyomingW | L | 40.820 | 38,900 | | | 79,720 | |
| 52. | American Samoa AS | N | | | | | | |
| 53. | Guam GL | | 60 | | | | 60 | |
| 54. | Puerto Rico PR | ı | 1,144,438 | 159,651 | | | 1.304.089 | |
| 55. | U.S. Virgin IslandsVI | N | 712 | | | | 712 | |
| 56. | Northern Mariana Islands MF | | | | | | 12 | |
| 56. 57. | Canada CA | | 3,941 | | | | 3,941 | |
| | | | | | | | , | |
| 58. | Aggregate Other Aliens | XXX | 66,563 | EQ 000 471 | <u> </u> | | 66,563 | |
| 59. | Subtotal | (a)51 | 56,770,374 | 52,868,474 | · | | 109,638,848 | |
| 90. | Reporting entity contributions for employee benef | | | | | | | |
| | plans | | | | | | | |
| 91. | Dividends or refunds applied to purchase paid-up | | | | | | | |
| | additions and annuities | | | } | | | ł | |
| 92. | Dividends or refunds applied to shorten endowme | | | | | | | |
| | or premium paying period | XXX | | | | | | |
| 93. | Premium or annuity considerations waived under | 1007 | 000 101 | İ | | | 000 401 | |
| 1 | disability or other contract provisions. | | 296 , 164 | | } | | 296 , 164 | |
| 94. | Aggregate or other amounts not allocable by Stat | | | | | | | |
| 95. | Totals (Direct Business) | | 57,066,538 | 52,868,474 | | | 109,935,012 | |
| 96. | Plus Reinsurance Assumed | | | | ļ | | | |
| 97 | Totals (All Business) | XXX | 57,066,538 | 52,868,474 | | | 109,935,012 | |
| 98. | Less Reinsurance Ceded | XXX | 42,658,985 | | ļ | | 42,658,985 | |
| 99. | Totals (All Business) less Reinsurance Ceded | XXX | 14,407,553 | 52,868,474 | | | 67,276,027 | |
| | DETAILS OF WRITE-INS | | | , , | | | | |
| 58001 | ZZZ Other Alien | xxx | 66.563 | İ | | | 66.563 | |
| | | XXX | | | | | | |
| | | XXX | | | | | 1 | |
| | Summary of remaining write-ins for Line 58 from | | <u> </u> | Ī | İ | | İ | |
| J0998. | overflow page | xxx | | | | | | |
| 58000 | Totals (Lines 58001 through 58003 plus | | | | | | | |
| 20222. | 58998)(Line 58 above) | XXX | 66,563 | | | | 66,563 | |
| 0404 | 56996)(LITIE 56 ADOVE) | XXX | 00,000 | | | | 00,000 | |
| | | | | | | | | |
| | | XXX | | | | | | |
| 9403. | Comment of a marining with its faulting 04 from | XXX | | | | | | |
| 9498. | Summary of remaining write-ins for Line 94 from | VVV | | | | | | |
| 0.40- | overflow page | XXX | | | ł | | ł | |
| 9499. | Totals (Lines 9401 through 9403 plus 9498)(Line | 3007 | | | | | | |
| | 94 above) | XXX | <u> </u> | | (0) 0 | | <u> </u> | . 5 |
| | sed or Chartered - Licensed Insurance Carrier or Deligible or approved to write Surplus Lines in the s | omiciled RRG; (F | | | | fied or Accredited F | Reinsurer; (E) Eligib | le - 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

The following entities are general partner level or above of Massachusetts Mutual Life Insurance Company (Parent)

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|--------------------------|
| MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY | 04-1590850 | 65935 | Massachusetts |
| Direct & Indirect Owned Subsidiaries: | 0.5.1.0.1.0.0 | | - |
| 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 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 |
| Timberland Forest Holding LLC | 47-5322979 | | Delaware |
| Lyme Adirondack Forest Company, LLC | None | | Delaware |
| Lyme Adirondack Timber Sales, Inc. | 20-5305426 | | New York |
| Lyme Adirondack Timberlands I, LLC | None | | Delaware |
| Lyme Adirondack Timberlands II, LLC | None | | Delaware |
| WP-SC, LLC* | 26-4441097 | | Delaware |
| MSP-SC, LLC | 04-1590850 | | Delaware |
| Country Club Office Plaza LLC* | 27-1435692 | | Delaware |
| Invicta Advisors LLC | 56-2574604 | | Delaware |
| Jefferies Finance LLC* | 27-0105644 | | Delaware |
| Apex Credit Partners LLC | None | | Delaware |
| JFIN Fund V 2017 LLC | None | | Delaware |
| JFIN Fund III LLC | None | | Delaware |
| JFIN Asset Management LLC | None | | Delaware |
| JFIN Co-Issuer Corporation | None | | Delaware |
| JFIN Europe GP, S.a.r.l. | None | | Luxembourg |
| Jefferies Finance Europe, SCSp | None | | Luxembourg |
| Jefferies Finance Business Credit LLC | None | | Delaware |
| JFIN Business Credit Fund I LLC | None | | Delaware |
| JFIN High Yield Investments LLC | None | | Delaware |
| JFIN LC Fund LLC | None | | Delaware |
| JFIN Revolver CLO Holdings LLC | None | | Delaware |
| JFIN CLO 2007 Ltd. | None | | Cayman Islands |
| JFIN CLO 2012 Ltd. | None | | Cayman Islands |
| JFIN CLO 2013 Ltd. | None | | Cayman Islands |
| JFIN CLO 2014 Ltd. | None | | Cayman Islands |
| JFIN CLO 2014-II Ltd. | None | | Cayman Islands |
| JFIN MM CLO 2014 Ltd.* | None | | Cayman Islands |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|-------------------|
| JFIN CLO 2015 Ltd.* | None | | Cayman Islands |
| JFIN CLO 2015-II Ltd.* | None | | Cayman Islands |
| JFIN Revolver CLO Ltd. | None | | Cayman Islands |
| JFIN Revolver CLO 2014 Ltd. | None | | Cayman Islands |
| JFIN Revolver CLO 2015 Ltd. | None | | Cayman Islands |
| JFIN Revolver CLO 2015-II Ltd. | None | | Cayman Islands |
| JFIN CLO 2016 Ltd.* | None | | Cayman Islands |
| JFIN CLO 2017 Ltd * | None | | Cayman Islands |
| 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 | | Connecticut |
| 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 |
| MML Private Equity Fund Investor LLC | 04-1590850 | | Delaware |
| MM Private Equity Intercontinental LLC | 04-1590850 | | Delaware |
| Pioneers Gate LLC | 45-2738137 | | Delaware |
| MSC Holding Company, LLC | 45-4376777 | | Delaware |
| MassMutual Holding MSC, Inc. | 04-3341767 | | Massachusetts |
| MassMutual Holding LLC | 04-2854319 | | Delaware |
| Fern Street LLC | 37-1732913 | | Delaware |
| First Mercantile Trust Company | 62-0951563 | | Tennessee |
| Haven Life Insurance Agency, LLC | 46-2252944 | | Delaware |
| MassMutual Assignment Company | 06-1597528 | | North Carolina |
| MassMutual Capital Partners LLC | 04-1590850 | | Delaware |
| MassMutual Ventures LLC | 47-1296410 | | 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 |
| Society of Grownups, LLC | 47-1466022 | | Massachusetts |
| MM Asset Management Holding LLC | 45-4000072 | | Delaware |
| Barings LLC | 51-0504477 | | Delaware |
| Barings Finance LLC | 80-0875475 | | Delaware |
| BCF Europe Funding Limited | None | | Ireland |
| BCF Senior Funding I LLC | None | | Delaware |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|--|--------------|---|
| BCF Senior Funding I Designated Activity Company | None | | Ireland |
| Barings Securities LLC | 04-3238351 | | Delaware |
| Barings Guernsey Limited | 98-0437588 | | Guernsey |
| Barings (UK) Limited | 98-0432153 | | United Kingdom |
| Barings GPC GP S.à. r.l. | None | | Luxembourg |
| 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 |
| Barings Global Advisors Limited | 98-1012393 | | United Kingdom |
| BCGSS 2 GP LLP | None | | United Kingdom |
| Babson European Direct Lending 1 GP LLP | None | | United Kingdom |
| Barings Advisers (Japan) KK | None | | Japan |
| Barings Multifamily Capital Holdings LLC | None | | Delaware |
| Barings Multifamily Capital LLC | None | | Michigan |
| Barings Multifamily Capital Corporation | None | | Delaware |
| Barings Real Estate Advisers Inc. | 04-3238351 | | California |
| Barings Real Estate Advisers Japan KK | None | | Japan |
| Barings Real Estate UK Holdings Limited | None | | Delaware |
| BREAE AIFM LLP | None | | United Kingdom |
| Barings Real Estate Advisers (Continental Europe) Limited | 98-0654401 | | United Kingdom |
| Barings Real Estate Advisers Europe LLP | 98-0654388 | | United Kingdom |
| Barings Real Estate Advisers Europe Finance LLP | 98-0654412 | | United Kingdom |
| Barings Real Estate Advisers GmbH | 98-1194368 | | Germany |
| MassMutual Baring Holding LLC | 04-1590850 | | Delaware |
| Baring North America LLC | 98-0241935 | | Massachusetts |
| MassMutual Holdings (Bermuda) Limited | None | | Bermuda |
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| Baring Asset Management Limited Baring International Investment Limited Baring International Investment Management Holdings Baring 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 Korea Limited Baring Asset Management (Japan) Limited Baring Asset Management (Australia) Pty Limited Baring Asset Management Switzerland Sàrl Baring Asset Management Switzerland Sàrl Baring SICE (Taiwan) Limited | 98-0241935 98-0457328 98-0457587 98-0457576 98-0465031 98-0524271 98-0457465 98-0457463 None 98-0236449 98-0457456 98-0524272 None 98-0457707 | | United Kingdom United Kingdom United Kingdom 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 |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID NAIC Co Code | State of Domicile |
|--|-----------------------------|---|
| Baring France SAS | 98-0497550 | France |
| Baring Fund Managers Limited | 98-0457586 | United Kingdom |
| Baring Pension Trustees Limited | 98-0457574 | United Kingdom |
| Baring Investment Services Limited | 98-0457578 | United Kingdom |
| Barings Australia Holding Company Pty Ltd | None | Australia |
| Barings Australia Pty Ltd | 98-0457456 | Australia |
| Barings Investment Advisers (Hong Kong) Limited | None | Hong Kong, Special Administrative Region of China |
| Alchemy Copyrights, LLC.* | 47-2642354 | Delaware |
| Chassis Acquisition Holding LLC | 81-2244465 | Delaware |
| CRA Aircraft Holding LLC* | 81-4258759 | Delaware |
| Milestone Acquisition Holding, LLC. | 47-3055009 | Delaware |
| Red Lake Ventures, LLC | 46-5460309 | Delaware |
| Remington L & W Holdings LLC* | 81-4065378 | Connecticut |
| Solar Acquisition Holding, LLC | None | Delaware |
| Sweet Tree Holdings 1, LLC | 46-3123110 | Delaware |
| Tamiami Citrus, LLC | None | Delaware |
| Teaktree Acquisition, LLC | None | Delaware |
| U.S. Buyer Broadcasting, LLC | 47-1855920 | Delaware |
| U.S. WIG Holdings, LP | 46-1500495 | Delaware |
| U.S. Pharmaceuticals Holdings II, LLC | 47-5436800 | Delaware |
| VGS Acquisition Holding, LLC | None | 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 Global Loan Feeder Management, LLC | None | Delaware |
| Barings CLO Investment Partners GP, LLC | None | Delaware |
| Barings Global Energy Infrastructure Advisors, LLC | None | Delaware |
| Barings North American Private Loan Fund Management, LLC | None | Delaware |
| Barings TERO Management LLC | None | Delaware |
| Benton Street Advisors, Inc. | 98-0536233 | Cayman Islands |
| Great Lakes III GP, LLC | 04-1590850 | Delaware |
| Lake Jackson LLC | None | Delaware |
| Loan Strategies Management LLC | 04-1590850 | Delaware |
| Mezzco LLC | 04-1590850 02-0767001 | Delaware |
| Mezzco II LLC | 41-2280126 | Delaware |
| Mezzco III LLC Mezzco IV LLC | 41-2280126 80-0920285 | Delaware Delaware |
| | | |
| Mezzco Australia LLC Mezzco Australia II LLC | 90-0666326 None | Delaware Delaware |
| SDCOS Management LLC | 04-1590850 | Delaware Delaware |
| Somerset Special Opportunities Management LLC | 04-1590850 | Delaware |
| Sometiset Special Opportunities Management LLC | 04-1370830 | Delawale |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|--|--------------------|--------------|---|
| 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 |
| Coastal Merger Corp. | None | | Delaware |
| HarbourView Asset Management Corporation | 22-2697140 | | New York |
| OFI Global Trust Company | 13-3459790 | | New York |
| OFI International, Ltd. | None | | United Kingdom |
| Trinity Investment Management Corporation | 25-1951632 | | Pennsylvania |
| OFI SteelPath, Inc. | 84-1128397 | | Delaware |
| Shareholder Services, Inc. | 84-1066811 | | Colorado |
| VTL Associates, LLC | None | | Pennsylvania |
| Index Management Solutions, LLC | None | | Pennsylvania |
| OFI Global Asset Management, Inc. | 84-0765063 | | Delaware |
| OFI Private Investments Inc. | 91-2036414 | | New York |
| Tremont Group Holdings, LLC | 62-1210532 | | New York |
| Tremont Partners, LLC | 06-1121864 | | Connecticut |
| Tremont GP, LLC | 20-8215352 | | Delaware |
| Settlement Agent LLC | 90-0874510 | | Delaware |
| Tremont (Bermuda) Limited | None | | Bermuda |
| MassMutual International LLC | 04-3313782 | | Delaware |
| 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 98-0610331 | | Hong Kong, Special Administrative Region of China |
| Protective Capital (International) Limited | 98-0610331 None | | Hong Kong, Special Administrative Region of China |
| MassMutual Life Insurance Company MassMutual Internacional (Chile) SpA | 98-1033127 | | Japan Chile |
| MML Management Corporation | 04-2443240 | | Massachusetts |
| MassMutual International Holding MSC, Inc. | 04-2443240 | | Massachusetts |
| MML Mezzanine Investor II, LLC | 04-1590850 | | Delaware |
| MML Mezzanine Investor III, LLC | 04-1590850 | | Delaware |
| MassMutual External Benefits Group LLC | 27-3576835 | | Delaware |
| Cornerstone Global REIT Corporation | 20-8730751 | | Delaware |
| Other Affiliates & Funds: | 20 0/00/01 | | |
| 100 w. 3rd Street LLC | 04-1590850 | | Delaware |
| 300 South Tryon Hotel LLC | 04-1590850 | | Delaware |
| | | | |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID NAIC C | State of Domicile |
|---|-----------------------|-------------------|
| 300 South Tryon LLC | 04-1590850 | Delaware |
| 54 West Capital LLC | 20-3887968 | Delaware |
| Alexandria Towers Investors LLC | 16-1720387 | Delaware |
| 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 |
| Barings Emerging Markets Corporate Bond Fund | None | Ireland |
| Barings Emerging Markets Local Debt Fund | None | Ireland |
| Barings Global Special Situations Credit Fund 1 | None | Ireland |
| Babson Capital Global Special Situation Credit Fund 2* | 98-1206017 | Delaware |
| Babson Capital Loan Strategies Fund, L.P.* | 37-1506417 | Delaware |
| Barings US High Yield Bond Fund* | None | Ireland |
| Babson CLO Ltd. 2007-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 |
| Babson CLO Ltd. 2015-I | None | Cayman Islands |
| Babson CLO Ltd. 2015-II | None | Cayman Islands |
| Babson CLO Ltd. 2016-I | None | Cayman Islands |
| Babson CLO Ltd. 2016-II | None | Cayman Islands |
| Babson Euro CLO 2014-I BV | None | Netherlands |
| Babson Euro CLO 2014-II BV | None | Netherlands |
| Babson Euro CLO 2015-I BV | None | Netherlands |
| Babson Euro CLO 2016-I BV | None | Netherlands |
| Babson Capital Global Credit Fund (Lux) SCSp, SIACV-SIF | None | Luxembourg |
| Baring Focused EAFE Equity Fund | 11-3789446 | Delaware |
| Baring Global Dynamic Asset Allocation Fund | 30-0607379 | Delaware |
| Barings Global Energy Infrastructure Fund 1 LP* | 98-1332384 | Cayman Islands |
| Barings NA Private Loan Fund* | 38-4010344 | Delaware |
| Barings RE Credit Strategies VII LP | 98-1332384 | Delaware |
| Baring International Small Cap Equity Fund | 26-4142796 | Delaware |
| Barings CLO Investment Partners LP* | 81-0841854 | Delaware |
| Barings Real Estate European Value Add I SCSp* | None | United Kingdom |
| Benton Street Partners I, L.P.* | 98-0536233 | Cayman Islands |
| Benton Street Partners II, L.P.* | 98-0536199 | Cayman Islands |
| Braemar Energy Ventures I, L.P. * | None | Delaware |
| Cambridge Hotel, LLC | 06-1614196 | Delaware |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|--------------------------|
| Chevenne Mountain Resort LLC | 04-1590850 | | Delaware |
| Barings European Core Property Fund SCSp | None | | Luxembourg |
| Cornerstone Core Mortgage Venture I LP | 27-1701622 | | Delaware |
| Cornerstone Enhanced Mortgage Fund I LP | 45-3751572 | | Delaware |
| Cornerstone Global Real Estate LP* | 20-8730751 | | Delaware |
| Cornerstone High Yield Venture LP | 36-4770946 | | Delaware |
| Barings/LAZ Parking Fund LP | 46-5437441 | | Delaware |
| Barings Core Property Fund LP | 20-5578089 | | Delaware |
| Cornerstone Real Estate Fund VIII LP | 27-0547156 | | Delaware |
| Cornerstone Real Estate Fund X LP | 46-5432619 | | Delaware |
| Duchess VI CLO B.V. | None | | United Kingdom |
| Duchess VII CLO B.V. | None | | United Kingdom |
| E-Wise Land Venture LLC | 20-3887968 | | Delaware |
| Gateway Mezzanine Partners I, L.P.* | 80-0691253 | | Delaware |
| Gateway Mezzanine Partners II LP* | 90-0991195 | | Delaware |
| Great Lakes III, L.P. | 37-1708623 | | Delaware |
| Kazwell Realty Partners LLC | 20-3887968 | | Delaware |
| Marco Hotel LLC | 46-4255307 | | Delaware |
| MM Debt Participations LLC* | 81-3000420 | | 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 |
| Rockall CLO B.V. | None | | United Kingdom |
| Rockville Town Center LLC | 54-2055778 | | Virginia |
| Seattle 1415 Hotel Owner LLC | 46-5491311 | | Delaware |
| Sedona TFMP Land LLC | 04-1590850 | | Delaware |
| Somerset Special Opportunities Fund L.P.* | 20-8856877 | | Delaware |
| South Myrtle Monrovia MM LLC | 04-1590850 | | Delaware |
| South Pasco Properties LLC | 20-3887968 | | 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-A, L.P. | 80-0920367 | | Delaware |
| West 46 th Street Hotel LLC | 05-1590850 | | Delaware |
| Baring Affiliates & Funds: | | | |
| Barings Emerging Markets Debt Blended Total Return Fund | None | | Ireland |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

| | Federal Tax ID | NAIC Co Code | State of Domicile |
|---|----------------|--------------|--------------------------|
| Barings Emerging Markets Debt Short Duration Fund | None | | Ireland |
| Barings Emerging Markets Sovereign Debt Fund | None | | Ireland |
| Babson Capital Floating Rate Income Fund, L.P. | 27-3330830 | | Delaware |
| Barings Global Investment Grade Corporate Plus Fund | None | | Ireland |
| Babson Capital Loan Strategies Master Fund LP | None | | Cayman Islands |
| Barings Emerging Markets Debt Blended Total Return Fund | 47-3758432 | | Massachusetts |
| Barings Emerging Markets Local Currency Debt Fund | 47-3774453 | | Massachusetts |
| Barings Global High Yield Fund | 47-3790192 | | Massachusetts |
| Baring Greater China Equity Fund | None | | Hong Kong |
| Barings Total Return Bond Fund | 47-3734770 | | Massachusetts |
| Barings U.S. High Yield Fund | 47-3801860 | | Massachusetts |
| Gateway Mezzanine Partners I Trust | None | | Australia |
| Great Lakes II LLC* | 71-1018134 | | Delaware |
| Great Lakes LLC* | 56-2505390 | | Delaware |
| Intermodal Holding II LLC | 46-2344300 | | Delaware |
| Somerset Special Opportunities Master Fund LP | None | | Cayman Islands |
| Wood Creek Venture Fund LLC | 04-1590850 | | Delaware |
| Barings Real Estate Affiliates & Funds: | | | |
| 12-18 West 55th Street Predevelopment, LLC* | 20-2548283 | | Delaware |
| 50 Liberty LLC* | 36-4823011 | | Delaware |
| One Harbor Shore LLC* | 80-0948028 | | Delaware |
| Budapester Strasse LLC | 81-4382111 | | Delaware |
| CHC/RFP VI Core LLC | 04-1590850 | | Delaware |
| Cornerstone California Mortgage Fund I LLC | 95-4207717 | | California |
| Cornerstone California Mortgage Fund II LLC | 95-4207717 | | California |
| Cornerstone Fort Pierce Development LLC* | 56-2630592 | | Delaware |
| Cornerstone Permanent Mortgage Fund | 45-2632610 | | Massachusets |
| Cornerstone Permanent Mortgage Fund II | 61-1750537 | | Massachusetts |
| Cornerstone Permanent Mortgage Fund III | 35-2531693 | | Massachusetts |
| Cornerstone Permanent Mortgage Fund IV | 61-1793735 | | Massachusetts |
| CREA 330 Third LLC* | 46-5001122 | | Delaware |
| CREA FMF Nashville LLC | 46-4367364 | | Delaware |
| CREA/LYON West Gateway, LLC* | 26-2399532 | | Delaware |
| CREA Madison Member LLC | 81-0890084 | | Delaware |
| CREA/PPC Venture LLC* | 20-0348173 | | Delaware |
| Fallon Cornerstone One MPD LLC* | 26-1611591 | | Delaware |
| Fan Pier Development LLC* | 20-3347091 | | Delaware |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

Federal Tax ID NAIC Co Code State of Domicile

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|--|----------------|--------------|------------------|
| Farringdon London Holdings LLC* | 46-3880526 | | Delaware |
| Infinity SCD Ltd. | None | | United Kingdom |
| Johnston Groves LLC | 20-4819358 | | Delaware |
| Landmark Manchester Holdings LLC | 81-5360103 | | Delaware |
| MM Chatham Office LLC* | 81-2871333 | | Delaware |
| Salomon Brothers Commercial Mortgage Trust 2001-MM | None | | Delaware |
| Sawgrass Village Shopping Center LLC* | 27-2977720 | | Delaware |
| Ten Fan Pier Boulevard LLC* | None | | Delaware |
| Three PW Office Holding LLC | 81-5273574 | | Delaware |
| Twenty Two Liberty LLC* | 35-2484550 | | Massachusetts |
| UK LÍW 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 |
| Willowwod Lakeside Master LLC | 81-1552222 | | Delaware |
| Ygnatio Valley Funding | 20-5481477 | | Delaware |
| MassMutual Premier Funds: | | | |
| MassMutual Barings Dynamic Allocation Fund | 45-3168892 | | Massachusetts |
| MassMutual Premier Focused International Fund | 02-0754273 | | Massachusetts |
| MassMutual Premier Main Street Fund | 51-0529328 | | Massachusetts |
| MassMutual Premier Strategic Emerging Markets Fund | 26-3229251 | | Massachusetts |
| MassMutual Premier Value Fund | 04-3277550 | | Massachusetts |
| MassMutual Select Funds: | | | |
| MassMutual Select Diversified International Fund | 14-1980900 | | Massachusetts |
| MassMutual Select Diversified Value Fund | 01-0821120 | | Massachusetts |
| MassMutual Select Fundamental Growth Fund | 04-3512593 | | Massachusetts |
| MassMutual Select Large Cap Value Fund | 04-3513019 | | Massachusetts |
| MassMutual Select Mid-Cap Value Fund | 42-1710935 | | Massachusetts |
| MassMutual Select Small Capital Value Equity Fund | 02-0769954 | | Massachusetts |
| MassMutual Select Small Company Value Fund | 04-3584140 | | Massachusetts |
| MML Series Investment Funds: | 46.4055056 | | |
| MML Series International Equity Fund | 46-4257056 | | Massachusetts |
| MML Series Investment Funds II: | 47. 2517222 | | N 1 |
| MML Series II Asset Momentum Fund | 47-3517233 | | Massachusetts |
| MML Series II Dynamic Bond Fund | 47-3529636 | | Massachusetts |
| MML Series II Equity Rotation Fund | 47-3544629 | | Massachusetts |
| MML Series II Special Situations Fund | 47-3559064 | | Massachusetts |
| MassMutual RetireSMART Funds: | 46 2200207 | | M 1 |
| MassMutual RetireSMART 2055 Fund | 46-3289207 | | Massachusetts |
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^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

PART 1 – ORGANIZATIONAL CHART

Federal Tax ID NAIC Co Code State of Domicile

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|--|------------|---------------|
| MassMutual RetireSMART 2060 Fund | 47-5326235 | Massachusetts |
| MassMutual RetireSMART Conservative Fund | 45-1618155 | Massachusetts |
| MassMutual RetireSMART Growth Fund | 45-1618222 | Massachusetts |
| MassMutual RetireSMART Moderate Fund | 45-1618262 | Massachusetts |
| MassMutual RetireSMART Moderate Growth Fund | 45-1618046 | Massachusetts |
| Oppenheimer Funds: | | |
| Oppenheimer Developing Markets Fund | 93-6305075 | Delaware |
| Oppenheimer Developing Markets Equity UCITS | None | Ireland |
| Oppenheimer Emerging Markets Innovators UCITS | None | Ireland |
| Oppenheimer ESG Revenue ETF | 81-3492794 | Delaware |
| Oppenheimer Global ESG Revenue ETF | 81-3480754 | Delaware |
| Oppenheimer Global Equity UCITS | None | Ireland |
| Oppenheimer Global Multi-Asset Growth Fund | 47-3676235 | Delaware |
| Oppenheimer Global Multi-Asset Income Fund | 47-1714929 | Delaware |
| Oppenheimer Global Value Equity UCITS | None | Ireland |
| Oppenhemier International Growth & Income Fund | 81-3136071 | Delaware |
| Oppenheimer Macquarie Global Infrastructure Fund | 81-1080638 | Delaware |

^{*}This entity is owned by another or multiple entities in the group. Please refer to Sch Y Part 1A for the ownership and percentage information.

SCHEDULE Y

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| | | | | | | | | | | | (Ownership, | is | | ls an | 1 |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | 1 |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filina | 1 |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | 1 |
| Group | | | ID | Federal | | (U.S. or | Parent. Subsidiaries | | | Divostly Controlled by | Influence. | Percen- | Ultimate Controlling | quired? | 1 |
| | 0 11 | Company | | | 0114 | | | Loca- | Reporting | Directly Controlled by | | | | | 1 |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | الــــــــــــــــــــــــــــــــــــ |
| | | | | | | | Massachusetts Mutual Life Insurance Company | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0435 | Massachusetts Mut Life Ins Co | 65935 | 04–1590850 | . 3848388 | 0000225602 | | (MMLIC) | MA | UDP | Company | Ownership | 100.000 | MMLIC | | ļ |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0435 | CM Life Ins Co | 93432 | 06-1041383 | | | | C.M. Life Insurance Company | CT | RE | Company | Ownership | 100.000 | MMLIC | | ļ |
| 0435 | MML Baystate Life Ins Co | 70416 | 43-0581430 | | 0000924777 | | MML Bay State Life Insurance Company | CT | DS | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | l |
| 0000 | | | . 06-1041383 | | | | CML Mezzanine Investor, LLC | DE | DS | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | 06-1041383 | | | | CML Mezzanine Investor L, LLC | DE | DS | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | tl |
| 0000 | | | 06-1041383 | | | | CML Mezzanine Investor III. LLC | DE | DS. | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | | | | | CML Special Situations Investor LLC | DE | DS. | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | 1 |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 04-1590850 | | | | MML Mezzanine Investor L, LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | 1 |
| | | | 1000000 | | | | man more and the state of the s | | | Massachusetts Mutual Life Insurance | отполотир | | | | |
| 0000 | | | | | | | MML Special Situations Investor LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | | | | | www. Special Situations investor LLC | VE | | Massachusetts Mutual Life Insurance | owner strip | | . MMLTO | | (|
| 0000 | | | 47 5000070 | | | | T: 1 1 15 4 11 11 11 11 11 11 11 11 11 11 11 11 1 | DE | NII A | | 0 1: | 05 000 | 188 10 | | 1 |
| 0000 | | | 47-5322979 | | | | Timberland Forest Holding LLC | | NI A | Company | Ownership | 95.000 | - MMLIC | | · |
| 0000 | | | 47-5322979 | | | | Timberland Forest Holding LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 5.000 | MMLIC | | t |
| 0000 | | | 47-5322979 | | | | Timberland Forest Holding LLC | DE | NI A | Wood Creek Capital Management LLC | Management | | MMLIC | | t |
| 0000 | | | | | | | Lyme Adirondack Forest Company, LLC | DE | NI A | Timberland Forest Holding LLC | Ownership | 100.000 | MMLIC | | · |
| 0000 | | | 20-5305426 | | | | Lyme Adirondack Timber Sales, Inc. | NY | NI A | Timberland Forest Holding LLC | Ownership | 100.000 | MMLIC | | ļ |
| 0000 | | | | | | | Lyme Adirondack Timberlands I, LLC | DE | NIA | Timberland Forest Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Lyme Adirondack Timberlands II, LLC | DE | NI A | Timberland Forest Holding LLC | Ownership | 100.000 | MMLIC | | ļ |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | . 04-1590850 | | | | Berkshire Way LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | 1 |
| | | | | | | | • | | | Massachusetts Mutual Life Insurance | · | | | | 1 |
| 0000 | | | 26-4441097 | | . | | WP-SC. LLC | DE | NI A | Company | Ownership | 81.400 | MML1C | | 1 |
| 0000 | | | 26-4441097 | | | | WP-SC, LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 18.600 | MMLIC | | 1 |
| | | | | | | | , | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 04-1590850 | | | | MSP-SC. LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | 1 |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | o | | | | |
| 0000 | | | 27-1435692 | | | | Country Club Office Plaza LLC | DE | NIA | Company | Ownership | 88.100 | MMLIC | | 1 |
| 0000 | | | 27-1435692 | | | | Country Club Office Plaza LLC | DE | NIA | C.M. Life Insurance Company | Ownership | 11.900 | MMLIC | | í |
| 0000 | | | . 21-1400002 | | | | Country Club Office Flaza LLC | UL | | Massachusetts Mutual Life Insurance | owner strip | | . mmL10 | | (|
| 0000 | | | 56-2574604 | | | | Invicta Advisors LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | 30-23/4004 | | | | INVICTA AUVISORS LLC | VE | NIA | Massachusetts Mutual Life Insurance | owner strip | 100.000 | MMLIC | | 1 |
| 0000 | | | 27-0105644 | | | | I-ffi Fi IIO | DE | NI A | | 0hi | 50.000 | MMLIC | | 1 . |
| 0000 | | | 27-0103644 | | | | Jefferies Finance LLC | DE | | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Apex Credit Partners LLC | | NI A | | Ownership | | | | · |
| 0000 | | | - | | | | JFIN Fund V 2017 LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | - | | | | JFIN Fund III LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | - MMLIC | | t |
| 0000 | | | | | | | JFIN Asset Management LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | - | | | | JFIN Co-Issuer Corporation | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | - MMLIC | | _f |
| 0000 | | | | | | | JFIN Europe GP, S.a.r.I. | LUX | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | · |
| 0000 | | | - | | | | Jefferies Finance Europe, SCSp | LUX | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | f |
| 0000 | | | | | | | Jefferies Finance Business Credit LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | JFIN Business Credit Fund LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | ļl |
| 0000 | | | | | | | JFIN High Yield Investments LLC | DE | NIA | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | · |
| 0000 | | | . | | | | JFIN LC Fund LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | ı |
| 0000 | | | | | | | JFIN Revolver CLO Holdings LLC | DE | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | JFIN CLO 2007 Ltd | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | L |
| 0000 | | l | | | | | JFIN CLO 2012 Ltd. | CYM | NIA | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | l | | | | JFIN CLO 2013 Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | JFIN CLO 2014 Ltd. | CYM | NIA | Jefferies Finance LLC | Ownership | 70.000 | MMLIC | | |
| 0000 | | | | | | | JFIN CLO 2014 Ltd. | CYML | NIA | Apex Credit Partners LLC | Ownership | 30.000 | MMLIC | | |
| 0000 | | | 1 | | | | JFIN CLO 2014-II Ltd. | CYM | NIA | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 1 | | | | JFIN MM CLO 2014 Ltd. | CYM | NIA | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | 00000 | O O | | | | |

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| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| | O No | | | | Oll | | | Loca- | | | | | | | * |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | |
| 0000 | | | | | | | JFIN CLO 2015 Ltd | CYM | NI A | Jefferies Finance LLC | Ownership | 44.000 | MMLIC | | |
| | | | | | | | JFIN CLO 2015 Ltd. | CYM | NI A | Apex Credit Partners LLC | Ownership | | MMLIC | | |
| 0000 | | | | | | | JFIN CLO 2015-II Ltd | CYM | NI A | Jefferies Finance LLC | Ownership | 33.000 | MMLIC | | |
| | | | | | | | JFIN CLO 2015-II Ltd | CYM | NI A | Apex Credit Partners LLC | Ownership | 53.000 | MMLIC | | |
| 0000 | | | | | | | JFIN Revolver CLO Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | JFIN Revolver CLO 2014 Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | JFIN Revolver CLO 2015 Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | JFIN Revolver CLO 2015-II Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | - | - | | | | JFIN CLO 2016 Ltd. | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | · |
| 0000 | | | | | | | JFIN CLO 2017 Ltd | CYM | NI A | Jefferies Finance LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | l | 400.005 | | | |
| 0000 | | | . 04-1590850 | | | | MassMutual Retirement Services, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | 1 | | Massachusetts Mutual Life Insurance | l | | | | 1 |
| 0000 | | | . 04-3356880 | | 0000943903 | | MML Distributors LLC | MA | NI A | Company | Ownership | 99.000 | MMLIC | | |
| 0000 | | | . 04-3356880 | | 0000943903 | | MML Distributors LLC | MA | NI A | MassMutual Holding LLC | Ownership | 1.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | | | | MML Investment Advisers, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | | | MML Mezzanine Investor, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 46-3238013 | | | | MML Strategic Distributors, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 06-1563535 | 2881445 | 0001103653 | | The MassMutual Trust Company, FSB | CT | NI A | Company | Ownership | 100.000 | MMLIC | Y | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | | | MMC Equipment Finance LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 26-0073611 | | | | MassMutual Asset Finance LLC | DE | NI A | MMC Equipment Finance LLC | Ownership | 99.600 | MMLIC | | |
| 0000 | | | . 26-0073611 | | | | MassMutual Asset Finance LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 0.400 | MMLIC | | |
| 0000 | | | 27-1379258 | | | | MMAF Equipment Finance LLC 2009-A | DE | NI A | MassMutual Asset Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 45-2589019 | | | | MMAF Equipment Finance LLC 2011-A | DE | NI A | MassMutual Asset Finance LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | MML Private Placement Investment Company I, | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | | | LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | 0000067160 | | MML Private Equity Fund Investor LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-1590850 | | | | MM Private Equity Intercontinental LLC | DE | NI A | MML Private Equity Fund Investor LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | . | 45-2738137 | | | | Pioneers Gate LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | ļ |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 45-4376777 | | | | MSC Holding Company, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | Y | |
| 0000 | | | . 04-3341767 | | | | MassMutual Holding MSC, Inc. | MA | NI A | MSC Holding Company, LLC | Ownership | 100.000 | MML1C | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 04-2854319 | 2392316 | | | MassMutual Holding LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | Y | |
| 0000 | | . | 06-1597528 | | | | MassMutual Assignment Company | NC | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | ļ |
| 0000 | | | . 37-1732913 | | | | Fern Street LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 62-0951563 | 1160004 | 0001259664 | | First Mercantile Trust Company | TN | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | ļ |
| 0000 | | | 46-2252944 | | | | Haven Life Insurance Agency, LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | . | . 04-1590850 | | 0001399869 | | MassMutual Capital Partners LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 47-1296410 | | | | MassMutual Ventures LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | . | . 04-1590850 | | | | MM Rothesay Holdco US LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 47-1466022 | | | | Society of Grownups, LLC | MA | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 04-1590850 | | 0000701059 | | MML Investors Services, LLC | MA | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-1590850 | | | | MML Insurance Agency, LLC | MA | NI A | MML Investors Services, LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 41-2011634 | | 0001456663 | | MMLISI Financial Alliances, LLC | DE | NI A | MML Investors Services, LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 45-4000072 | | | | MM Asset Management Holding LLC | DE | NI A | MassMutual Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | l | 51-0504477 | l | 0000009015 | | Barings LLC | DE | NI A | MassMutual Asset Management Holding LLC | Ownership | 100.000 | MMLIC | | 1 |
| | | | | | | | v | ., | | 1 | | | | , | |

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| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | | | D! | | | | | | | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| 0000 | | | 80-0875475 | | | | Barings Finance LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | BCF Europe Funding Limited | IRL | NI A | Barings Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | BCF Senior Funding LLC | DE | NI A | Barings Finance LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | BCF Senior Funding I Designated Activity | | | | | | | | |
| 0000 | | | | | | | Company | IRL | NI A | Barings Finance LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-3238351 | | 0000930012 | | Barings Securities LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0437588 | | | | Barings Guernsey Limited | GGY | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0432153 | | | | Barings (UK) Limited | GBR | NI A | Barings Guernsey Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings GPC GP S.à. r.I | LUX | NIA | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine GP III Limited | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Almack Holding Partnership GP Limited | GBR | NIA | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund Limited | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund II Limited | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-1012393 | | | | Barings Global Advisors Limited | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | BCGSS 2 GP LLP | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Babson European Direct Lending 1 GP LLP | GBR | NI A | Barings (U.K.) Limitied | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Advisers (Japan) KK | JPN | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Multifamily Capital Holdings LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Multifamily Capital LLC | MI | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Multifamily Capital Corporation | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-3238351 | 3456895 | 0001011148 | | Barings Real Estate Advisers Inc. | CA | NI A | Barings Real Estate Advisers LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Real Estate Advisers Japan KK | JPN | NI A | Barings Real Estate Advisers LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Real Estate UK Holdings Limited | DE | NI A | Barings Real Estate Advisers LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | BREAE AIFM LLP | GBR | NI A | Barings Real Estate Advisers LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Barings Real Estate Advisers (Continental | | | | | | | | |
| 0000 | | | 98-0654401 | | | | Europe) Limited | GBR | NI A | Barings Real Estate UK Holdings Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0654388 | | | | Barings Real Estate Advisers Europe LLP | GBR | NI A | Barings Real Estate UK Holdings Limited | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Barings Real Estate Advisers Europe Finance | | | , , , , , , , , , , , , , , , , , , , | · | | | | |
| 0000 | | | 98-0654412 | | | | LLP | GBR | NI A | Barings Real Estate UK Holdings Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-1194368 | | | | Barings Real Estate Advisers GmbH | DEU | NI A | Barings Real Estate UK Holdings Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-1590850 | | | | MassMutual Baring Holding LLC | DE | NI A | MassMutual Asset Management Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0241935 | 2363071 | 0000932463 | | Baring North America LLC | MA | NI A | MassMutual Baring Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | MassMutual Holdings (Bermuda) Limited | BMU | NI A | MassMutual Baring Holding LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0241935 | | | | Baring Asset Management Limited | GBR | NI A | MassMutual Holdings (Bermuda) Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0457328 | | 0001568131 | | Baring International Investment Limited | GBR | NI A | Baring Asset Management Limited | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Baring International Investment Management | | | _ | 1 | | | | |
| 0000 | | | 98-0457587 | | | | Holdings | GBR | NI A | Baring Asset Management Limited | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Baring International Investment Management | 1 | | | | |
| 0000 | | | 98-0457576 | | | | Baring Asset Management UK Holdings Limited. | GBR | NI A | Holdings | Ownership | 100.000 | MMLIC | | |
| | | 1 | | | 1 | | | | | Baring Asset Management UK Holdings Limited | I) | | | | |
| 0000 | | | 98-0465031 | | | | Baring Asset Management GmbH | DEU | NI A | - * | Ownership | 100.000 | MMLIC | | |
| | | 1 | | | 1 | | Baring Asset Management (Asia) Holdings | | | Baring Asset Management UK Holdings Limited | I) | | | | |
| 0000 | | | 98-0524271 | | | | Limited | HKG | NI A | - | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Baring International Fund Managers (Bermuda) | | | Baring Asset Management (Asia) Holdings | | | | | |
| 0000 | | | 98-0457465 | | | | Limited | BMU | NI A | Limited | Ownership | 100.000 | MMLIC | | |
| | | 1 | 1 | | | | | | | Baring Asset Management (Asia) Holdings | 1 | | | 1 1 | |
| 0000 | | | 98-0457463 | | | | Baring Asset Management (Asia) Limited | HKG | NIA | Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . | | | | Baring Asset Management Korea Limited | KOR | NI A | Baring Asset Management (Asia) Limited | Ownership | 100.000 | MMLIC | | |
| | | | | | | | _ | | | Baring Asset Management (Asia) Holdings | 1 | | | | |
| 0000 | | | 98-0236449 | | | | Baring Asset Management (Japan) Limited | JPN | NI A | Limited | Ownership | 100.000 | MMLIC | | |
| | | 1 | | 1 | | | Baring Asset Management (Australia) Pty | | | Baring Asset Management (Asia) Holdings | 1 | | | | |
| 0000 | | | 98-0457456 | | | | Limited | AUS | NI A | Limited | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Baring International Fund Managers (Ireland) | | | Baring Asset Management UK Holdings Limited | | | | | |
| 0000 | | | 98-0524272 | | | | Limited | IRL | NI A | - v | Ownership | 100.000 | MMLIC | | |
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| | | | | | | | | | | | Type | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Craun | | | ID | Fadaral | | (U.S. or | Parent, Subsidiaries | | | Discotly Controlled by | | Percen- | Liltimata Cantrallina | | |
| Group Code | Group Name | Company Code | Number | Federal RSSD | CIK | International) | Or Affiliates | Loca- tion | Reporting | Directly Controlled by (Name of Entity/Person) | Influence, Other) | | Ultimate Controlling Entity(ies)/Person(s) | quired? (Y/N) | * |
| Code | Group Name | Code | Number | หออบ | CIK | international) | Or Allillates | lion | Entity | | Other) | tage | Entity(les)/Person(s) | (Y/IN) | |
| 0000 | | | | | | | Danian Accel Management Ocidental and Obel | CHE | NIA | Baring Asset Management UK Holdings Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Baring Asset Management Switzerland Sàrl | HE | NI A | Baring Asset Management UK Holdings Limited | Uwnersnip | 100.000 | MMLIC | | |
| 0000 | | | 98-0457707 | | | | Baring SICE (Taiwan) Limited | TWN | NIA | balling Asset management on noturings Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 30-043//0/ | | | | Dailing Stor (Talwall) Limited | 111111 | NIA | Baring Asset Management UK Holdings Limited | owner sirrp | 100.000 | | | |
| 0000 | | | 98-0497550 | | | | Baring France SAS | FRA | NI A | balling Asset management on hordings Elimited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0457586 | | | | Baring Fund Managers Limited | GBR | NIA | Baring Asset Management Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0457574 | | | | Baring Pension Trustees Limited | GBR | NI A | Baring Asset Management Limited | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | 98-0457578 | | | | Baring Investment Services Limited | GBR | NI A | Baring Asset Management Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings Australia Holding Company Pty Ltd | AUS | NI A | Barings LLC | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | 98-0457456 | | | | Barings Australia Pty Ltd | AUS | NIA | Baring Australia Holding Company Pty Ltd. | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Barings Investment Advisors (Hong Kong) | | | • • • • • • | | | | | |
| 0000 | | . | | | | | Limited | HKG | NI A | Barings LLC | Ownership | 100.000 | . MMLIC | | |
| 0000 | | | 47-2642354 | | | | Alchemy Copyrights, LLC. | DE | NI A | MassMutual Holding LLC | Ownership/Influence | 15.100 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 47-2642354 | | | | Alchemy Copyrights, LLC. | DE | NI A | Company | Ownership | 0.100 | MMLIC | | |
| 0000 | | | 47-2642354 | | | | Alchemy Copyrights, LLC. | DE | NI A | Barings LLC | Influence | | . MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-2244465 | | | | Chassis Acquisition Holding LLC | DE | NI A | Company | Ownership/Influence | 30.000 | MMLIC | | |
| 0000 | | | 81-2244465 | | | | Chassis Acquisition Holding LLC | DE | NI A | Barings LLC | Influence | · | MMLIC | | |
| | | | 0.4.4050750 | | | | | | | Massachusetts Mutual Life Insurance | | 40.000 | | | |
| 0000 | | | 81-4258759 | | | | CRA Aircraft Holding LLC | DE | NI A | Company | Ownership/Influence | 40.000 | MMLIC | | |
| 0000 | | | 81-4258759 47-3055009 | | | | CRA Aircraft Holding LLC | DE | NI A NI A | Barings LLC | Influence | 18.300 | MMLIC | | |
| 0000 | | | 47-3055009 | | | | Milestone Acquisition Holding, LLC. | VE | NI A | Massachusetts Mutual Life Insurance | Ownership/Influence | 18.300 | MMLIC | | |
| 0000 | | | 47-3055009 | | | | Milestone Acquisition Holding, LLC. | DE | NI A | Company | Ownership | 0.000 | MMLIC | | |
| 0000 | | | 47-3055009 | | | | Milestone Acquisition Holding, LLC. | DE | NIA | Barings LLC | Influence | | MMLIC | | |
| 0000 | | | 47-3033009 | | | | wittestone Acquisition noturing, ELC. | UL | NI / | Massachusetts Mutual Life Insurance | . I I I I uelice | | . MINIETO | | |
| 0000 | | | 46-5460309 | | | | Red Lake Ventures. LLC | DE | NI A | Company | Ownership/Influence | 15.800 | MMLIC | | |
| 0000 | | - | 46-5460309 | | | | Red Lake Ventures, LLC | DE | NIA | Barings LLC | Influence | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-4065378 | | | | Remington L & W Holdings LLC | DE | NI A | Company | Ownership/Influence | 66.300 | MMLIC | | |
| 0000 | | | 81-4065378 | | | | Remington L & W Holdings LLC | DE | NI A | Barings LLC | Influence | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-3123110 | | | | Sweet Tree Holdings 1, LLC | DE | NI A | Company | Ownership/Influence | 16 . 100 | MMLIC | | |
| 0000 | | - | 46-3123110 | | | | Sweet Tree Holdings 1, LLC | DE | NI A | Barings LLC | Influence | | MMLIC | | |
| | | 1 | | | | | | | | Massachusetts Mutual Life Insurance | | | | 1 | |
| 0000 | | - | | | | | Tamiami Citurus, LLC | DE | NI A | Company | Ownership | 15.700 | MMLIC | | |
| 0000 | | | | | | | Teaktree Acquisition, LLC | DE | NI A | MassMutual Holding LLC | Ownership/Influence | 14.700 | MMLIC | | |
| 0000 | | - | | | | | Teaktree Acquisition, LLC | DE | NI A | Barings LLC | Influence | | - MMLIC | [| |
| 0000 | | İ | | 1 |] | | II C. Boose Boosdoodtine II C | DE | NII A | Massachusetts Mutual Life Insurance | 0 | 10.700 | 100 | | |
| 0000 | | - | | | | | U.S. Buyer Broadcasting, LLC | DE | NI A NI A | CompanyBarings LLC | Ownership/Influence Influence | 12.700 | MMLIC | | |
| 0000 | | - | 46-1500495 | | | | U.S. Buyer Broadcasting, LLC | DE | NIA | MassMutual Holding LLC | Ownership/Influence | 11.700 | MMLIC | | |
| 0000 | | | 46-1500495 | | | | U.S. WIG Holdings, LP | DE | NIA | Barings LLC | Influence | 11.700 | MMLIC | | |
| 0000 | | | 10 1000400 | | | | O.O. mid nordings, Li | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | 1 | 20-2970495 | | | | US Pharmaceutical Holdings II, LLC | DE | NI A | Company | Ownership/Influence | 32.600 | MMLIC | 1 | |
| 0000 | | | 20-2970495 | | | | US Pharmaceutical Holdings II, LLC | DE | NIA | Barings LLC | Influence | | MMLIC | | |
| | | | | | | | The state of the s | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | . | | | | | Solar Acquisition Holding, LLC | DE | NI A | Company | Ownership/Influence | 39.200 | MMLIC | | <u> </u> |
| 0000 | | | | | | | Solar Acquisition Holding, LLC | DE | NI A | Barings LLC | Management | | MMLIC | | |
| 0000 | | . | | | | | VGS Acquisition Holding, LLC | DE | NI A | MassMutual Holding LLC | Ownership/Influence | 42.600 | MMLIC | | |
| 0000 | | | | | | | VGS Acquisition Holding, LLC | DE | NI A | Barings LLC | Management | | MMLIC | | 1 |

| | | | | PP | | A - DE I AI | L OF INSURANC | ,C [| JOLD | ING COMPANT | SISIEM | | | | |
|-------|------------|---------|----------------------------|-----------|---------------|--------------------|--|-----------|--------------|--|---------------------|---------|-----------------------|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | | | | Type | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | | (U.Ś. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| | • | | | | | · | | | • | Massachusetts Mutual Life Insurance | , | | , , , , , , | , , , , , , , , , , , , , , , , , , , | |
| 0000 | | | . 46-3378584 | | | | WC Aircraft Holdings US II, LLC | DE | NI A | Company | Ownership/Influence | 18.000 | MMLIC | | |
| 0000 | | | 46-3378584 | | | | WC Aircraft Holdings US II, LLC | DE | NI A | Wood Creek Capital Management LLC | Management | | MMLIC | | |
| 0000 | | | | | | | W 10 14: (41111: 1 15 | 0)/14 | NII A | Massachusetts Mutual Life Insurance | | 40,400 | 188 10 | | |
| 0000 | | | | | | | Wood Creek Aircraft Holding I, LP Wood Creek Aircraft Holding I, LP | CYM | NIA NIA | Company Wood Creek Capital Management LLC | Ownership | 12.100 | MMLIC | | |
| 0000 | | | | | | | Babson Capital Floating Rate Income Fund | VYM | NI A | wood Greek Capital Management LLC | Management | | MMLIC | | |
| 0000 | | | 04-1590850 | | 0001501011 | | Management, LLC | DE | NIA | Barings LLC | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | 1000000 | | 0001001011 | | Babson Global Loan Feeder Management, LLC | DE | NIA | Barings LLC | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | | | | | Barings CLO Investment Partners GP, LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| | | 1 | | | | | Barings Global Energy Infrastructure | | | , and the second | 1 | | | | |
| 0000 | | | | | | | Advisors, LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| | | | | | | | Barings North American Private Loan Fund | | | | | | | | |
| 0000 | | | | | | | Management, LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-0536233 | | | | Barings TERO Management LLC Benton Street Advisors, Inc. | DE CYM | NI A NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 04-1590850 | | | | SDCOS Management LLC | DE | NIA | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-1590850 | | | | Great Lakes III GP, LLC | DE | NIA | Barings LLC | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | 1000000 | | | | Lake Jackson LLC | DE | NIA | Barings LLC | Ownership | 100.000 | MMLIC | | 1 |
| 0000 | | | 04-1590850 | | | | Loan Strategies Management LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 04-1590850 | | | | Mezzco LLC | DE | NI A | Barings LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 02-0767001 | | | | Mezzco II LLC | DE | NI A | Barings LLC | Ownership | 98.400 | MMLIC | | |
| 0000 | | | . 41-2280126 | | | | Mezzco III LLC | DE | NI A | Barings LLC | Ownership | 99.300 | - MMLIC | | |
| 0000 | | | 80-0920285 | | | | Mezzco IV LLC | DE | NI A | Barings LLC | Ownership | 99.300 | MMLIC | | |
| 0000 | | | 90-0666326 | | | | Mezzco Australia LLC | DE | NI A NI A | Barings LLCBarings LLC | Ownership | 72.000 | MMLIC | | |
| 0000 | | | | | | | Somerset Special Opportunities Management LLC | DE | NIA | Dai Higs LLC | Owner Sirrp | | . mmL10 | | |
| 0000 | | | 04-1590850 | | | | Somerset Special Opportunities management LLC | DE | NI A | Barings LLC | Ownership | 100,000 | MMLIC | | |
| 0000 | | | 84-1149206 | 2897101 | | | Oppenheimer Acquisition Corp. | DE | NI A | MassMutual Asset Management Holding LLC | Ownership | 97.000 | MMLIC | | |
| 0000 | | | 13-2527171 | 2679183 | 0000820031 | | OppenheimerFunds, Inc. | CO | NI A | Oppenheimer Acquisition Corp. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 13-2953455 | | 0000276541 | | OppenheimerFunds Distributor, Inc | NY | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 84-1106295 | | | | Oppenheimer Real Asset Management, Inc. | DE | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | - MMLIC | | |
| 0000 | | | . 13-4160541 | . 3458125 | 0001179479 | | OFI Global Institutional, Inc. | NY DE | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 22-2697140 | | | | Coastal Merger Corp HarbourView Asset Management Corporation | NY | NIA NIA | OFI Institutional Asset Management, Inc OFI Institutional Asset Management, Inc | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 13-3459790 | 2914875 | | | OFI Global Trust Company | NY | NIA | OFI Institutional Asset Management, Inc | Owner Ship | 100.000 | MMLIC | [| |
| 0000 | | | | | | | OFI International, Ltd. | GBR | | OFI Institutional Asset Management, Inc | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | 25-1951632 | | 0000099782 | | Trinity Investment Management Corporation | PA | NI A | OFI Institutional Asset Management, Inc | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 84-1128397 | | 0000857468 | | OFI SteelPath, Inc. | DE | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 84-1066811 | . | 0000276398 | | Shareholder Services, Inc. | CO | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | - | | | | VTL Associates , LLC | PA | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | [| 04 0705000 | | 0001041074 | | Index Management Solutions, LLC | PA | NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 84-0765063 91-2036414 | | 0001041674 | | OFI Global Asset Management, Inc. | DE | NI A NI A | OppenheimerFunds, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | l | 62-1210532 | | . 100011/9480 | | Tremont Group Holdings, LLC | NY | NIA | Oppenheimer Acquisition Corp. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 06-1121864 | | 0000764139 | | Tremont Partners, LLC | CT | NIA | Tremont Group Holdings, Inc. | Ownership | 100.000 | MMLIC | [| *************************************** |
| 0000 | | | 20-8215352 | | | | Tremont GP, LLC | DE | NIA | Tremont Group Holdings, Inc. | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 90-0874510 | | | | Settlement Agent LLC | DE | NI A | Tremont GP | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Tremont (Bermuda) Limited | BMU | NI A | Tremont Group Holdings, Inc. | Ownership | 100.000 | MMLIC | | |
| 1 | | I | | | | | | | | Massachusetts Mutual Life Insurance | | | | 1 | |
| 0000 | | | 04-3313782 | | | | MassMutual International LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | Y | |
| 0000 | | | - | | | | MassMutual Asia Limited | HKG | IA | MassMutual International LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | - | | | | MassMutual Asia Investors Ltd. | HKG | NI A | MassMutual Asia Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | l | MassMutual Guardian Limited | HKG | NI A | MassMutual Asia Limited | Ownership | 1 | MML U | | |

| | | | | PA | KII | A - DE I AI | L OF INSURANCE | ,E I | JOLL | ING COMPANY | 2 1 2 1 E IVI | | | | |
|-------|------------|---------|--------------|---------|------|--------------------|---|------------|---------------------------------------|--|---------------------------|---------|-----------------------|---------|-------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | | | | Туре | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| _ | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | O N | Company | ID | Federal | 0114 | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) MassMutual Asia Limited | Other) | tage | Entity(ies)/Person(s) | (Y/N) | |
| 0000 | | | | | | | MassMutual Insurance Consultants Limited MassMutual Services Limited | HKG | NIA NIA | MassMutual Asia Limited | Ownership. | 100.000 | MMLIC | | |
| 0000 | | | | | | | MassMutual Trustees Limited | HKG | NIA | MassMutual Asia Limited | Ownership | 80.000 | MMLIC | | |
| 0000 | | | 98-0610331 | | | | Protective Capital (International) Limited | HKG | NI A | MassMutual Asia Limited | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 98-1033127 | | | | MassMutual Internacional (Chile) SpA | CHL | NI A | MassMutual International LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | - | | | | MassMutual Life Insurance Company | JPN | IA | MassMutual International LLC | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 04-2443240 | | | | MML Management Corporation | MA | NI A | Massachusetts Mutual Life Insurance Company | Ownership | 100.000 | MMLIC | v | |
| 0000 | | | 04-3548444 | | | | MassMutual International Holding MSC, Inc | MA | NIA | MML Management Corporation | Ownership | 100.000 | MMLIC | | |
| | | | 1 | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 04-1590850 | | | | MML Mezzanine Investor II, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | | | MML Mezzanine Investor III, LLC | DE | NI A | Company Massachusetts Mutual Life Insurance | Ownership | 100.000 | - MMLIC | | |
| 0000 | | | 27-3576835 | | | | MassMutual External Benefits Group LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | |
| | | | 27 0070000 | | | | massmatuar Externar Benefits droup EEC | | NIA | Massachusetts Mutual Life Insurance | Owner strip | | - mile 10 | | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global REIT Corporation | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04–1590850 | | | | 100 w. 3rd Street LLC | DE | NI A | Company | Ownership | 100.000 | - MMLIC | | |
| 0000 | | | . 04-1590850 | | | | 300 South Tryon Hotel LLC | DE | NIA | Massachusetts Mutual Life Insurance | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 04-1590650 | | | | 300 South Tryon Hotel LLC | UE | NI A | Company | Owner Strip | 100.000 | MMLIC | | |
| 0000 | | | 04-1590850 | | | | 300 South Tryon LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | , | | | Massachusetts Mutual Life Insurance | 1 | | | | |
| 0000 | | | 20-3887968 | | | | 54 West Capital LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 16-1720387 | | | | Alexandria Towers Investors LLC | DE | NIA | Massachusetts Mutual Life Insurance | Ownership | 100.000 | MMLIC | | |
| 0000 | | | . 16-1/2038/ | | | | Alexandria lowers investors LLC | UE | NI A | Company Massachusetts Mutual Life Insurance | . Uwnersnip | 100.000 | . MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund LP | GBR | NI A | Company | Ownership/Influence | 38.900 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund LP | GBR | NI A | C.M. Life Insurance Company | Ownership | 4.300 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund I LP | GBR | NI A | Barings (U.K.) Limitied | Management | | MMLIC | | |
| 0000 | | | | | | | Alasah Managian Found II Iblanca and IB | ODD | NIA | Massachusetts Mutual Life Insurance | 0 | 73.300 | MMLIC | | |
| 0000 | | | - | | | | Almack Mezzanine Fund II Unleveraged LP Almack Mezzanine Fund II Unleveraged LP | GBR GBR | NIA | Company Barings (U.K.) Limitied | Ownership/Influence | /3.300 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | | | | Almack Mezzanine Fund III LP | GBR | NI A | Company | Ownership/Influence | 34.400 | MMLIC | | ļl |
| 0000 | | | | | | | Almack Mezzanine Fund III LP | GBR | NI A | C.M. Life Insurance Company | Ownership | 3.800 | MMLIC | | |
| 0000 | | | | | | | Almack Mezzanine Fund III LP | GBR | NIA | Barings (U.K.) Limitied Massachusetts Mutual Life Insurance | Management | | MMLIC | | ····· |
| 0000 | | | | | | | Barings Emerging Markets Corporate Bond Fund | IRL | NI A | Company | Ownership/Influence | 98.700 | MMLIC | | |
| | | | 1 | | | | Barings Emerging Markets Corporate Bond Fund | | MIA | Company | Owner strip/ trit ructice | | MINETO | | |
| 0000 | | | | | | | | IRL | NI A | Barings LLC | Management | | MMLIC | | |
| 1 | | | | | | | | | | Massachusetts Mutual Life Insurance | [| .= | | | |
| 0000 | | | | | | | Barings Emerging Markets Local Debt Fund | IRL | NIA | Company | Ownership/Influence | 47.300 | MMLIC | | ···· |
| 0000 | | | | | | | Barings Emerging Markets Local Debt Fund Barings Global Special Situations Credit Fund | IHL | NIA | Barings LLC | Management | | MMLIC | | |
| 0000 | | | | | | | 1 | IRL | NI A | Company | Ownership/Influence | 98.700 | MMLIC | | |
| | | | | | | | Barings Global Special Situations Credit Fund | | | | 1 | | | | |
| 0000 | | | | | | | 1 | IRL | NIA | Barings LLC | Management | | MMLIC | | |
| 0000 | | | 00 4000047 | | | | Babson Capital Global Special Situation | DE | NI A | Massachusetts Mutual Life Insurance | 0 | 00.000 | 188 10 | | |
| 0000 | | | 98-1206017 | | | | Credit Fund 2 | DE | NIA | Company | Ownership/Influence | 23.900 | . MMLIC | | |
| 0000 | | | 98-1206017 | | | | Credit Fund 2 | DE | NIA | C.M. Life Insurance Company | Ownership. | 1.500 | MMLIC | | |
| | | | - 00 1200017 | | 1 | | 0.00und E | | · · · · · · · · · · · · · · · · · · · | o.m. 2 mourano company | . oo. op | | | | |

| | | | | PA | | A - DE I AI | L OF INSURANC | , C [| JOLU | ING COMPAIN | SISIEM | | | | |
|-------|------------|---------|--------------|---------|------------|--------------------|--|------------|-----------|--|---------------------------|--------------|-----------------------|---------|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | _ | Ŭ | , | Ü | Ŭ | , | | | | •• | Type | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Constition | | | Deletion | | | - | | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| | | | | | | | Babson Capital Global Special Situation | | | | | | | | |
| 0000 | | | 98-1206017 | | | | Credit Fund 2 | DE | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 37-1506417 | | | | Babson Capital Loan Strategies Fund, L.P | DE | NI A | Company | Ownership/Influence | 78.700 | MMLIC | | |
| 0000 | | | 37-1506417 | | | | Babson Capital Loan Strategies Fund, L.P | DE | NI A | C.M. Life Insurance Company | Ownership | 3.900 | MMLIC | | |
| 0000 | | | 37-1506417 | | | | Babson Capital Loan Strategies Fund, L.P | DE | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | 40.000 | | | |
| 0000 | | | | | | | Barings US High Yield Bond Fund | IRL | NI A | Company | Ownership/Influence | 42.600 | MMLIC | | 4 |
| 0000 | | | | | | | Barings US High Yield Bond Fund | IRL | NI A | Barings LLC | Management | | MMLIC | | |
| 0000 | | | - | | | | Babson CLO Ltd. 2007-I | CYM | NIA | Barings LLCBarings LLC | Influence | - | MMLIC | | |
| 0000 | | | | | | | Babson CLO Ltd. 2012-I | CYM | | | Influence | | | | |
| 0000 | | | | | | | Babson CLO Ltd. 2012-II | CYM CYM | NIA | Barings LLCBarings LLC | Influence | ····· | MMLIC | | |
| 0000 | | - | 98-1128827 | | | | Babson CLO Ltd. 2013-I | CYM | NIA | Barings LLC | Influence | | MMLIC | | 5 |
| 0000 | | | 90-1120021 | | | | | CYM | NIA | Barings LLC | Influence | ····· | MMLIC | | |
| 0000 | | | | | | | Babson CL0 Ltd. 2014-I | CYM | NIA | Barings LLC | Influence | | MMLIC | | 6 |
| 0000 | | | | | | | Babson CLO Ltd. 2014-11 | CYM | NIA | Barings LLC | Influence | ····· | MMLIC | | 0 |
| 0000 | | | | | | | Babson CLO Ltd. 2015-1 | CYM | NIA | Barings LLC | Influence | | MMLIC | | 7 |
| 0000 | | | - | | | | Babson CLO Ltd. 2015-II | CYM | NIA | Barings LLC | Influence | ····· | MMLIC | | 8 |
| 0000 | | | 1 | | | | Babson CLO Ltd. 2016-1 | CYM | NIA | Barings LLC | Influence | | MMLIC | | |
| 0000 | | | | | | | Babson CLO Ltd. 2016-1 | CYM | NIA | Barings LLC | Influence | ····· | MMLIC | | |
| 0000 | | | | | | | Babson Euro CLO 2014-1 BV | NLD | NI A | Barings LLC | Influence | | MMLIC | | |
| 0000 | | | | | | | Babson Euro CLO 2014-II BV | NLD | NIA | Barings LLC | Influence | - | MMLIC | | |
| 0000 | | | | | | | Babson Euro CLO 2015-I BV | NLD | NIA | Barings LLC | Influence | | MMLIC | | |
| 0000 | | | | | | | Babson Euro CLO 2016-I BV | NLD | NIA | Barings LLC | Influence | | MMLIC | | |
| | | | | | | | Babson Global Credit Fund (Lux) SCSp, SIACV- | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | | | | SIF | LUX | NI A | Company | Ownership/Influence | 15.200 | MMLIC | | |
| | | | | | | | Babson Global Credit Fund (Lux) SCSp, SIACV- | | | | · | | | | |
| 0000 | | | | | | | SIF | LUX | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-0841854 | | | | Barings CLO Investment Partners LP | DE | NI A | Company | Ownership/Influence | 99.300 | MMLIC | | |
| 0000 | | | 81-0841854 | | | | Barings CLO Investment Partners LP | DE | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | Barings Real Estate European Value Add I SCSp | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | | | | | GBR | NI A | Company | Ownership/Influence | 90.000 | MMLIC | | |
| | | | | | | | Barings Real Estate European Value Add I SCSp | | | | | | | | |
| 0000 | | | | | | | | GBR | NI A | C.M. Life Insurance Company | Ownership | 10.000 | MMLIC | | |
| | | | | | | | Barings Real Estate European Value Add I SCSp | | | | | | | | |
| 0000 | | | | | | | | GBR | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 11-3789446 | | | | Baring Focused EAFE Equity Fund | DE | NI A | Company | Ownership/Influence | 43.400 | MMLIC | | |
| 0000 | | | 11-3789446 | | | | Baring Focused EAFE Equity Fund | DE | NI A | Baring Asset Management Limited | Management | - | MMLIC | | |
| 0000 | | | 00 0007070 | | 0001497049 | | Denies Olekel Denesis Asset Allesstics Food | DE | ALLA | Massachusetts Mutual Life Insurance | 0 | 18.700 | MMLIC | | |
| 0000 | | | 30-0607379 | | | | Baring Global Dynamic Asset Allocation Fund | | NI A | Company | Ownership/Influence | 18.700 | | | |
| 0000 | | - | . 30-0607379 | - | 0001497049 | | Baring Global Dynamic Asset Allocation Fund Barings Global Energy Infrastructure Fund I | DE | NI A | Baring Asset Management Limited Massachusetts Mutual Life Insurance | Management | | MMLIC | | · |
| 0000 | | | 98-1332384 | 1 | | | IP | CYM | NIA | | Ownership/Influence | 99.200 | MMLIC | | 1 1 |
| 0000 | | 1 | 20-1332304 | 1 | | | Barings Global Energy Infrastructure Fund I | VTWL | NI A | Company | . Towner Strip/ Intruence | | MMLIU | | 1 |
| 0000 | | | 98-1332384 | 1 | | | Barings Global Energy Intrastructure Fund I | CYM | NIA | Baring Asset Management Limited | Management | | MML1C | | |
| 0000 | | | | 1 | | | LI | ا۱۱۱ د | INI A | Massachusetts Mutual Life Insurance | manayement | | IMMLIO | | 1 |
| 0000 | | | 38-4010344 | 1 | | | Barings North American Private Loan Fund LP . | DE | NI A | Company | Ownership/Influence | 82.000 | MMLIC | | |
| 0000 | | | 38-4010344 | | | | Barings North American Private Loan Fund LP | DE | NIA | Baring Asset Management Limited | Management | | MMLIC | | 1 |
| 0000 | | | | | | | Darringo north American Frivate Lean Fulle Li | | | Massachusetts Mutual Life Insurance | managomorre | | IIIII | | 1 |
| 0000 | | | 98-1332384 | 1 | | | Barings RE Credit Strategies VII LP | DE | NIA | Company | Ownership/Influence | 41.100 | MMLIC | | 1 1 |
| 0000 | | | 98-1332384 | | | | Barings RE Credit Strategies VII LP | DE | NIA | Baring Asset Management Limited | Management | | MMLIC | | |
| | | | | | | | | | | | | | | | |

| | | | | PA | KRI I | A - DE I AI | L OF INSURANC | ,C [| HOLL | ING COMPANT | SISIEIVI | | | | |
|-------|--------------|---------|------------------------------|-----------------|------------|--------------------|--|---------|-----------|---|---------------------------------------|----------|-----------------------|---------|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | _ | | | | Type | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | - 1 | | Re- | |
| Craun | | | ID | Fadaral | | | Names of Parent, Subsidiaries | | | Directly Controlled by | | Provide | Liltimata Cantrallina | | |
| Group | Outside Name | Company | | Federal RSSD | Olly | (U.S. or | Or Affiliates | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | * |
| Code | Group Name | Code | Number | R55D | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | |
| 0000 | | | 26-4142796 | | | | D : 14 1: 10 110 E :1 E 1 | DE | NIA | Massachusetts Mutual Life Insurance | | 64.400 | 188 10 | | |
| 0000 | | | . 26-4142796 . 26-4142796 | | | | Baring International Small Cap Equity Fund Baring International Small Cap Equity Fund | DE | NIA | Company | Ownership/Influence | | MMLIC | | |
| 0000 | | | 98-0536233 | | | | Benton Street Partners I, L.P. | CYM | NIA | Baring Asset Management Limited MassMutual Capital Partners LLC | Management | 99.100 | MMLIC | | |
| 0000 | | | 98-0536233 | | | | Benton Street Partners I, L.P. | CYM | NIA | Barings LLC | Management | 99.100 | MMLIC | | |
| 0000 | | | 98-0536233 | | | | Benton Street Partners I, L.P. | CYM | NIA | C.M. Life Insurance Company | Ownership | 0.100 | MMLIC | | |
| | | | . 30-0330233 | | | | Denton Street Farthers 1, L.I. | IWL | NI A | Massachusetts Mutual Life Insurance | owner strip | 100 | . MMLTO | | |
| 0000 | | | 98-0536233 | | | | Benton Street Partners I. L.P. | CYM | NIA | Company | Ownership | 0.400 | MMLIC | | |
| | | | 00 0000200 | | | | bonton otroot rai thoro 1, E.i . | | | Massachusetts Mutual Life Insurance | omior on p. | | | | |
| 0000 | | | 98-0536199 | | | | Benton Street Partners II. L.P. | CYM | NIA | Company | Ownership/Influence | 28,600 | MMLIC | | 3 |
| 0000 | | | 98-0536199 | | | | Benton Street Partners II, L.P. | CYM | NIA | MassMutual Capital Partners LLC | Ownership | 10.400 | MMLIC | | |
| 0000 | | | 98-0536199 | | | | Benton Street Partners II, L.P. | CYM | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | | | | Braemar Energy Ventures I, L.P. | DE | NI A | Company | Ownership/Influence | 92.500 | MMLIC | | |
| 0000 | | | | | | | Braemar Energy Ventures I, L.P. | DE | NI A | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 06-1614196 | | | | Cambridge Hotel, LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 04-1590850 | | | | Cheyenne Mountain Resort LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | | | | | Barings European Core Property Fund SCSCp | LUX | NI A | MassMutual Holding LLC | Ownership/Influence | 81.700 | MMLIC | | |
| 0000 | | | | | | | Barings European Core Property Fund SCSCp | LUX | NI A | C.M. Life Insurance Company | Ownership | 5.200 | MMLIC | | |
| 0000 | | | | | | | Barings European Core Property Fund SCSCp | LUX | NI A | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| 0000 | | | 27-1701622 | | 0001481752 | | Cornerstone Core Mortgage Venture I LP | DE | NI A | MassMutual Holding LLC | Ownership/Influence | 50.000 | MMLIC | | |
| 0000 | | | 27-1701622 | | 0001481752 | | Cornerstone Core Mortgage Venture I LP | DE | NI A | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | l | | |
| 0000 | | | 45-3751572 | | 0001534877 | | Cornerstone Enhanced Mortgage Fund I LP | DE | NI A | Company | Ownership/Influence | 15.600 | MMLIC | | |
| 0000 | | | 45-3751572 | | 0001534877 | | Cornerstone Enhanced Mortgage Fund I LP | DE | NI A | Barings Real Estate Advisers LLC Massachusetts Mutual Life Insurance | Management | | MMLIC | | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | NI A | | Ownership/Influence | 92.300 | MMLIC | | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | NIA | Company | Ownership | 7.600 | MMLIC | | |
| 0000 | | | 20-8730751 | | | | Cornerstone Global Real Estate LP | DE | NIA | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| 0000 | | | . 20-0/30/31 | | | | Cornerstone Grobal hear Estate Lr | UE | NIA | Massachusetts Mutual Life Insurance | Inanagement | | MMLIC | | |
| 0000 | | | 36-4770946 | | 0001590049 | | Cornerstone High Yield Venture LP | DE | NI A | Company | Ownership/Influence | 50.000 | MMLIC | | |
| 0000 | | | 36-4770946 | | 0001590049 | | Cornerstone High Yield Venture LP | DE | NIA | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| 0000 | | | 20-5578089 | | 0001000010 | | Barings Core Property Fund LP | DE | NI A | MassMutual Holding LLC | Ownership/Influence | 10.300 | MMLIC | | |
| 0000 | | | 20-5578089 | | | | Barings Core Property Fund LP | DE | NIA | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| | | | 20 0070000 | | | | Dan mgo done mopor ty mana in | | | Massachusetts Mutual Life Insurance | - India a gonori C | | | | |
| 0000 | | l | 27-0547156 | . | 1 | l | Cornerstone Real Estate Fund VIII LP | DE | NI A | Company | Ownership/Influence | 15 . 100 | MMLIC | | 1 |
| 0000 | | | 27-0547156 | | | | Cornerstone Real Estate Fund VIII LP | DE | NI A. | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | · · · · · · · · · · · · · · · · · · · | | | | |
| 0000 | | | 46-5432619 | | | | Cornerstone Real Estate Fund X LP | DE | NI A | Company | Ownership/Influence | 25.400 | MMLIC | | |
| 0000 | | | 46-5432619 | _ | | | Cornerstone Real Estate Fund X LP | DE | NI A | C.M. Life Insurance Company | Ownership | 2.800 | MMLIC | | |
| 0000 | | | 46-5432619 | | | | Cornerstone Real Estate Fund X LP | DE | NI A | Barings Real Estate Advisers LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-5437441 | | | | Barings/LAZ Parking Fund LP | DE | NIA | Company | Ownership/Influence | 100.000 | MMLIC | | |
| 0000 | | | 46-5437441 | - | | | Barings/LAZ Parking Fund LP | DE | | Barings Real Estate Advisers LLC | Management | | MMLIC | | l |
| 0000 | | | | 3981641 | | | Duchess VI CLO B.V. | GBR | NI A | Barings LLC | _ Influence | | MMLIC | | |
| 0000 | | | | 4007502 | | | Duchess VII CLO B.V. | GBR | NI A | Barings LLC | . Influence | | MMLIC | | |
| 1 | | | | | I | | | | | Massachusetts Mutual Life Insurance | 1. | | | | |
| 0000 | | | . 20-3887968 | | | | E-Wise Land Venture LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | 1 | |
| 0000 | | | . 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NI A | Company | Ownership/Influence | 62.500 | MMLIC | | |
| 0000 | | | 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NI A | C.M. Life Insurance Company | Ownership | 7.700 | . MMLIC | | |
| 0000 | | | 80-0691253 | | 0001517196 | | Gateway Mezzanine Partners I, L.P. | DE | NI A | Barings LLC | . Management | | MMLIC | | |

| | | | | FA | | A - DE I A | L OF INSURANC | J⊑ I | JOLL | ING COMPANT | SISIEM | | | | |
|---------------|------------|---------|--------------|---------|------------|--------------------|--|-------------------------------------|--------------|--|---------------------|----------|-----------------------|---------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | | | | | Type | If | | | |
| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | |
| Group Code | Group Name | Company | | RSSD | CIIZ | International) | Or Affiliates | | | (Name of Entity/Person) | Other) | | Entity(ies)/Person(s) | (Y/N) | * |
| Code | Group Name | Code | Number | หออบ | CIK | international) | Or Animates | tion | Entity | Massachusetts Mutual Life Insurance | Other) | tage | Entity(les)/Person(s) | (Y/N) | |
| 0000 | | | 90-0991195 | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | Company | Ownership/Influence | 34.900 | MMLIC | | |
| 0000 | | | 90-0991195 | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | C.M. Life Insurance Company | Ownership | 5.200 | MMLIC | | |
| 0000 | | | 90-0991195 | | 0001597511 | | Gateway Mezzanine Partners II LP | DE | NIA | Barings LLC | Management | 3.200 | MMLIC | | |
| 0000 | | | . 30-0331133 | | 0001337311 | | dateway wezzaittie raittiers ii Li | UL | | Massachusetts Mutual Life Insurance | - management | | I MMLTO | | |
| 0000 | | | 37-1708623 | | 0001565779 | | Great Lakes III, L.P | DE | NI A | Company | Ownership/Influence | 35.700 | MMLIC | | |
| 0000 | | - | 37-1708623 | | 0001565779 | | Great Lakes III, L.P. | DE | NIA | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-3887968 | | | | Kazwell Realty Partners LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | • | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-4255307 | | | | Marco Hotel LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-3000420 | | | | MM Debt Participations LLC | DE | NI A | Company | Ownership/Influence | 100.000 | MMLIC | | |
| 0000 | | | 81-3000420 | | | | MM Debt Participations LLC | DE | NI A | Barings LLC | . Management | | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 26-3799762 | | | | MML O'Hare Hotel LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-3887968 | | | | Oakley Grove Development LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-3887968 | | | | Old Pasco Properties LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 75 0004004 | | | | D 4 4 1 4 110 | DE | | Massachusetts Mutual Life Insurance | | 400.000 | 188 10 | | |
| 0000 | | | 75–2901061 | | | | Reston Arboretum LLC | DE | NIA | Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 30-0713071 | | | | Riva Portland LLC | DE | NIA | Massachusetts Mutual Life Insurance Company | Ownership | 100.000 | MMLIC | | |
| 0000 | | | 30-0713071 | | | | Rockall CLO B.V. | GBR | NIA | Barings LLC | Influence | 100.000 | MMLIC | | |
| 0000 | | | | | | | NOCKATT OLU B.V. | nubn | NI A | Massachusetts Mutual Life Insurance | . IIII Tuelice | | . MMLTC | | |
| 0000 | | | 54-2055778 | | | | Rockville Town Center LLC | VA | NIA | Company | Ownership | 100.000 | MMLIC | | |
| | | - | . 04 2000110 | | | | TIOCKVITTO TOWN OCHTOL ELO | • • • • • • • • • • • • • • • • • • | | Massachusetts Mutual Life Insurance | Owner Sirip. | | I IIIIL I O | | |
| 0000 | | | 46-5491311 | | | | Seattle 1415 Hotel Owner LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | - | | | | | Court of the field of the East | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 04-1590850 | | | | Sedona TFMP Land LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-8856877 | | 0001409910 | | Somerset Special Opportunities Fund L.P | DE | NI A | Company | Ownership/Influence | 46.600 | MMLIC | | |
| 0000 | | | 20-8856877 | | 0001409910 | | Somerset Special Opportunities Fund L.P. | DE | NI A | C.M. Life Insurance Company | Ownership | 2.300 | MMLIC | | |
| 0000 | | | 20-8856877 | | 0001409910 | | Somerset Special Opportunities Fund L.P | DE | NI A | Barings LLC | . Management | <u>-</u> | MMLIC | | |
| | | 1 | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | . 04-1590850 | | | | South Myrtle Monrovia MM LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| 1 | | I | | | | | | | l | Massachusetts Mutual Life Insurance | I | | l | | |
| 0000 | | | 20-3887968 | | | | South Pasco Properties LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | · |
| 0000 | | I | 00 0000040 | | 0004045076 | | T 0 0 11 1 D 1 11 1 2 | DE | | Massachusetts Mutual Life Insurance | | 00.400 | 188.10 | | |
| 0000 | | | 30-0336246 | | 0001345379 | | Tower Square Capital Partners II, L.P. | DE | NIA | Company | Ownership/Influence | 28.100 | MMLIC | | |
| 0000 | | - | 30-0336246 | | 0001345379 | | Tower Square Capital Partners II, L.P | DE | NI A NI A | C.M. Life Insurance Company | Ownership | 4.500 | MMLIC | | |
| 0000 | | - | 30-0330240 | | 0001040379 | | Tower Square Capital Partners II, L.P. | UE | NIA | Massachusetts Mutual Life Insurance | _ management | | MINILIU | | |
| 0000 | | 1 | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P | DE | NIA | Company | Ownership/Influence | 85.000 | MMLIC | | |
| 0000 | | - | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P | DE | NIA | C.M. Life Insurance Company | Ownership | 15.000 | MMLIC | | |
| 0000 | | | 32-0160190 | | | | Tower Square Capital Partners II-A, L.P | DE | NIA | Barings LLC | Management | | MMLIC | | 1 |
| 0000 | | | 41-2280127 | | 0001447547 | | Tower Square Capital Partners III, L.P. | DE | NIA | Barings LLC | Management | | MMLIC | | 1 |
| | | 1 | 2230127 | | | | oquaro oupriur rarinoro irr, E.I. | | | Massachusetts Mutual Life Insurance | - managomori t | | | | |
| 0000 | | .1 | 41-2280127 | l | 0001447547 | | Tower Square Capital Partners III, L.P | DE | NI A | Company | Ownership/Influence | 6.000 | MMLIC | [| 1 |
| 0000 | | | 41-2280127 | | 0001447547 | | Tower Square Capital Partners III, L.P. | DE | NIA | MassMutual Holding LLC | Ownership/Influence | 17.000 | MMLIC | | |
| | | | | | | | , | | | Massachusetts Mutual Life Insurance | , , | | | | |
| 0000 | | . | 41-2280129 | | 0001447548 | | Tower Square Capital Partners IIIA, L.P. | DE | NIA | Company | Ownership/Influence | 96.400 | MMLIC | | ļl |
| 0000 | | . | 41-2280129 | | 0001447548 | | Tower Square Capital Partners IIIA, L.P. | DE | NI A | Barings LLC | Management | | MMLIC | | . |
| | | | | | | | | | | | | | | | |

| Part | | | | | FF | | A - DE I AI | L OF INSURANC | <i>,</i> 🗀 I | IOLL | TING COMPAIN | SISILIVI | | | | |
|--|------|------------|------|--------------|------|----------------|----------------|--|--------------|--------|-------------------------------------|-----------------------|---------------|-----------------------|-------|----------|
| State Stat | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | Type of Control | If Control | 14 | | 16 |
| Part | | | | | | | | | | D 1 11 | | | _ | | | |
| Process | | | | | | | | | | | | | | | | |
| Property | | | NAIG | | | | | N. C | | | | | | | | |
| Code | | | | I.D. | l = | | | | | | D: 11 O . 11 . 11 | | | 1.111. | | |
| March Marc | | O No | | | | Olle | (U.S. or | | | | | | | | | |
| Control Cont | Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | | Otner) | tage | Entity(les)/Person(s) | (Y/N) | |
| | 0000 | | | 00 0000007 | | 0001500707 | | Tawar Cause Conital Dantage IV A I D | DE | NII A | | O-marchi - /Influence | 0.000 | MAIL LC | | |
| 1 | | | | | | | | | | | | | | | | 1 |
| | | | | . 00-0320307 | | 0001330727 | | Tower Square Capital Faithers IV-A, L.I. | UL | | | management | | . mmL10 | | |
| 0.00 | 0000 | | | 04-3722906 | | 0001228752 | | Tower Square Capital Partners I P | DF | NIA | | Ownership/Influence | 41 100 | MML IC | | |
| March Marc | | | | | | | | | | | | | | | | |
| | 0000 | | | | | 0001228752 | | | | NI A | | Management | | MMLIC | | |
| Second Company Compa | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| March Marc | 0000 | | | 04-1590850 | | | | | DE | NIA | Company | Ownership | 100.000 | MMLIC | | |
| Series S | | | | | | | | Barings Emerging Markets Debt Blended Total | | | | | | | | |
| March Marc | 0000 | | | | | | | | IRL | NI A | Barings LLC | Management | | MMLIC | | |
| Sering English Parket Soverey Both Faul Sering English Parket Soverey Both Faul Sering LLC Sering English Parket Soverey Both Faul Sering LLC Sering English Parket Soverey Both Faul Sering LLC Sering English Investment Faul Sering LLC | | | | | | | | | | | | l | | | | |
| 100 | 0000 | | - | | | | | | IRL | NI A | Barings LLC | Management | | - MMLIC | | · |
| December | 0000 | | | | | | | Barings Emerging Markets Sovereign Debt Fund | IDI | NII A | Di 110 | N | | MW 10 | | |
| | | | | | | | | Pahan Canital Floating Data Income Fund | I KL | NI A | Barings LLC | management | | MMLIC | | 1 |
| Beach Capital Land Strategian Master Found Security States Found Security States Security Stat | 0000 | | | 27 2220020 | | 0001521404 | | | ne ne | NI A | MaceMutual Halding LLC | Ownership | 0.000 | MM IC | | |
| Agrings Global Investment Grade Corporate Fig. 10 | | | | . 21-3330630 | | . 000 132 1404 | | | UE | NI // | wasswutuar norumg LLC | Owner Sirr p | 000.ע | | | 1 |
| Serion S | 0000 | | | | | | | Danson Capital Loan Strategies master rund Li | CVM | NΙΔ | Rarings IIC | Management | | MML IC | | |
| Pie Find | | | | | | | | Barings Global Investment Grade Corporate | J I W | | Dai mgs LLO | management | | minE10 | | 1 |
| Sarring Energing Infarcts Data Blanced Total Roturn Fund Sarring Energing Infarcts Data Discrept Data Sarring ELC Sarrin | 0000 | | | | | | | | IRL | NIA | Barings LLC | Management | | MMLIC | | |
| | | | | | | | | | | | | | | | | |
| 1000 147-377453 Find | 0000 | | | 47-3758432 | | | | Return Fund | MA | NI A | Barings LLC | Management | | MMLIC | | |
| March Marc | | | | | | | | Barings Emerging Markets Local Currency Debt | | | | | | | | |
| D000 | | | | | | | | | | | | | | | | |
| DOOD | | | | . 47-3790192 | | | | Barings Global High Yield Fund | | | | | | | | |
| D000 | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Description | | | | . 47-3801860 | | | | Barings U.S. High Yield Fund | MA | | | | · | | | 4 |
| 1.000 | | | | | | | | Gateway Mezzanine Partners I Trust | AUS | NI A | Manage LLU | management | | MMLIC | | |
| Oreal Lakes II LC DE | 0000 | | | 71_1019134 | | | | Great Lakes II II C | DE | NIA | | Ownership | 11 200 | MM IC | | |
| Description | | | | | | | | | | | | | | | | |
| | | | | | | | | a. ca. Lanco II LLO | | | | | | | | |
| | 0000 | | | 56-2505390 | | | | Great Lakes LLC | DE | NI A | | Ownership | 4.400 | MMLIC | | <u> </u> |
| | | | | | | | | | DE | NI A | | | | MMLIC | | |
| Description | | | | | | | | Intermodal Holdings II LLC | | | | | | | | |
| Massachusetts Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Massachusetts Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mutual Life Insurance Mu | | | | | | | | Somerset Special Opportunities Master Fund | | | | | | | | |
| 0000 04-1590850 Wood Creek Venture Fund LLC DE NIA Company Ownership 40.000 MML IC | 0000 | | | | | | | LP | CYM | NI A | | Management | | MMLIC | | |
| DOOD | | | | | | | | | | | | | | | |] |
| D000 | 0000 | | | . 04–1590850 | | | | Wood Creek Venture Fund LLC | DE | NI A | | Ownership | 40.000 | MMLIC | | · |
| D000 | 0000 | | | 00 0540000 | | | | 40 40 11 4 5511 04 4 5 1 4 5 1 1 1 1 1 1 1 1 1 | DE | | | l | 00.000 | IIIII 10 | | |
| D000 | | | | | | | | | | | | | | | | · |
| 0000 36-4823011 50 Liberty LLC DE NIA Company Ownership 46.100 MML IC Ownership 4.600 0000 | | | | | | | 12-18 West 55th Street Predevelopment, LLC | UE | NI A | | _ Uwnership | 008 | - MMLIC | | · |
| .0000 | 0000 | | | 36_4923011 | | | | 50 Liberty IIC | DE | NII A | | Ownership | 46 100 | MML IC | |] |
| 0000 | | | | | | | | | | | | | | | | |
| .0000 80-0948028 One Harbor Shore LLC DE NIA Company Ownership 32.300 MMLIC .0000 80-0948028 One Harbor Shore LLC DE NIA C.M. Life Insurance Company Ownership 3.200 MMLIC .000 81-4382111 Budapester Strasse LLC DE NIA Company Ownership 100.000 MMLIC | | | | | | | | OF EIROT CJ LEO | | | | - O | т.оо | ,LIV | | |
| .0000 | 0000 | | | 80-0948028 | l | | | One Harbor Shore LLC | DE | NIA | | Ownership | 32.300 | MMLIC | |] |
| | | | | | | | | | | | | | | | | |
| 0000 B1-4382111 Budapester Strasse LLC DE NIA Company Ownership 100.000 MMLIC | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| | 0000 | | | 81-4382111 | | | | Budapester Strasse LLC | DE | NI A | | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | | | | | | | |
| | 0000 | | | . 04-1590850 | | | | CHC/RFP VI Core LLC | DE | NIA | Company | Ownership | 100.000 | _ MMLIC | | |

| | | | | FAI | n ı 14 | A - DE I AI | L OF INSURANC | , L I | IOLD | HING COMPAIN I | SISIEIVI | | | | |
|-------|------------|---------|------------|-----------|---------------|--------------------|---|---------|-----------|-------------------------------------|-------------------|------------------|-----------------------|---------|----|
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| | | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | | Name of Committee | | | Deletien | | | | | | |
| | | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | ' |
| Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| | • | | | | | • | | | | Massachusetts Mutual Life Insurance | • | | | | |
| 0000 | | | 95-4207717 | | | | Cornerstone California Mortgage Fund LLC | CA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | • | | | | |
| 0000 | | | 95-4207717 | | | | Cornerstone California Mortgage Fund II LLC . | CA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 56-2630592 | | | | Cornerstone Fort Pierce Development LLC | DE | NI A | Company | Ownership | 84.400 | MMLIC | | |
| 0000 | | | 56-2630592 | | | | Cornerstone Fort Pierce Development LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 5.600 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 45-2632610 | | | | Cornerstone Permanent Mortgage Fund | MA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | I | l | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 61-1750537 | | | | Cornerstone Permanent Mortgage Fund II | MA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | 1 | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 35-2531693 | | | | Cornerstone Permanent Mortgage Fund III | MA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | • | | | | |
| 0000 | | | 61-1793735 | | | | Cornerstone Permanent Mortgage Fund IV | MA | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | • | | | | |
| 0000 | | | 46-5001122 | | | | CREA 330 Third LLC | DE | NI A | Company | Ownership | 0.900 | | | |
| 0000 | | | 46-5001122 | | | | CREA 330 Third LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 0.100 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-4367364 | | | | CREA FMF Nashville LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 26-2399532 | | | | CREA/LYON West Gateway, LLC | DE | NI A | Company | Ownership | 54.000 | MMLIC | | |
| 0000 | | | 26-2399532 | | | | CREA/LYON West Gateway, LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 6.000 | MMLIC | | |
| 0000 | | | 81-0890084 | | | | CREA Madison Member LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 100.000 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-0348173 | | | | CREA/PPC Venture LLC | DE | NIA | Company | Ownership | 93.400 | MMLIC | | |
| 0000 | | | 20-0348173 | | | | CREA/PPC Venture LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 6.600 | _ MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life İnsurance | | | | | |
| 0000 | | | 26-1611591 | . 3956836 | | | Fallon Cornerstone One MPD LLC | DE | NI A | Company | Ownership | 67 . 100 | MMLIC | | |
| 0000 | | | 26-1611591 | 3956836 | | | Fallon Cornerstone One MPD LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 6.600 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-3347091 | | | | Fan Pier Development LLC | DE | NI A | Company | Ownership | 58.500 | MMLIC | | |
| 0000 | | | 20-3347091 | | | | Fan Pier Development LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 5.800 | MMLIC | | |
| | | 1 | | 1 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-3880526 | | | | Farringdon London Holdings LLC | DE | NI A | Company | Ownership | 94.500 | MMLIC | | |
| 0000 | | | 46-3880526 | -[] | | | Farringdon London Holdings LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 5.500 | MMLIC | | |
| | | I | l | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | | . [] | | | Infinity SCD Ltd | GBR | NI A | Company | Ownership | 4.200 | MMLIC | | |
| | | I | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 20-4819358 | - | | | Johnston Groves LLC | DE | NI A | Company | Ownership | 57.200 | MMLIC | | |
| | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-5360103 | | | | Landmark Manchester Holdings LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | I | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 81-2871333 | | | | MM Chatham Office LLC | DE | NI A | Company | Ownership | 83.400 | MMLIC | | |
| | | I | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 81-2871333 | - | | | MM Chatham Office LLC | DE | NI A | Company | Ownership | 16.600 | MMLIC | | |
| | | I | l | 1 | | | Salomon Brothers Commercial Mortgage Trust | | | | | | | | 1 |
| 0000 | | | | . [] | | | 2001-MM | DE | NI A | Barings Real Estate Advisers LLC | Influence | · - | MMLIC | | |
| | | I | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | 1 |
| 0000 | | | 27-2977720 | - | | | Sawgrass Village Shopping Center LLC | DE | NI A | Company | Ownership | 84.200 | MMLIC | | |
| 0000 | | | 27-2977720 | - | | | Sawgrass Village Shopping Center LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 15.800 | MMLIC | | |
| l | | 1 | | 1 | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | | . [] | | | Ten Fan Pier Boulevard LLC | DE | NI A | Company | Ownership | 91.000 | MMLIC | | |
| 0000 | | | l | | | | Ten Fan Pier Boulevard LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 9.000 | MMLIC | | |

| | | | | ranı i | A - DETA | IL OF INSURANC | /C I | IOLL | ING COMPAIN | SISIEM | | | | |
|-------|------------|---------|------------|------------|--------------------|--|---------|-----------|-------------------------------------|-------------------|---------|-----------------------|---------|--|
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| | | _ | | | | | - | _ | | Type | lf . | | | |
| | | | | | | | | | | of Control | Control | | | |
| | | | | | | | | | | (Ownership, | is | | ls an | |
| | | | | | N (0 ''' | | | D 1 11 | | | | | | |
| | | | | | Name of Securities | | | Relation- | | Board, | Owner- | | SCA | |
| | | | | | Exchange | | Domi- | ship | | Management, | ship | | Filing | |
| | | NAIC | | | if Publicly Traded | Names of | ciliary | to | | Attorney-in-Fact, | Provide | | Re- | |
| Group | | Company | ID | Federal | (U.S. or | Parent, Subsidiaries | Loca- | Reporting | Directly Controlled by | Influence, | Percen- | Ultimate Controlling | quired? | · |
| Code | Group Name | Code | Number | RSSD CIK | International) | Or Affiliates | tion | Entity | (Name of Entity/Person) | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| | | | | | , | | | | Massachusetts Mutual Life Insurance | | | 3(/ | | |
| 0000 | | | 81-5273574 | | | Three PW Office Holding LLC | DE | NIA | Company | Ownership | 95.000 | MMLIC | | |
| | | | 0. 02.00 | | | The second secon | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 35-2484550 | | | Twenty Two Liberty LLC | MA | NΙΔ | Company | Ownership | 59.200 | MMLIC | | |
| 0000 | | | 35-2484550 | | | Twenty Two Liberty LLC | MA | NIA | C.M. Life Insurance Company | Ownership | 5.900 | MMLIC | | |
| | | | 00 2101000 | | | Thorey the Elberty LEe | | | Massachusetts Mutual Life Insurance | Owner drift | | - IIIIE 10 | | |
| 0000 | | | 45-4606547 | | | UK LIW Manager LLC | DE | NIA | Company | Ownership | 1.000 | MMLIC | | |
| | | | 10 1000011 | | | OK ETH Manager EEO | | | Massachusetts Mutual Life Insurance | Owner strip | | | | |
| 0000 | | | 45-4606547 | | | UK LIW Member LLC | DE | NIA | Company | Ownership | 99.000 | MMLIC | | |
| | | | 10 1000011 | | | GK ETH WEINDET EEG | | | Massachusetts Mutual Life Insurance | Owner strip | | | | |
| 0000 | | | 45-5401109 | | | Washington Gateway Apartments Venture LLC | DE | NIA | Company | Ownership | 92.000 | MMLIC | | |
| 0000 | | | 45-5401109 | | | Washington Gateway Apartments Venture LLC | DE | NIA | C.M. Life Insurance Company | Ownership. | 4.800 | MMLIC | | |
| 0000 | | | 45-5401109 | | | washington Galeway Apartments Venture LLC | DE | NIA | | . Owner snip | 4.000 | MMLIC | | |
| 0000 | | | 00 0070405 | | | Waterford Development Association | DE | ALL A | Massachusetts Mutual Life Insurance | 0h: | 00 000 | MMLIC | | |
| 0000 | | | 20-2970495 | | | Waterford Development Associates | UE | NI A | Company | Ownership | 90.000 | MMLIC | | |
| 0000 | | | 47 4000400 | | | W + 1 1 1 11 11 11 11 11 11 11 11 11 11 1 | DE | A11.A | Massachusetts Mutual Life Insurance | 0 1: | 400 000 | 188.10 | | |
| 0000 | | | 47-1993493 | | | Waterloo London Holdings LLC | DE | NI A | Company | Ownership | 100.000 | MMLIC | | |
| | | | 40.040000 | | | | 25 | | Massachusetts Mutual Life Insurance | | 77 400 | | | |
| 0000 | | | 46-3122029 | | | WeHo Domain LLC | DE | NI A | Company | Ownership | 77.400 | MMLIC | | |
| 0000 | | | 46-3122029 | | | WeHo Domain LLC | DE | NI A | C.M. Life Insurance Company | Ownership | 12.600 | MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 81-1552222 | | | Willowwood Lakeside Master LLC | DE | NI A | Company | Ownership | 50.000 | MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 20-5481477 | | | Ygnatio Valley Funding | DE | NI A | Company | Ownership | 90.000 | MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 45-3168892 | | 0Q | MassMutual Barings Dynamic Allocation Fund | MA | NI A | Company | Ownership | 0.000 | . MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 51-0529328 | | 0Q | MassMutual Premier Main Street Fund | MA | NI A | Company | Ownership | 0.000 | . MMLIC | | |
| | | | | | | MassMutual Premier Strategic Emerging Markets | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 26-3229251 | | 0Q | Fund | MA | NI A | Company | Ownership | 12.500 | MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 04-3277550 | | 0Q | MassMutual Premier Value Fund | MA | NI A | Company | Ownership | 96.800 | MMLIC | | |
| | | | | | | MassMutual Select Diversified International | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 14-1980900 | | 0Q | Fund | MA | NI A | Company | Ownership | 29.700 | MMLIC | | |
| 1 | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 01-0821120 | | 00 | MassMutual Select Diversified Value Fund | MA | NI A | Company | Ownership | 12.000 | | | |
| | | | Ì | | | | | | Massachusetts Mutual Life Insurance | 1 | | | | |
| 0000 | | | 04-3512593 | | 00 | MassMutual Select Fundamental Growth Fund | MA | NI A | Company | Ownership | 0.000 | . MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 04-3513019 | 0000916053 | 00 | MassMutual Select Large Cap Value Fund | MA | NI A | Company | Ownership | 18.200 | | | |
| 1 | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 42-1710935 | | 0Q | MassMutual Select Mid-Cap Value Fund | MA | NI A | Company | Ownership | 74.600 | MMLIC | | |
| | | | Ì | | | MassMutual Select Small Capital Value Equity | | | Massachusetts Mutual Life Insurance | 1 | | | | |
| 0000 | | | 02-0769954 | | 0Q | Fund | MA | NI A | Company | Ownership | 15.700 | MMLIC | | |
| 1 1 | | | 1 | | | | | | Massachusetts Mutual Life Insurance | 1 | | | | |
| 0000 | | | 04-3584140 | 0000916053 | 0Q | MassMutual Select Small Company Value Fund | MA | NI A | Company | Ownership | 18.600 | MMLIC | | |
| 1 1 | | | 1 | | | . , | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 46-4257056 | 0000067160 | | MML Series International Equity Fund | MA | NI A | Company | Ownership | 8.400 | MMLIC | | <u> </u> |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 47-3517233 | 0001317146 | | MML Series II Asset Momentum Fund | MA | NIA | Company | Ownership | 95.500 | MMLIC | _ [| |
| | | | | | | | | | Massachusetts Mutual Life Insurance | 1 | | | | |
| 0000 | | | 47-3529636 | 0001317146 | | MML Series II Dynamic Bond Fund | MA | NIA | Company | Ownership | 3.200 | MMLIC | | |
| | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | | | 47-3544629 | 0001317146 | | MML Series II Equity Rotation Fund | MA | NIA | Company | Ownership | 98.100 | MMLIC | | |
| | | | 00 17020 | 140 | | Joi 100 11 Equity Hotation Luna | m/\ | | vompan) | . | | | | |

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| Name of Securities Name of | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
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| NAC Company D Federal Company D Company D Company D Code Number Code | | | | | | | | | | | | of Control | Control | | | |
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| Code Company Code Company Code Company Code Company Code Co | | | | | | | Name of Socurities | | | Polation | | | | | | |
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| Group Code Company D Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Number Code Co | | | NIAIO | | | | | Name of | | | | | | | 9 | |
| Code Group Name Code Number RSSD CIK International Or Affiliates tion Entity (Name of Entity/Person) Cither) tage Entity(ies)/Person(s) (Y/N) ** | | | | | 1 | | | | | | 5: " 6 : " 11 | | | | | |
| | | | | | | | | | | | | | | | | |
| DODD | Code | Group Name | Code | Number | RSSD | CIK | International) | Or Affiliates | tion | Entity | | Other) | tage | Entity(ies)/Person(s) | (Y/N) | * |
| Description | | | | | | | | | | | | | | | | |
| | 0000 | | | . 47-3559064 | | 0001317146 | | MML Series II Special Situations Fund | MA | NI A | Company | Ownership | 98.500 | . MMLIC | | |
| | | | | | | | | | | | | | | | | |
| | 0000 | | | . 46-3289207 | | 0000916053 | | MassMutual RetireSMART 2055 Fund | MA | | | Ownership | 25.600 | . MMLIC | | |
| 0,000 | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| DOOD 45-1618155 DOOD 16053 MassMutual RetireSMAT Conservative Fund MA NIA Company Doneship. D. 0.000 MALI C | 0000 | | | . 47-5326235 | | 0000916053 | | MassMutual RetireSMART 2060 Fund | MA | NI A | | Ownership | 96.700 | . MMLIC | | |
| | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| Description | 0000 | | | . 45-1618155 | | 0000916053 | | MassMutual RetireSMART Conservative Fund | MA | | | Ownership | 0.000 | | | |
| MassMutual RetireSMATI Moderate Fund | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| Massilutual RetireSMAT Moderate Fund | 0000 | | | . 45-1618222 | | 0000916053 | | MassMutual RetireSMART Growth Fund | MA | NI A | | Ownership | 5.700 | | | |
| Massachusetts Mutual Life Insurance | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 | 0000 | | | . 45-1618262 | | 0000916053 | | MassMutual RetireSMART Moderate Fund | MA | | | Ownership | 0.000 | MMLIC | | |
| 0000 0.000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000 0.000000 0.00000 0.00000 0.00000 | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| 0000 0000 0000 000000 | 0000 | | | . 45-1618046 | | 0000916053 | | MassMutual RetireSMART Moderate Growth Fund | MA | NI A | | Ownership | 0.000 | MMLIC | | |
| Oppenheimer Developing Markets Equity UCITSIRLNIA OppenheimerFunds, Inc | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| Oppenheimer Developing Markets Equity UCITS J.F.L. NIA Company Ownership 31.600 MMLIC | 0000 | | | . 93-6305075 | | | | Oppenheimer Developing Markets Fund | DE | | | Ownership | 0.900 | MMLIC | | |
| Oppenheimer Developing Markets Equity UCITS Oppenheimer Funds, Inc. Management MML IC | | | | | | | | | | | Massachusetts Mutual Life Insurance | | | | | |
| Depenheimer Emerging Markets Innovators UCITS Depenheimer Es GRevenue ETF Depenheimer Es GRevenue ETF Depenheimer Global Equity UCITS Depenheimer Funds, Inc. Depenheimer Funds, Inc. Depenheimer Funds, Inc. Depenheimer Global Equity UCITS Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Es Grevenue ETF Depenheimer Global Multi-Asset Income Fund Depenheimer Global Multi-Asset Income Fund Depenheimer Global Multi-Asset Income Fund Depenheimer Global Value Equity UCITS Depenheimer Global Value Equity UCITS Depenheimer Funds, Inc. Depenheimer Global Value Equity UCITS Depenheimer Global Value Equity UCITS Depenheimer Funds, Inc. Depenheimer Global Value Equity UCITS Depenheimer Funds, Inc. Depenheimer Funds, Inc. Depenheimer Global Value Equity UCITS Depenheimer Funds, Inc. Depenheimer Global Value Equity UCITS Depenheimer Funds, Inc. Depenheimer Global Value Equity UCITS Depenheime | | | | | | | | | | | | | 31.600 | L10 | | |
| .0000 | 0000 | | | | | | | | | NI A | OppenheimerFunds, Inc | Management | | MMLIC | | |
| .0000 | | | | | | | | Oppenheimer Emerging Markets Innovators UCI | | | | | | | | |
| Description | | | | | | | | | | NI A | | Management | | | | |
| .0000 | | | | . 81-3492794 | | | | Oppenheimer ESG Revenue ETF | DE | | | Management | | | | |
| 0000 | | | | | | | | | | | | | | | | |
| 0000 47-1714929 Oppenheimer Global Multi-Asset Income Fund DE NIA OppenheimerFunds, Inc. Management Management Management MultiC Oppenheimer Funds, Inc. Management | | | | | | | | | | | | Management | | | | |
| 0000 Oppenheimer Global Value Equity UCITS IRL NIA OppenheimerFunds, Inc. Management MMLIC Oppenheimer International Growth & Income Fund Oppenheimer Macquarie Global Infrastructure Oppenheimer Macquarie Global Infrastructure | 0000 | | | | | | | | | | | Management | | | | |
| Oppenheimer International Growth & Income 0000 | | | | 47-1714929 | | | | Oppenheimer Global Multi-Asset Income Fund | DE | | | Management | . <u> -</u> | | | |
| 0000 B1-3136071 Fund DE NIA OppenheimerFunds, Inc. Management Management MMLIC Oppenheimer Funds and Oppenheimer Funds and Oppenheimer Funds and Oppenheimer Macquarie Global Infrastructure | 0000 | | | | | | | | IRL | NI A | OppenheimerFunds, Inc. | Management | | MMLIC | | |
| Oppenheimer Macquarie Global Infrastructure | | | 1 | | | | | Oppenheimer International Growth & Income | | | | | 1 | | | |
| | 0000 | | | 81-3136071 | . | | | | | NI A | OppenheimerFunds, Inc. | Management | | MMLIC | | |
| | | | 1 | | | | | Oppenheimer Macquarie Global Infrastructure | | | | | 1 | | | |
| | 0000 | | | . 81-1080638 | | | | Fund | DE | NI A | OppenheimerFunds, Inc. | Management | | MMLIC | | |
| | | | 1 | | | | | | | | | | 1 | | | |

| Asterisk | Explanation |
|----------|---|
| 1 | Massachusetts Mutual Life Insurance Company owns .98% of the affiliated debt of Jefferies Finance LLC |
| 2 | Debt investors own 3.6% and includes only Great Lakes III, L.P. |
| 3 | Partnership investors own 99% and include Babson Capital Loan Strategies Fund, L.P. |
| 4 | Debt investors own 8.7% and includes only Babson Capital Loan Strategies Fund, L.P. |
| 5 | Debt investors own 4.3% and includes only Great Lakes III, L.P. |
| 6 | Debt investors own 5.8% and includes only Great Lakes III, L.P. |
| 7 | Debt investors own 2.0% and includes only Great Lakes III, L.P. |
| 8 | Debt investors own 4.3% and includes only 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.

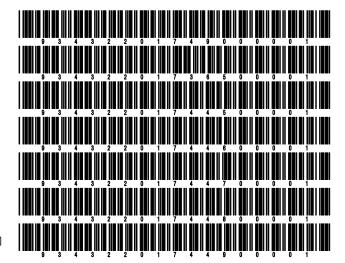
| | | Response |
|----|---|----------|
| | | |
| 1. | Will the Trusteed Surplus Statement be filed with the state of domicile and the NAIC with this statement? | NO |
| 2. | Will the Medicare Part D Coverage Supplement be filed with the state of domicile and the NAIC with this statement? | NO |
| 3. | 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]
- Reasonableness of Assumptions Certification required by Actuarial Guideline XXXV [Document Identifier 445]
- 4. 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]
- 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]



OVERFLOW PAGE FOR WRITE-INS

Additional Write-ins for Liabilities Line 25

| / taaitioii | ai Wille-ins for Elabilities Line 25 | | |
|-------------|---|----------------|-------------|
| | | 1 | 2 |
| | | Current | December 31 |
| | | Statement Date | Prior Year |
| 2504. | Funds awaiting escheat and other miscellaneous | 18,011,158 | 2,550,177 |
| 2597. | Summary of remaining write-ins for Line 25 from overflow page | 18,011,158 | 2,550,177 |

SCHEDULE A - VERIFICATION

Real Estate

| | | 1 | 2 |
|-----|---|--------------|------------------|
| | | | 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 yill va | | |
| 7. | Deduct current year's other than temporary impair ent reconstruction zero | | |
| 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 | 966,906,414 | 985,850,414 |
| 2. | Cost of acquired: | | |
| | 2.1 Actual cost at time of acquisition | 494,801 | 113,485,456 |
| | 2.2 Additional investment made after acquisition | 1,435,421 | 9,840,626 |
| 3. | 2.1 Actual cost at time of acquisition 2.2 Additional investment made after acquisition Capitalized deferred interest and other | 339,083 | 943,848 |
| 4. | Accrual of discount | 63,700 | 163,368 |
| 5. | Unrealized valuation increase (decrease) | | |
| 6. | Total gain (loss) on disposals | 72,320 | (333,041) |
| 7. | Deduct amounts received on disposals | 17,757,083 | 134,699,663 |
| 8. | Deduct amortization of premium and mortgage interest points and commitment fees | 139,609 | 371,826 |
| 9. | Total foreign exchange change in book value/recorded investment excluding accrued interest | 929,945 | (6,645,575) |
| 10. | Deduct current year's other than temporary impairment recognized | | 1,327,193 |
| 11. | Book value/recorded investment excluding accrued interest at end of current period (Lines 1+2+3+4+5+6-7-8+9-10) | 952,344,992 | 966,906,414 |
| 12. | Total valuation allowance | (250,000) | (250,000) |
| 13. | Subtotal (Line 11 plus Line 12) | | |
| 14. | Deduct total nonadmitted amounts | | |
| 15. | Statement value at end of current period (Line 13 minus Line 14) | 952,094,992 | 966,656,414 |

SCHEDULE BA - VERIFICATION

Other Long-Term Invested Assets

| | - | 1 | 2 |
|-----|--|----------------|------------------|
| | | | Prior Year Ended |
| | | Year to Date | December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | 201,480,523 | 234,145,696 |
| 2. | Cost of acquired: | | |
| | 2.1 Actual cost at time of acquisition | 182,670 | 4,827,054 |
| | 2.2 Additional investment made after acquisition | 4,694,395 | 34,110,758 |
| 3. | Capitalized deferred interest and other | | |
| 4. | Accrual of discount | | |
| 5. | Unrealized valuation increase (decrease) | 18, 188, 932 | 9,488,856 |
| 6. | Total gain (loss) on disposals | | (520, 100) |
| 7. | Deduct amounts received on disposals | 38 . 170 . 711 | 80.096.623 |
| 8. | Deduct amortization of premium and depreciation | 2,281 | 9,911 |
| 9. | Total foreign exchange change in book/adjusted carrying value | 115,703 | (465,207) |
| 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) | 186,489,231 | 201,480,523 |
| 12. | Deduct total nonadmitted amounts | 1,438,500 | 1,092,438 |
| 13. | Statement value at end of current period (Line 11 minus Line 12) | 185,050,731 | 200,388,085 |

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 | 4,414,366,679 | 4,470,816,857 |
| 2. | Cost of bonds and stocks acquired | 242,388,320 | 820,379,361 |
| 3. | Accrual of discount | | |
| 4. | Unrealized valuation increase (decrease) | 6,275,675 | 58,754,679 |
| 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 | 369,376 | 6,693,817 |
| 10. | Book/adjusted carrying value at end of current period (Lines 1+2+3+4+5-6-7+8-9) | 4,335,305,224 | 4,414,366,679 |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 4,335,305,224 | 4,414,366,679 |

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

| NAIC Designation | Book/Adjusted Carrying Value Beginning of Current Quarter | Acquisitions During Current Quarter | Dispositions During Current Quarter | Non-Trading Activity During Current Quarter | Book/Adjusted Carrying Value End of First Quarter | Book/Adjusted Carrying Value End of Second Quarter | Book/Adjusted Carrying Value End of Third Quarter | Book/Adjusted Carrying Value December 31 Prior Year |
|-------------------------------------|--|---|---|---|--|---|--|--|
| | | | | | | | | |
| BONDS | | | | | | | | |
| 1. NAIC 1 (a) | | 1,122,563,072 | 1,048,888,459 | (178,655,610) | 1,984,685,293 | | | 2,089,666,290 |
| 2. NAIC 2 (a) | , , , | 1,200,000,187 | 1,150,036,296 | , , , , | 1,835,871,308 | | | 1,622,094,328 |
| 3. NAIC 3 (a) | | 20,764,188 | 38,354,172 | 18,073,917 | 224,750,194 | | | 224,266,261 |
| 4. NAIC 4 (a) | | 106,889,738 | 102,816,854 | 2,537,619 | 197,806,855 | | | 191, 196, 352 |
| 5. NAIC 5 (a) | | 104,853 | 5,864,535 | 4,877,041 | 75,049,843 | | | 75,932,484 |
| 6. NAIC 6 (a) | 23,535,069 | 55,405 | 3,041,325 | (86,618) | 20,462,531 | | | 23,535,069 |
| 7. Total Bonds | 4,226,690,784 | 2,450,377,443 | 2,349,001,641 | 10,559,438 | 4,338,626,024 | | | 4,226,690,784 |
| PREFERRED STOCK | | | | | | | | |
| 8. NAIC 1 | 4,200,000 | | | | 4,200,000 | | | 4,200,000 |
| 9. NAIC 2 | 8,513,029 | 169,555 | | | 8,682,584 | | | 8,513,029 |
| 10. NAIC 3 | 8,300,119 | | | (383,917) | 7,916,202 | | | 8,300,119 |
| 11. NAIC 4 | 1,751,966 | | | 351,870 | 2,103,836 | | | 1,751,966 |
| 12. NAIC 5 | 2,623,367 | | | 10,182 | 2,633,549 | | | 2,623,36 |
| 13. NAIC 6 | 60,565 | | | (3,490) | 57,075 | | | 60,565 |
| 14. Total Preferred Stock | 25,449,046 | 169,555 | | (25,355) | 25,593,246 | | | 25,449,046 |
| 15. Total Bonds and Preferred Stock | 4,252,139,830 | 2,450,546,998 | 2,349,001,641 | 10,534,083 | 4,364,219,270 | | | 4,252,139,830 |

(a) Book/Adjusted Carrying Value column for the end of the current reporting period includes the following amount of short-term and cash equivalent bonds by NAIC designation:

SCHEDULE DA - PART 1

Short-Term Investments

| | 1 Book/Adjusted | 2 | 3 | 4 Interest Collected | 5 Paid for Accrued Interest |
|----------------|--------------------|-----------|-------------|-------------------------|-----------------------------|
| | Carrying Value | Par Value | Actual Cost | Year-to-Date | Year-to-Date |
| 9199999 Totals | 16,162,028 | XXX | 16,158,722 | | |

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 | 17,482,743 | |
| 2. | Cost of short-term investments acquired | | |
| 3. | Accrual of discount | 20,533 | 172,324 |
| 4. | Unrealized valuation increase (decrease) | | |
| 5. | Total gain (loss) on disposals | 7 | 1, 171 |
| 6. | Deduct consideration received on disposals | 17,499,977 | 26,997,524 |
| 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) | 16,162,028 | 17,482,743 |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 16,162,028 | 17,482,743 |

SCHEDULE DB - PART A - VERIFICATION

Options, Caps, Floors, Collars, Swaps and Forwards

| 1. | Book/Adjusted Carrying Value, December 31, prior year (Line 9, prior year) | 7,742,517 |
|-----|---|--------------|
| 2. | Cost Paid/(Consideration Received) on additions | |
| 3. | Unrealized Valuation increase/(decrease) | (16,585,394) |
| 4. | Total gain (loss) on termination recognized | 891,684 |
| 5. | Considerations received/(paid) on terminations | 1,055,259 |
| 6. | Amortization | |
| 7. | Adjustment to the Book/Adjusted Carrying Value of hedged item | |
| 8. | Total foreign exchange change in Book/Adjusted Carrying Value | |
| 9. | Book/Adjusted Carrying Value at End of Current Period (Lines 1+2+3+4-5+6+7+8) | (9,006,452) |
| 10. | Deduct nonadmitted assets | |
| 11. | Statement value at end of current period (Line 9 minus Line 10) | (9,006,452) |
| | | |

| | , | | | | |
|-----|--|-------------------|-------------|------------|-------------|
| | | | | | |
| | SCHEDULE DB - PART | B - VEF | RIFICATIO | N | |
| | Futures Con | | | | |
| 1. | Book/Adjusted carrying value, December 31 of prior year (Line 6, prior year) | | | | |
| 2. | Cumulative cash change (Section 1, Broker Name/Net Cash Deposits Footnote - Cu | mulative Cash Cha | nge column) | | |
| 3.1 | Add: | | | | |
| | Change in variation margin on open contracts - Highly Effective Hedges | | | | |
| | 3.11 Section 1, Column 15, current year to date minus | | | | |
| | 3.12 Section 1, Column 15, prior year | | | | |
| | Change in variation margin on open contracts - All Other | | | | |
| | 3.13 Section 1, Column 18, current year to date minus | 4,775,713 | | | |
| | 3.14 Section 1, Column 18, prior year | (5,999,031) | 10,774,743 | 10,774,743 | |
| 3.2 | Add: | | | | |
| | Change in adjustment to basis of hedged item | | | | |
| | 3.21 Section 1, Column 17, current year to date minus | | | | |
| | 3.22 Section 1, Column 17, prior year | | | | |
| | Change in amount recognized | | | | |
| | 3.23 Section 1, Column 19, current year to date minus | 4,775,713 | | | |
| | 3.24 Section 1, Column 19, prior year | (5,999,031) | 10,774,743 | 10,774,743 | |
| 3.3 | Subtotal (Line 3.1 minus Line 3.2) | | | | |
| 4.1 | Cumulative variation margin on terminated contracts during the year | | (4,527,249) | | |
| 4.2 | Less: | | | | |
| | 4.21 Amount used to adjust basis of hedged item | | | | |
| | 4.22 Amount recognized | 1,471,782 | 1,471,782 | | |
| 4.3 | Subtotal (Line 4.1 minus Line 4.2) | | | | (5,999,031) |
| 5. | Dispositions gains (losses) on contracts terminated in prior year: | | | | |
| | 5.1 Total gain (loss) recognized for terminations in prior year | | | | 5,999,031 |
| | 5.2 Total gain (loss) adjusted into the hedged item(s) for terminations in prior year \ldots | | | | |
| 6. | Book/Adjusted carrying value at end of current period (Lines 1+2+3.3-4.3-5.1-5.2) | | | | |
| 7. | Deduct total nonadmitted amounts | | | | |
| 8. | Statement value at end of current period (Line 6 minus Line 7) | | | | |

Schedule DB - Part C - Section 1 - Replication (Synthetic Asset) Transactions (RSATs) Open **NONE**

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

SCHEDULE DB - VERIFICATION

Verification of Book/Adjusted Carrying Value, Fair Value and Potential Exposure of all Open Derivative Contracts

| | | Book/Adjusted Carrying Valu | Book/Adjusted Carrying Value Check | |
|-----|--|-----------------------------|------------------------------------|--|
| 1. | Part A, Section 1, Column 14. | (9,006,451) | | |
| 2. | Part B, Section 1, Column 15 plus Part B, Section 1 Footnote - Total Ending Cash Balance | | | |
| 3. | Total (Line 1 plus Line 2) | | (9,006,451) | |
| 4. | Part D, Section 1, Column 5 | | | |
| 5. | Part D, Section 1, Column 6 | | | |
| 6. | Total (Line 3 minus Line 4 minus Line 5) | | | |
| | | Fair Value Check | | |
| 7. | Part A, Section 1, Column 16 | | | |
| 8. | Part B, Section 1, Column 13 | | | |
| 9. | Total (Line 7 plus Line 8) | | (9,006,451) | |
| 10. | Part D, Section 1, Column 8 | 460, 194, 761 | | |
| 11. | Part D, Section 1, Column 9 | (469,201,213) | | |
| 12 | Total (Line 9 minus Line 10 minus Line 11) | | | |
| | | Potential Exposure Che | eck | |
| 13. | Part A, Section 1, Column 21 | 205,472,691 | | |
| 14. | Part B, Section 1, Column 20 | 10,606,000 | | |
| 15. | Part D, Section 1, Column 11 | 216,078,691 | | |
| 16. | Total (Line 13 plus Line 14 minus Line 15) | | | |

SCHEDULE E - VERIFICATION

(Cash Equivalents)

| | 1 | 1 | |
|-----|---|---------------|------------------|
| | | 1 | 2 |
| | | | Prior Year Ended |
| | | Year To Date | December 31 |
| 1. | Book/adjusted carrying value, December 31 of prior year | 131,990,044 | 290,288,161 |
| 2. | Cost of cash equivalents acquired | | |
| 3. | Accrual of discount | 589 , 155 | 1,828,052 |
| 4. | Unrealized valuation increase (decrease) | | |
| 5. | Total gain (loss) on disposals | 834 | 5,352 |
| 6. | Deduct consideration received on disposals | 1,999,750,176 | 6,168,813,623 |
| 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) | 325,312,312 | 131,990,044 |
| 11. | Deduct total nonadmitted amounts | | |
| 12. | Statement value at end of current period (Line 10 minus Line 11) | 325,312,312 | 131,990,044 |