

**MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY
AND SUBSIDIARIES**

CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS

As of and for the years ended December 31, 2010 and 2009

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MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATUTORY STATEMENTS OF FINANCIAL POSITION

	December 31,	
	2010	2009
	(In Millions)	
Assets:		
Bonds	\$ 54,740	\$ 50,815
Preferred stocks	322	135
Common stocks - subsidiaries and affiliates	2,903	2,901
Common stocks - unaffiliated	244	252
Mortgage loans	12,166	12,171
Policy loans	9,246	8,771
Real estate	1,149	1,111
Partnerships and limited liability companies	5,606	5,057
Derivatives and other invested assets	2,821	2,654
Cash, cash equivalents and short-term investments	1,590	2,707
Total invested assets	90,787	86,574
Investment income due and accrued	579	720
Deferred income taxes	1,546	1,171
Other than invested assets	905	836
Total assets excluding separate accounts	93,817	89,301
Separate account assets	47,285	43,642
Total assets	\$ 141,102	\$ 132,943
Liabilities and Surplus:		
Policyholders' reserves	\$ 69,492	\$ 67,180
Liabilities for deposit-type contracts	3,606	2,828
Contract claims and other benefits	312	298
Policyholders' dividends	1,230	1,236
General expenses due or accrued	652	721
Federal income taxes	157	54
Asset valuation reserve	1,459	1,154
Securities sold under agreements to repurchase	4,163	3,739
Commercial paper	250	250
Derivative collateral	1,433	1,937
Other liabilities	724	653
Total liabilities excluding separate accounts	83,478	80,050
Separate account liabilities	47,272	43,634
Total liabilities	130,750	123,684
Surplus	10,352	9,259
Total liabilities and surplus	\$ 141,102	\$ 132,943

See notes to condensed consolidated statutory financial statements

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATUTORY STATEMENTS OF INCOME (LOSS)

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Revenue:		
Premium income	\$ 11,617	\$ 13,245
Net investment income	4,748	4,363
Fees and other income	640	666
Total revenue	17,005	18,274
Benefits and expenses:		
Policyholders' benefits	11,020	12,310
Change in policyholders' reserves	2,066	2,133
General insurance expenses	1,393	1,344
Commissions	530	550
State taxes, licenses and fees	142	143
Total benefits and expenses	15,151	16,480
Net gain (loss) from operations before dividends and federal income taxes	1,854	1,794
Dividends to policyholders	1,209	1,212
Net gain (loss) from operations before federal income taxes	645	582
Federal income tax expense (benefit)	(217)	(48)
Net gain (loss) from operations	862	630
Net realized capital gains (losses) after tax and transfers to interest maintenance reserve	(268)	(913)
Net income (loss)	\$ 594	\$ (283)

See notes to condensed consolidated statutory financial statements

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATUTORY STATEMENTS OF CHANGES IN SURPLUS

	Years Ended	
	December 31,	
	2010	2009
	<u>(In Millions)</u>	
Surplus, beginning of year	\$ 9,259	\$ 8,463
Increase (decrease) due to:		
Net income (loss)	594	(283)
Change in net unrealized capital gains (losses), net of tax	579	718
Change in net unrealized foreign exchange capital gains (losses), net of tax	5	119
Change in net deferred income taxes	(69)	65
Change in nonadmitted assets	110	(138)
Change in reserve valuation basis	(9)	-
Change in asset valuation reserve	(305)	(741)
Change in surplus notes	-	740
Cumulative effect of accounting changes, net of tax	-	(71)
Prior period adjustments	32	(28)
Aggregate write-ins for deferred income taxes	79	321
Change in minimum pension liability included in surplus	80	148
Other	(3)	(54)
	<u>1,093</u>	<u>796</u>
Net increase (decrease)		
Surplus, end of year	<u>\$ 10,352</u>	<u>\$ 9,259</u>

See notes to condensed consolidated statutory financial statements

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATUTORY STATEMENTS OF CASH FLOWS

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Cash from operations:		
Premium and other income collected	\$ 12,304	\$ 13,952
Net investment income	4,598	4,097
Benefit payments	(10,914)	(12,168)
Net transfers from (to) separate accounts	347	(578)
Commissions and other expenses	(2,105)	(1,888)
Dividends paid to policyholders	(1,217)	(1,330)
Federal and foreign income taxes recovered (paid)	299	513
Net cash from operations	3,312	2,598
Cash from investments:		
Proceeds from investments sold, matured or repaid:		
Bonds	18,001	16,369
Common stocks - unaffiliated	85	392
Mortgage loans	2,056	1,330
Real estate	135	13
Partnerships	800	786
Preferred and affiliated common stocks	759	140
Other	(190)	(250)
Total investment proceeds	21,646	18,780
Cost of investments acquired:		
Bonds	(21,551)	(18,525)
Common stocks - unaffiliated	(55)	(235)
Mortgage loans	(2,013)	(566)
Real estate	(202)	(127)
Partnerships	(1,435)	(950)
Preferred and affiliated common stocks	(500)	(46)
Other	(16)	(140)
Total investments acquired	(25,772)	(20,589)
Net (increase) decrease in policy loans	(475)	386
Net cash from investments	(4,601)	(1,423)
Cash from financing and other sources:		
Net deposits (withdrawals) on deposit-type contracts	711	(1,209)
Cash provided from surplus notes	-	740
Net securities sold (bought) under agreements to repurchase	424	223
Change in derivative collateral	(505)	(1,165)
Other cash provided (applied)	(458)	(106)
Net cash from financing and other sources	172	(1,517)
Net change in cash, cash equivalents and short-term investments	(1,117)	(342)
Cash, cash equivalents and short-term investments, beginning of year	2,707	3,049
Cash, cash equivalents and short-term investments, end of year	\$ 1,590	\$ 2,707

See notes to condensed consolidated statutory financial statements

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS

1. Nature of operations

MassMutual Financial Group (MMFG) is comprised of Massachusetts Mutual Life Insurance Company (MassMutual) and its subsidiaries. MMFG is a global, diversified financial services organization providing life insurance, disability income insurance, long-term care insurance, annuities, retirement and income products, investment management, mutual funds and trust services to individual and institutional customers. MassMutual is organized as a mutual life insurance company.

2. Summary of significant accounting policies

a. Basis of presentation

The consolidated statutory financial statements include the accounts of MassMutual and its wholly owned United States of America (U.S.) domiciled life insurance subsidiary (collectively, the Company): C.M. Life Insurance Company (C.M. Life), as well as its indirect subsidiary, MML Bay State Life Insurance Company (MML Bay State), which is wholly owned by C.M. Life. All intercompany transactions and balances for these consolidated entities have been eliminated. Other entities comprising MMFG are accounted for under the equity method in accordance with statutory accounting principles. Statutory financial statements filed with regulatory authorities are not presented on a consolidated basis.

The consolidated statutory financial statements have been prepared in conformity with the statutory accounting practices of the National Association of Insurance Commissioners (NAIC) and the accounting practices prescribed or permitted by the Commonwealth of Massachusetts Division of Insurance (the Division); and for the wholly owned U.S. domiciled life insurance subsidiaries, the State of Connecticut Insurance Department (the Department).

Statutory accounting practices are different in some respects from financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP). The more significant differences between statutory accounting principles and U.S. GAAP are as follows: (a) certain acquisition costs, such as commissions and other variable costs, that are directly related to acquiring new business are charged to current operations as incurred, whereas U.S. GAAP generally capitalizes these expenses and amortizes them based on profit emergence over the expected life of the policies or over the premium payment period; (b) statutory policy reserves are based upon prescribed methodologies, such as the Commissioners' Reserve Valuation Method (CRVM), Commissioners' Annuity Reserve Valuation Method (CARVM) or net level premium method, and prescribed statutory mortality, morbidity and interest assumptions, whereas U.S. GAAP reserves would generally be based upon the net level premium method or the estimated gross margin method, with estimates of future mortality, morbidity, persistency and interest assumptions; (c) bonds are generally carried at amortized cost, whereas U.S. GAAP generally reports bonds at fair value; (d) beginning with the third quarter of 2008 and through the second quarter of 2009, the Company utilized undiscounted cash flows to determine impairments on loan-backed and structured securities, whereas U.S. GAAP would require the use of discounted cash flows; (e) changes in the balances of deferred income taxes, which provide for book versus tax temporary differences, are subject to limitation and are charged to surplus, whereas U.S. GAAP would generally include the change in deferred taxes in net income; (f) payments received for universal and variable life insurance products and certain variable and fixed deferred annuities are reported as premium income and change in reserves, whereas U.S. GAAP would treat these payments as deposits to policyholders' account balances; (g) majority-owned noninsurance subsidiaries and variable interest entities where the Company is the primary beneficiary and certain other controlled entities are accounted for using the equity method, whereas U.S. GAAP would consolidate these entities; (h) surplus notes are reported in surplus, whereas U.S. GAAP would report these notes as liabilities; (i) assets are reported at admitted asset value and nonadmitted assets are excluded through a charge against surplus, whereas U.S. GAAP records these assets net of any valuation allowance; (j) reinsurance reserve credits, unearned ceded premium and unpaid ceded claims are reported as a reduction of policyholders' reserves or liabilities for deposit-type contracts whereas U.S. GAAP would report these balances as an asset; (k) an asset valuation reserve (AVR) is reported as a contingency reserve to stabilize surplus against fluctuations in the statement value of common stocks, real estate investments, partnerships and limited

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

liability company(ies) (LLC) as well as credit-related declines in the value of bonds, mortgage loans and certain derivatives to the extent AVR is greater than zero for the appropriate asset category, whereas U.S. GAAP does not record this reserve; (l) after-tax realized capital gains and losses which result from changes in the overall level of interest rates for all types of fixed-income investments and interest-related hedging activities are deferred into the interest maintenance reserve(s) (IMR) and amortized into revenue, whereas U.S. GAAP reports these gains and losses as revenue; (m) changes in the fair value of derivative financial instruments are recorded as changes in surplus, whereas U.S. GAAP generally reports these changes as revenue unless deemed an effective hedge; (n) comprehensive income is not presented, whereas U.S. GAAP presents changes in unrealized capital gains and losses and foreign currency translations as other comprehensive income; (o) a prepaid asset and/or a liability is recorded for the difference between the fair value of the pension and other postretirement plan assets and the accumulated benefit obligation (which excludes nonvested employees) with the change recorded in surplus, whereas for U.S. GAAP purposes, the over/underfunded status of a plan, which is the difference between the fair value of the plan assets and the projected benefit obligation, is recorded as an asset or liability on the Condensed Consolidated Statements of Financial Position with the change recorded through accumulated other comprehensive income; (p) embedded derivatives are recorded as part of the underlying contract, whereas U.S. GAAP would identify and bifurcate certain embedded derivatives from the underlying contract or security and account for them separately at fair value; and (q) certain group annuity and variable universal life contracts, which do not pass-through all investment gains to contract holders, are maintained in the separate accounts and are presented on a single line in the statutory financial statements, whereas U.S. GAAP reports these contracts in the general investments of the company.

The preparation of financial statements requires management to make estimates and assumptions that impact the reported amounts of assets and liabilities, the disclosure of assets and liabilities as of the date of the consolidated statutory financial statements and the reported amounts of revenues and expenses during the reporting periods. The most significant estimates include those used in determining the carrying values of investments including the amount of mortgage loan investment valuation reserves, other-than-temporary impairment(s) (OTTI), the value of the investment in MassMutual Holding LLC (MMHLLC), the liabilities for future policyholders' reserves, the determination of deferred tax asset(s) (DTA), the liability for taxes and litigation contingencies. Future events including, but not limited to, changes in the level of mortality, morbidity, interest rates, persistency and asset valuations and defaults could cause actual results to differ from the estimates used in the consolidated statutory financial statements. Although some variability is inherent in these estimates, management believes the amounts presented are appropriate.

The Company recorded in the Condensed Consolidated Statutory Statements of Changes in Surplus a net increase of \$32 million through prior period adjustments and an associated tax expense of \$7 million reported in the Condensed Consolidated Statutory Statements of Income (Loss) for the year ended December 31, 2010 and a net decrease of \$28 million through prior period adjustments, a net decrease of \$8 million through the change in net unrealized capital gains (losses) and an associated tax benefit of \$13 million reported in the Condensed Consolidated Statutory Statements of Income (Loss) for the year ended December 31, 2009.

Certain 2009 balances within these financial statements have been reclassified to conform to the current year presentation.

b. Bonds

Generally, bonds are valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds which are carried at the lower of amortized cost or fair value and residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers. Bond transactions are recorded on a trade date basis, except for private placement bonds which are recorded on the funding date.

For fixed income securities that do not have a fixed schedule of payments, such as asset-backed securities (ABS), mortgage-backed securities (MBS), including RMBS and CMBS, and structured securities, including Collateralized Debt Obligations (CDOs), amortization or accretion is revalued quarterly based on

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

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

The fair value of bonds is based on quoted market prices when available. If quoted market prices are not available, values provided by other third-party organizations are used. If values provided by other third-party organizations are unavailable, fair value is estimated using internal models by discounting expected future cash flows using observable current market rates applicable to yield, credit quality and maturity of the investment or using quoted market values for comparable investments. Internal inputs used in the determination of fair value include estimated prepayment speeds, default rates, discount rates and collateral values, among others. Structure characteristics and cash flow priority are also considered. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants at the financial statement date.

Refer to *Note 2aa. "Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses"* for information on the Company's policy for determining OTTI.

c. Preferred stocks

Generally, preferred stocks in good standing are valued at amortized cost. Preferred stocks not in good standing, those which are rated Category 4 through 6 by the Securities Valuation Office (SVO), are valued at the lower of amortized cost or fair value. Fair values are based on quoted market prices, when available. If quoted market prices are not available, the Company estimates fair value using broker-dealer quotations or internal models. These models use inputs that are not directly observable or correlated with observable market data. Typical inputs integrated into the Company's internal discounted expected earnings models include, but are not limited to, earnings before interest, taxes, depreciation, and amortization estimates. Fair values resulting from internal models are those expected to be received in an orderly transaction between willing market participants at the financial statement date.

Refer to *Note 2aa. "Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses"* for information on the Company's policy for determining OTTI.

d. Common stocks - subsidiaries and affiliates

Common stocks of unconsolidated subsidiaries, primarily MMHLLC, are accounted for using the statutory equity method. The Company accounts for the value of its investment in its subsidiary, MMHLLC, at its underlying U.S. GAAP net equity adjusted to remove nonadmitted and intangible assets as well as a portion of its noncontrolling interests and appropriated retained earnings (NCI) after consideration of MMHLLC fair value and the Company's capital levels. Operating results, less dividend distributions, for MMHLLC are reflected as net unrealized capital gains (losses) in the Condensed Consolidated Statutory Statements of Changes in Surplus. Dividend distributions received from MMHLLC are recorded in net investment income. Dividend distributions to the Company are limited to MMHLLC's U.S. GAAP retained earnings. The cost basis of common stocks - subsidiaries and affiliates is adjusted for impairments deemed to be other than temporary, consistent with common stocks - unaffiliated. Refer to *Note 4d. "Common stocks – subsidiaries and affiliates"* for further information on the valuation of MMHLLC.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Refer to Note 2aa. “Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses” for information on the Company’s policy for determining OTTI.

e. Common stocks - unaffiliated

The fair value of common stocks is based on quoted market prices when available. If quoted market prices are not available, values provided by other third-party organizations are used. If values from other third parties are unavailable, fair values are determined by management using estimates based upon internal models. Typical inputs integrated in the Company’s internal models include estimates based upon comparable company analysis, review of financial statements, broker quotes and last traded price.

Refer to Note 2aa. “Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses” for information on the Company’s policy for determining OTTI.

f. Mortgage loans

Mortgage loans are valued at the unpaid principal balance of the loan, net of unamortized premium and discount, valuation allowances, nonrefundable commitment fees and mortgage interest points. The mortgage loan portfolio is comprised of commercial mortgage loans, including mezzanine loans, and residential mortgage loan pools. Mezzanine loans are loans secured by a pledge of direct or indirect equity interest in an entity that owns real estate. Mezzanine loans are subordinate to senior secured first liens. However, the Company has negotiated provisions within the loan documents to maximize control which mitigates our risks as the mezzanine lender. Residential mortgage loan pools are pools of homogeneous residential mortgage loans substantially backed by Federal Housing Administration (FHA) and Veterans Administration (VA) guarantees.

The Company performs annual internal reviews to determine if individual mortgage loans are performing or nonperforming. The fair values of performing mortgage loans are estimated by discounting expected future cash flows using current interest rates for similar loans with similar credit risk. For nonperforming loans, the fair value is the estimated collateral value of the underlying real estate. If foreclosure is probable, the Company will obtain an appraisal from an external appraiser.

When, based upon current information and events, it is probable that the Company will be unable to collect all amounts of principal and interest due according to the contractual terms of the mortgage loan agreement, a valuation allowance is established for the excess of the carrying value of the mortgage loan over the fair value of its underlying collateral. Collectability and estimated decreases are assessed on a loan-by-loan basis considering all events and conditions relevant to the loan. This evaluation is inherently subjective as it requires estimates that are susceptible to significant revisions as more information becomes available, as changes occur in the market or as negotiations with the borrowing entity evolve. Changes to the valuation allowance are recorded in net unrealized capital gains (losses) in surplus. If there is a change in the fair value of the underlying collateral, the valuation allowance will be adjusted. At no time will the net carrying amount of the loan exceed the recorded investment in the loan. When an event such as the acquisition of the collateral is determined to be probable, resulting in an OTTI, previously recorded valuation allowance adjustments are reversed from unrealized capital losses and a direct write-down is recorded as OTTI in realized capital losses and a new cost basis is established.

Interest income earned on impaired loans is accrued on the outstanding principal balance of the loan based on the loan’s contractual coupon rate. Interest is not accrued for impaired loans more than 60 days past due, for loans delinquent more than 90 days, or when collection of interest is improbable. The Company continually monitors mortgage loans where the accrual of interest has been discontinued, and will resume the accrual of interest on a mortgage loan when the facts and circumstances of the borrower and property indicate that the payments will continue to be received per the terms of the original or modified mortgage loan agreement.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Refer to *Note 2aa*. “*Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses*” for information on the Company’s policy for determining OTTI.

g. Policy loans

Policy loans are carried at the outstanding loan balance less amounts unsecured by the cash surrender value of the policy. At issuance, policy loans are fully secured by the cash surrender value of the policy. Unsecured amounts can occur when subsequent charges are incurred on the underlying policy without the receipt of additional premium. If the premium is not paid during the contractual grace period, the policy will lapse. Unsecured amounts were less than \$1 million as of December 31, 2010 and 2009 and were nonadmitted. Policy loans earn interest calculated based upon either a fixed or a variable interest rate. Variable rate policy loans are adjusted at least annually and their carrying value approximates the fair value. For loans issued with a fixed interest rate, fair value is estimated by discounting expected future cash flows using current interest rates for similar loans with similar credit risk. Accrued investment income on policy loans more than 90 days past due is included in the unpaid balance of the policy loan not to exceed the cash surrender value of the underlying contract.

h. Real estate

Investment real estate, which the Company has the intent to hold for the production of income, and real estate occupied by the Company are carried at depreciated cost, less encumbrances. Depreciation is calculated using the straight-line method over the estimated useful life of the real estate holding, not to exceed 40 years. Depreciation expense is included in net investment income.

When an investment in real estate, held for the production of income is transferred to real estate, held for sale, it is transferred at the lower of depreciated cost or fair value, less selling costs. Real estate classified as held for sale is not depreciated. Adjustments to the carrying value of real estate held for sale are recorded in a valuation reserve when fair value less selling costs is below depreciated cost, changes in the valuation reserve are included in realized capital losses.

Real estate acquired in satisfaction of debt is recorded at the lower of cost or fair value at the date of foreclosure and is classified as held for sale.

Fair value is generally estimated using the present value of expected future cash flows discounted at a rate commensurate with the underlying risks. The Company also obtains external appraisals for a rotating selection of properties on an annual basis. If an external appraisal is not obtained, an internal appraisal is performed.

Refer to *Note 2aa*. “*Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses*” for information on the Company’s policy for determining OTTI.

i. Partnerships and limited liability companies

Partnerships and LLC, except for partnerships which generate low income housing tax credits (LIHTC), are accounted for using the equity method with the change in the equity value of the underlying investment recorded in surplus. Distributions received are recognized as net investment income to the extent the distribution does not exceed previously recorded accumulated undistributed earnings.

Investments in partnerships which generate LIHTC are carried at amortized cost unless considered impaired. Under the amortized cost method, the excess of the carrying value of the investment over its estimated residual value is amortized into income during the period in which tax benefits are recognized.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The equity method is suspended if the carrying value of the investment is reduced to zero due to losses from the investment. Once the equity method is suspended, losses are not recorded until the investment returns to profitability and the equity method is resumed. However, if the Company has guaranteed obligations of the investment or is otherwise committed to provide further financial support for the investment, losses will continue to be reported up to the amount of those guaranteed obligations or commitments.

Refer to Note 2aa. "Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses" for information on the Company's policy for determining OTTI.

j. Derivatives and other invested assets

Derivatives and other invested assets consist of investments in derivative financial instruments and other receivables for securities sold.

Derivative financial instruments are carried at estimated fair value, which is based primarily upon quotations obtained from counterparties and independent sources. The quotations from counterparties and independent sources are compared to internally derived prices and a price challenge is lodged with the counterparties and independent sources when a significant difference cannot be explained by appropriate adjustments to the internal model. When quotes from counterparties and independent sources are not reliable or available, the internally derived value is recorded. Changes in the fair value of these instruments are recorded as unrealized capital gains and losses in surplus. Gains and losses realized on the termination, closing or assignment of contracts are recorded as realized capital gains and losses. Amounts receivable and payable are accrued.

The Company adopted a clearly defined hedging strategy (CDHS) in order to enable the Company to incorporate currently held hedges in risk-based capital calculations. The CDHS is utilized to significantly mitigate the impact that movements in capital markets have on the liabilities associated with annuity guarantees. The hedge portfolio is comprised mainly of interest rate swaps, equity swaps, interest rate swaptions and equity futures, and provides protection in the stress scenarios under which risk-based capital (RBC) is calculated. The hedge portfolio has offsetting impacts relative to the guaranteed minimum death benefits (GMDBs) and variable annuity guaranteed living benefits (VAGLBs) total asset requirement for risk-based capital and surplus.

k. Cash, cash equivalents and short-term investments

The Company considers all highly liquid investments purchased with maturities of three months or less to be cash and cash equivalents.

Short-term investments, which are carried at amortized cost, consist of all highly liquid investments purchased with maturities of greater than three months and less than or equal to 12 months. Investments in money market mutual funds, commercial paper, and securities purchased under agreements to resell are classified as short-term investments.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The Company has entered into contracts for securities purchased under agreements to resell whereby the Company purchases securities and simultaneously agrees to resell the same or substantially the same securities. Securities purchased under agreements to resell are accounted for as collateralized loans, with the cash paid for the securities included in the Condensed Consolidated Statutory Statements of Cash Flows as a short-term investment. The underlying securities are not recorded as investments owned by the Company, but instead serve as collateral related to these short-term investments. The difference between the amount paid and the amount at which the securities will be subsequently resold is reported as interest income in net investment income. At purchase, the Company requires collateral in the form of securities having a fair value of a minimum of 102% of the securities' purchase price. If at anytime the fair value of the collateral declines to less than 100% of the securities' purchase price, the counterparty is obligated to provide additional collateral to bring the total collateral held by the Company to at least 102% of the securities' purchase price.

The carrying value reported in the Condensed Consolidated Statutory Statements of Financial Position for these instruments approximates the fair value.

l. Investment income due and accrued

Accrued investment income consists primarily of interest and dividends. Interest is recognized on an accrual basis and dividends are recorded as earned on the ex-dividend date. Due and accrued income is not recorded on: (a) bonds and mortgage loans delinquent more than 90 days or where collection of interest is improbable; (b) impaired bonds and mortgage loans more than 60 days past due; (c) bonds in default; (d) rent in arrears for more than 90 days; and (e) policy loan interest due and accrued in excess of the cash surrender value of the underlying contract.

m. Other than invested assets

Other than invested assets primarily includes deferred and uncollected premium, tax settlements in process, reinsurance receivables, other receivable items and fixed assets.

Fixed assets are included in other than invested assets at cost less accumulated depreciation and amortization. Depreciation is determined using the straight-line method over the estimated useful lives of the assets. Estimated lives range up to fifteen years for leasehold improvements and up to ten years for all other fixed assets. Within fixed assets, most unamortized software and office equipment are nonadmitted assets.

n. Nonadmitted assets

Assets designated as nonadmitted by the NAIC include the pension plan assets, certain investments in partnerships for which audits are not performed, advances and prepayments, certain electronic data processing equipment, the amount of the DTA (subject to certain limitations) that will not be realized by the end of the third calendar year, the disallowed IMR (when in a net asset position), certain other receivables, furniture, certain intangible assets, unamortized software and related party amounts outstanding greater than 90 days from the due date. Such amounts are excluded from the Condensed Consolidated Statutory Statements of Financial Position.

o. Separate accounts

Separate account assets and liabilities represent segregated funds administered and invested by the Company for the benefit of individual and group variable annuity, variable life and other insurance contract/policyholders to meet specific investment objectives. Separate account assets consist principally of marketable securities reported at fair value. Except for Company seed money, as noted below, separate account assets can only be used to satisfy separate account liabilities and are not available to satisfy the general obligations of the Company. The Company's revenue reflects fees charged to the separate accounts including administrative and investment advisory fees.

Assets may be transferred from the general investments of the Company to seed products within the separate accounts. Assets transferred to separate accounts are transferred at fair market value on the date the transaction occurs. Gains related to the transfer are deferred to the extent that the Company maintains a proportionate interest in the separate account. The deferred gain is recognized as the Company's ownership decreases or when the separate account sells the underlying asset during the normal course of business. Losses associated with these transfers are recognized immediately.

Separate accounts reflect two categories of risk assumption: nonguaranteed separate accounts for which the contract/policyholder assumes the investment risk and guaranteed separate accounts for which the Company contractually guarantees either a minimum return or minimum account value to the contract/policyholder. For certain guaranteed separate account products such as interest rate guarantee and indexed separate accounts, reserve adequacy is performed on a contract by contract basis using, as applicable, prescribed interest rates, mortality rates and asset risk deductions. If the outcome from this adequacy analysis produces a deficiency relative to the current account value, a liability is recorded in policyholders' reserves or liabilities for deposit-type contracts in the Condensed Consolidated Statutory Statements of Financial Position with the corresponding change in the liability recorded as change in policyholders' reserves or policyholders' benefits in the Condensed Consolidated Statutory Statements of Income (Loss).

Premium income, benefits and expenses of the separate accounts are included in the Condensed Consolidated Statutory Statements of Income (Loss) with offsetting transfer to/from separate accounts. Investment income and realized capital gains and losses on the assets of separate accounts, other than seed money, accrue to contract/policyholders and are not recorded in the Condensed Consolidated Statutory Statements of Income (Loss). Unrealized capital gains and losses on assets of separate accounts accrue to contract/policyholders and, accordingly, are reflected in the separate account liability to the contract/policyholder.

p. Policyholders' reserves

Policyholders' reserves provide amounts adequate to discharge estimated future obligations in excess of estimated future premium on policies in force.

Reserves for individual life insurance contracts are developed using accepted actuarial methods computed principally on the net level premium or CRVM bases using the American Experience or the 1941, 1958, 1980 or the 2001 Commissioners' Standard Ordinary mortality tables with assumed interest rates. Reserves for disability riders associated with life contracts are calculated using morbidity rates from the 1952 Period 2 Intercompany Disability Table.

The Company waives deduction of deferred fractional premium at death and returns any portion of the final premium beyond the date of death. Reserves are computed using continuous functions to reflect these practices.

The reserve method applied to standard policies is used for substandard reserve calculations based on a substandard mortality rate (a multiple of standard reserve tables).

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Certain variable universal life and universal life contracts include features such as GMDBs or other guarantees that ensure continued death benefit coverage when the policy would otherwise lapse. The value of the guarantee is only available to the beneficiary in the form of a death benefit. The liability for variable and universal life GMDBs and other guarantees is included in policyholders' reserves and the related change in this liability is included in change in policyholders' reserves.

Reserves for individual and group payout annuities are developed using accepted actuarial methods computed principally under CARVM using applicable interest rates and mortality tables. Individual payout annuities primarily use the 1971 and 1983 Individual Annuity Mortality and Annuity 2000 tables. Group payout annuities primarily use the 1983 Group Annuity Mortality and 1994 Group Annuity Reserving tables.

Certain individual variable annuity products issued by the Company offer GMDBs and VAGLBs. The primary types of VAGLBs offered by MassMutual are guaranteed minimum accumulation benefits (GMABs), guaranteed minimum income benefits (GMIBs) and guaranteed minimum withdrawal benefits (GMWBs). In general, these benefit guarantees require the contract or policyholder to adhere to a company-approved asset allocation strategy. The liabilities for individual variable annuity GMDBs and VAGLBs are included in policyholders' reserves and the related changes in these liabilities are included in change in policyholders' reserves.

Variable annuity GMDBs provide a death benefit in excess of the account value if the account value is less than the guaranteed minimum amount. Some contracts provide that guarantee upon the contract owner's death while others provide it upon the annuitant's death. This amount may be based on a return of premium (the premium paid less amounts withdrawn), a roll-up (an accumulation of premium at a specified interest rate adjusted for withdrawals), a reset (the contract value on a specified anniversary date adjusted for subsequent withdrawals, which is allowed to decrease when reset) or a ratchet (the contract value on a specified anniversary date adjusted for subsequent withdrawals, which is never allowed to decrease when reset). For a variable annuity contract, a decline in the stock market causing the contract value to fall below the specified amount will increase the net amount at risk, which is the GMDB in excess of the contract value.

GMABs provide the annuity contract holder with a guaranteed minimum account value at the end of the product's guarantee period. If the account value is below that guarantee at the end of the period, the account value is increased to the guaranteed level and the contract continues from that point. Options for the guarantee period are ten and twenty years.

GMIBs provide the annuity contract holder with a guaranteed minimum payment when the contract is annuitized. The GMIB would be beneficial to the contract holder if the contract holder's account value would otherwise not provide a higher annuitization value using currently offered rates at the time of annuitization. GMIB benefits generally anticipate payout between ages 60 and 90. The Company first issued GMIBs in 2002 and suspended issuing contracts with GMIBs by March 2009. GMIBs cannot be exercised prior to at least seven years after contract issuance.

GMWBs provide the annuity contract holder with a guarantee that a minimum amount will be available for withdrawal annually for life regardless of the contract value. In 2009, the Company temporarily suspended issuing contracts with GMWBs. Beginning in the first quarter of 2010 the Company began offering a newly designed GMWB on a variable annuity product.

Reserves for individual and group fixed and variable deferred annuities are developed using accepted actuarial methods computed principally under CARVM using applicable interest rates and mortality tables. Individual deferred annuities primarily use the 1971 and 1983 Individual Annuity Mortality and Annuity 2000 tables. Group deferred annuities primarily use the 1983 Group Annuity Mortality and 1994 Group Annuity Reserving tables.

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Beginning in 2009, reserves for individual and group variable deferred annuities are developed using accepted actuarial methods computed principally under CARVM for Variable Annuities using applicable interest rates and mortality tables. Individual variable deferred annuities primarily use the 1994 Minimum Guaranteed Death Benefit or Annuity 2000 tables. The liability is evaluated under both a standard scenario and stochastic scenarios net of currently held applicable hedge asset cash flows. The Company holds the reserve liability valuation at the higher of the standard or stochastic scenario values. Based on the Company's currently held hedges, if market interest rates increase, the fair value of the Company hedges would decrease in value and reserves would decrease. Should market interest rates decrease, the fair value of the Company hedges would increase in value and reserves would increase.

The standard scenario is a prescriptive reserve with minimal company discretion. The primary driver of the standard scenario result is the composition of the in force policies, with the key factor being the extent to which the product guarantees are "in the money." Determining the value of the reserve guarantees under the standard scenario is driven primarily by equity markets and interest rates.

For the stochastic scenarios, the Company uses the American Academy of Actuaries' scenarios. Prudent estimate assumptions used for policyholder behavior (lapses, partial withdrawals, annuitization and additional premium), mortality, expenses and commissions, investment management fees and taxes are consistent with those used for asset adequacy testing and based on Company experience. The key drivers for the stochastic results are the degree that the variable annuity benefits are "in the money" given equity market levels, policyholder elections for GMIBs, currently held applicable hedge asset cash flows, expenses and discount interest rates.

Disability income policy reserves are generally calculated using the two-year preliminary term method and actuarially accepted morbidity tables using the 1964 Commissioners' Disability Table and the 1985 Commissioners' Individual Disability Table A with assumed interest and mortality rates in accordance with applicable statutes and regulations.

Disabled life claim reserves are generally calculated using actuarially accepted methodologies and actuarially accepted morbidity tables using the 1964 Commissioners' Disability Table and 1985 Commissioners' Individual Disability Tables A and C with assumed interest rates in accordance with applicable statutes and regulations.

Long-term care policy reserves are generally calculated using the one-year preliminary term method and actuarially accepted morbidity, mortality and lapse tables with assumed interest rates in accordance with applicable statutes and regulations.

Long-term care claim reserves are generally calculated using actuarially accepted methodologies and actuarially accepted morbidity tables with assumed interest rates in accordance with applicable statutes and regulations.

Unpaid claims and claim expense reserves are related to disability and long-term care claims. Unpaid disability claim liabilities are projected based on the average of the last three disability payments paid prior to the valuation date. Claim expense reserves are based on an analysis of the unit expenses related to the processing and examination of new and ongoing claims. Interest accrued on reserves is calculated by applying NAIC prescribed interest rates to the average reserves by incurral year.

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Tabular interest, tabular reserves less actual reserves released, and tabular cost for all life and annuity contracts and supplementary contracts involving life contingencies are determined in accordance with NAIC Annual Statement instructions. For tabular interest, permanent and term products use a formula that applies a weighted average interest rate determined from a seriatim valuation file to the mean average reserves. Universal life, variable life, group life, annuity and supplemental contracts use a formula which applies a weighted average credited rate to the mean account value. For contracts without an account value (e.g., a Single Premium Immediate Annuity) a weighted average statutory valuation rate is applied to the mean statutory reserve or accepted actuarial methods using applicable interest rates are applied.

All policyholders' reserves and accruals are based on the various estimates discussed previously and are presented net of reinsurance. Management believes that these liabilities and accruals represent management's best estimate and will be sufficient, in conjunction with future revenues, to meet future anticipated obligations of policies and contracts in force.

q. *Liabilities for deposit-type contracts*

Liabilities for funding agreements, dividend accumulations, premium deposit funds, investment-type contracts such as supplementary contracts not involving life contingencies and certain structured settlement annuities are based on account value or accepted actuarial methods using applicable interest rates. Fair value is estimated by discounting expected future cash flows using current market interest rates.

r. *Policyholders' dividends*

The liability for policyholders' dividends includes the estimated amount of annual dividends and settlement dividends expected to be paid to policyholders in the following year. Policyholders' dividends incurred are recorded in the Condensed Consolidated Statutory Statements of Income (Loss). Dividends expected to be paid to policyholders in the following year are approved annually by MassMutual's Board of Directors. The allocation of these dividends to policyholders reflects the relative contribution of each group of participating policies to surplus and considers, among other factors, investment returns, mortality and morbidity experience, expenses and taxes. Settlement dividends are an extra dividend payable at termination of a policy upon maturity, death or surrender.

s. *Asset valuation reserve*

The Company maintains an AVR which is a contingency reserve to stabilize surplus against fluctuations in the statement value of common stocks, real estate investments, partnerships and LLC as well as credit-related changes in the value of bonds, preferred stocks, mortgage loans, and certain derivatives to the extent that AVR is greater than zero for the appropriate asset category. The AVR is reported in the Condensed Consolidated Statutory Statements of Financial Position and the change in AVR is reported in the Condensed Consolidated Statutory Statements of Changes in Surplus.

t. *Interest maintenance reserve*

The Company maintains an IMR which is used to stabilize net income against fluctuations in interest rates. After-tax realized capital gains and losses which result from changes in the overall level of interest rates for all types of fixed-income investments and interest-related hedging activities are deferred into the IMR and amortized into revenue using the grouped amortization method. The IMR is included in other liabilities on the Company's Condensed Consolidated Statutory Statements of Financial Position, or if negative, is nonadmitted and excluded from the Condensed Consolidated Statutory Statements of Financial Position.

u. *Securities sold under agreements to repurchase*

The Company has entered into contracts for securities sold under agreements to repurchase whereby the Company sells securities and simultaneously agrees to repurchase the same or substantially the same

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securities. Securities sold under agreement to repurchase are accounted for as collateralized borrowings with the proceeds from the sale of the securities recorded as a liability and the underlying securities recorded as an investment by the Company. Earnings on these investments are recorded as investment income and the difference between the proceeds and the amount at which the securities will be subsequently reacquired is amortized as interest expense, a component of investment expense which is reported in net investment income on the Condensed Consolidated Statutory Statements of Income (Loss). The Company utilizes the proceeds from these agreements to acquire U.S. treasuries at favorable rates. U.S. treasuries are utilized as part of our overall asset/liability management program.

The Company provides collateral, as dictated by the agreements, to the counterparty in exchange for a loan. If the fair value of the securities sold becomes less than the loan, the counterparty may require additional collateral.

v. *Commercial paper*

The Company issues commercial paper in the form of unsecured notes (Notes) and interest on the Notes is calculated using a 360-day year based on the actual number of days elapsed. These Notes are reported as a liability on the Company's Condensed Consolidated Statutory Statements of Financial Position. Due to the short-term nature of the Notes, the carrying value is assumed to approximate fair value.

w. *Other liabilities*

Other liabilities primarily include liabilities related to amounts held for agents, other payable items, derivative payables and unsettled suspense balances.

x. *Participating contracts*

Participating contracts are those that may be eligible to share in any dividends declared by the Company. Participating contracts issued by the Company represented 66% and 65% of the Company's policyholders' reserves and liabilities for deposit-type contracts as of December 31, 2010 and 2009, respectively.

y. *Reinsurance*

The Company enters into reinsurance agreements with affiliated and unaffiliated insurers in the normal course of business to limit its insurance risk. The Company's initial retention limit per individual life insured is generally \$15 million.

Premium income, benefits to policyholders and policyholders' reserves are stated net of reinsurance. Premium, benefits and reserves related to reinsured business are accounted for on bases consistent with those used in accounting for the original policies issued and the terms of the reinsurance contracts. The Company records a receivable for reinsured benefits paid and reduces policyholders' reserves for the portion of insurance liabilities that are reinsured. Commissions and expense allowances on reinsurance ceded and modified coinsurance reserve adjustments on reinsurance ceded are recorded as revenue.

z. *Premium and related expense recognition*

Life insurance premium revenue is generally recognized annually on the anniversary date of the policy and excess premium for flexible products is recognized when received. Annuity premium is recognized as revenue when received. Disability income premium is recognized as revenue when due.

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Premium revenue is adjusted by the related deferred premium adjustment. Deferred premium adjusts for the overstatement created in the calculation of reserves as the reserve computation assumes the entire year's net premium is collected annually at the beginning of the policy year and does not take into account installment or modal payments. Commissions and other costs related to issuance of new policies and policy maintenance and settlement costs are charged to current operations when incurred. Surrender fee charges on certain life and annuity products are recorded as a reduction of benefits and expenses.

aa. Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses

Realized capital gains and losses, net of taxes, exclude gains and losses deferred into the IMR and gains and losses of the separate accounts. Realized capital gains and losses are recognized in net income and include OTTI, which are determined using the specific identification method.

Bonds - general

The Company employs a systematic methodology to evaluate OTTI by conducting a quarterly analysis of all bonds. The Company considers the following factors, where applicable, depending on the type of securities, in the evaluation of whether a noninterest related decline in value is other than temporary: (a) the likelihood that the Company will be able to collect all amounts due according to the contractual terms of the debt security; (b) the present value of the expected future cash flows of the security; (c) the characteristics, quality and value of the underlying collateral or issuer securing the position; (d) collateral structure; (e) the length of time and extent to which the fair value has been below amortized cost; (f) the financial condition and near-term prospects of the issuer; (g) adverse conditions related to the security or industry; (h) the rating of the security; and (i) the Company's ability and intent to hold the investment for a period of time sufficient to allow for an anticipated recovery to amortized cost.

The Company considers the following factors in the evaluation of whether an interest related decline in value is other than temporary: (a) the Company's near-term intent to sell; (b) the Company's contractual and regulatory obligations; and (c) the Company's ability and intent not to sell the investment until anticipated recovery of the cost of the investment. The Company also considers other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes in value.

When a bond is other-than-temporarily impaired, a new cost basis is established. Any difference between the new amortized cost basis and any increased present value of future cash flows expected to be collected is accreted into net investment income over the expected life of the bond.

As of July 1, 2009, if the Company has the intent to sell, or the inability, or lack of intent to retain the investment in a loan-backed or structured security for a period of time sufficient to recover the amortized cost basis, OTTI are recognized in earnings as realized losses equal to the entire difference between the investments' amortized cost bases and their fair values at the balance sheet date. Otherwise, if the present value of cash flows expected to be collected is less than the amortized cost basis of the security, an OTTI is recognized in earnings as a realized loss equal to the difference between the investment's amortized cost basis and the present value of cash flows expected to be collected, discounted at the loan-backed or structured security's effective interest rate. Internal inputs used in determining the amount of the OTTI on structured securities included collateral performance including prepayment speeds, default rates, and loss severity based on borrower and loan characteristics, as well as deal structure including subordination, over-collateralization and cash flow priority. For the period from July 1, 2008 through June 30, 2009, the Company utilized undiscounted cash flows to determine OTTI for structured securities. Prior to July 1, 2008, resulting cash flows were discounted at spreads consistent with their fair values.

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The impairment review process provides a framework for deriving OTTI in a manner consistent with market participant assumptions. In these analyses, credit quality by loan vintage, collateral type and investment structure are critical elements in determining OTTI.

Bonds - structured and loan-backed securities

ABS and MBS are evaluated for OTTI on a periodic basis using scenarios customized by collateral type. Cash flow estimates are based on various assumptions and inputs obtained from external industry sources along with internal analysis and actual experience. Assumptions are based on the specifics of each security including collateral type, loan type, vintage, and position in the structure. Where applicable, assumptions include prepayment speeds, default rates and loss severity, weighted average maturity and changes in the collateral values.

The Company has a review process for determining if CDO investments are at risk for OTTI. For the senior, mezzanine and junior debt tranches, cash flows are modeled using five scenarios based on the current ratings and values of the underlying corporate credit risks and incorporating prepayment and default assumptions that vary according to collateral attributes of each deal. The prepayment and default assumptions are varied within each model based upon rating (base case), historical expectations (default), rating change improvement (optimistic), rating change downgrade (pessimistic), and fair value (market). The default rates produced by these five scenarios are assigned an expectation weight according to current market and economic conditions and fed into a sixth scenario. OTTI are recorded if this sixth scenario results in the default of any principal or interest payments due.

For the most subordinated junior tranches (CDO tranches), the present value of the projected cash flows in the sixth scenario are measured using an effective yield. If the current book value of the security is greater than the present value measured using an effective yield, then an OTTI is taken in an amount sufficient to produce its effective yield. Certain CDOs cannot be modeled using all six scenarios because of limitations on the data needed for all scenarios. The cash flows for these CDOs, including foreign denominated CDOs, are projected using a customized scenario management believes is reasonable for the applicable collateral pool.

Common and preferred stock

The cost basis of common and preferred stocks is adjusted for impairments deemed to be other than temporary. The Company considers the following factors in the evaluation of whether a decline in value is other than temporary: (a) the financial condition and near-term prospects of the issuer; (b) the Company's ability and intent to retain the investment for a period of time sufficient to allow for a near-term recovery in value; and (c) the period and degree to which the value has been below cost. The Company conducts a quarterly analysis of issuers whose common or preferred stock is not-in-good standing or valued below 80% of cost. The Company also considers other qualitative and quantitative factors in determining the existence of OTTI including, but not limited to, unrealized loss trend analysis and significant short-term changes. If the impairment is other than temporary, a new cost basis is established.

Mortgage loans

When, based upon current information and events, it is probable that the Company will be unable to collect all amounts of principal and interest due according to the contractual terms of the mortgage loan agreement, a valuation allowance is established for the excess of the carrying value of the mortgage loan over the fair value of its underlying collateral. This valuation allowance is recorded in net unrealized capital gains (losses) in surplus. When acquisition of the collateral is determined to be probable, the previously recorded valuation allowance adjustments are reversed from unrealized capital losses and recorded as OTTI in realized capital losses. When an OTTI is recorded, a new cost basis is established reflecting management's estimate of the fair value of the collateral.

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Real estate

For real estate held for the production of income, depreciated cost is adjusted for impairments whenever events or changes in circumstances indicate the carrying amount of the asset may not be recoverable, with the impairment being included in realized capital losses. An impairment is recognized if the carrying amount exceeds the sum of undiscounted cash flows expected to result from the use and disposition. The impairment loss is measured as the amount by which the carrying value exceeds its fair value.

For real estate held for sale, the fair value is determined by an appraisal based on relevant market data and net sale price. Any subsequent declines in value are recorded as an impairment and included in realized capital losses.

Partnerships and LLC

When it is probable that the Company will be unable to recover the outstanding carrying value of an investment based on undiscounted cash flows, or there is evidence indicating an inability of the investee to sustain earnings to justify the carrying value of the investment, OTTI are recognized in realized capital losses reflecting the excess of the carrying value over the estimated fair value of the investment. The estimated fair value is determined by assessing the value of the partnership's or LLC's underlying assets, cash flow, current financial condition and other market factors.

For determining impairments in partnerships which generate LIHTC, the Company uses the present value of all future benefits, the majority of which are tax credits, discounted at a risk-free rate ranging from 0.7% for future benefits of two years to 3.5% for future benefits of ten years or greater and compares the results to its current book values. Impairments are recognized as realized capital losses.

Unrealized capital gains and losses

Unrealized capital gains and losses are recorded as a change in surplus.

bb. Employee compensation plans

The Company has a long-term incentive compensation plan under which certain employees of the Company and its subsidiaries may be issued phantom share-based compensation awards. These awards include Phantom Stock Appreciation Rights (PSAR) and Phantom Restricted Stock (PRS). These awards do not grant an equity or ownership interest in the Company.

PSAR provide the participant the right to receive the appreciation in phantom stock price over the award period, providing an individual with the opportunity to share in the value created in the total enterprise. Awards can only be settled in cash equal to the gain, if any, related to the number of PSAR exercised. PSAR cliff vest at the end of three years and expire five years after the date of grant. Vested PSAR may be exercised during quarterly two-week exercise periods prior to expiration. The compensation expense for an individual award is recognized over the service period.

PRS provides the participant with the opportunity to receive the full phantom share value over the award period. This value is determined by grant price plus/minus any change in share price. PRS vests on a graded basis over five years, one third per year after years three, four and five. On each vesting date, a lump sum cash settlement is paid to the participant based on the number of shares vested multiplied by the most recent phantom stock price. Compensation expense is recognized on the accelerated attribution method. The accelerated attribution method recognizes compensation expense over the vesting period by which each separate payout year is treated as if it were, in substance, a separate award.

All awards granted under the Company's plans are compensatory classified awards. Compensation costs are based on the most recent quarterly calculated intrinsic value of the PSAR (current share price less grant

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price per share not less than zero) and PRS (current share price per share), considering vesting provisions, net of forfeiture assumptions and are included in the Condensed Consolidated Statutory Statements of Financial Position as a liability in general expenses due or accrued. The compensation expense for an individual award is recognized over the service period. The cumulative compensation expense for all outstanding awards in any period is equal to the change in calculated liability period over period. The requisite service period for the awards is the vesting period. Awards contain vesting conditions, whereby employees' unvested awards immediately vest at the time of retirement, death or disability with a one year exercise period after termination. A formula has been established, which serves as the basis for the phantom share price, based on the core operating earnings of the Company and its subsidiaries. This phantom share price will be calculated and communicated to all participants quarterly and used in calculating the liability of the Company based on intrinsic value.

cc. Federal income taxes

Total federal income taxes are based upon the Company's best estimate of its current and deferred tax assets or liabilities. Current tax expense is reported on the income statement as federal income tax expense if resulting from operations and within net realized capital gains (losses) if resulting from capital transactions. Changes in the balances of deferred taxes, which provide for book versus tax temporary differences, are subject to limitations and are reported within surplus. Changes to deferred income taxes are reported on various lines within surplus. Limitations of deferred income taxes are recorded on the change in nonadmitted assets line, whereas, deferred taxes associated with net unrealized capital gains (losses) are shown within that caption on a net basis. Accordingly, the reporting of statutory to tax temporary differences, such as reserves and policy acquisition costs, and of statutory to tax permanent differences, such as tax-exempt interest and tax credits, results in effective tax rates that differ from the federal statutory tax rate.

Refer to *Note 3a. "Adoption of new accounting standards"* for information on the Company's application of tax-planning strategies.

3. New accounting standards

a. Adoption of new accounting standards

In December 2009, the NAIC issued new guidance pertaining to fair value measurements. This new standard provides statutory accounting guidance on defining fair value when other statutory accounting pronouncements require or permit fair value measurements, establishes a framework for measurement of fair value and expands fair value disclosures. It substantially adopts the fair value guidance in U.S. GAAP Accounting Standards Codification 820 Fair Value Measurements and Disclosures. However, it excludes the consideration of a company's own credit risk in estimating the fair value of a liability, including derivatives. This guidance was issued as Statement of Statutory Accounting Principles (SSAP) No. 100, "Fair Value Measurements" and is effective for the December 31, 2010 financial statements, with early application permitted as of December 31, 2009. Adoption of this statement did not have a significant impact on the Company.

In November 2009, the NAIC issued new guidance pertaining to accounting requirements for income taxes, which increases the potential admittance of DTAs. It provides an increase in the admissibility limitation from 10% to 15% of surplus and an increase in the reversal/realization periods from one to three years. It requires gross DTA to be reduced by a statutory valuation allowance if it is more likely than not that some portion or all of the gross DTA will not be realized. The valuation allowance is required whether or not an insurer can admit higher DTA based on the new standard, i.e. whether its RBC exceeds the minimum threshold. Significant disclosures are required, including splitting the DTA and deferred tax liability (DTL) by character, regardless of whether the company is eligible for the enhanced DTA admissibility standard. This guidance was issued as SSAP No. 10R, "Income Taxes – Revised, A Temporary Replacement of SSAP No. 10," and was effective for 2009 annual statements and 2010 interim and annual statements. The

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effect, as of December 31, 2009, of adopting this pronouncement was an increase to admitted DTA by approximately \$321 million. This guidance has been extended through December 31, 2011 and updated to include additional disclosures regarding the impact of tax-planning strategies in determining the adjusted gross DTA and in determining the net admitted DTA by percentage and tax character.

In September 2009, the NAIC issued new guidance pertaining to loan-backed and structured securities, which supersedes existing guidance regarding treatment of their cash flows when quantifying changes in valuation and impairments of loan-backed and structured securities. This revised guidance provides information on accounting for structured securities and beneficial interests with the primary impact related to OTTI. It requires the bifurcation of impairment losses into interest and noninterest related portions. The noninterest portion is the difference between the present value of cash flows expected to be collected from the security and the amortized cost basis of the security. The interest portion is the difference between the present value of cash flows expected to be collected from the security and its fair value at the balance sheet date. If there is no intent to sell and the company has the intent and the ability to retain the investment to recovery, then only the noninterest loss is recognized through earnings. However, if there is an intent to sell or the company does not have the intent and ability to hold the investment for a period of time sufficient to recover the amortized cost basis, the security must be written down to fair value and the loss recognized through earnings. This guidance required a cumulative effect adjustment to statutory surplus as of July 1, 2009. For any previously other-than-temporarily impaired structured security to have been included in the cumulative effect adjustment, the company must have held the security as of September 30, 2009, must not have had the intent to sell the security and must have had the intent and ability to hold the security for a period of time sufficient to recover the security's amortized cost basis. This guidance requires additional disclosures, including a listing of all investments where the present value of cash flows is less than amortized cost for securities with recognized OTTI. This guidance was issued as SSAP No. 43R, "Loan-backed and Structured Securities," and was effective September 30, 2009. The cumulative effect, as of July 1, 2009, of adopting this pronouncement was a decrease to surplus of approximately \$71 million, net of the impact of AVR and income taxes.

In September 2008, the NAIC issued guidance pertaining to accounting for certain securities subsequent to an other-than-temporary impairment. This guidance establishes the statutory accounting principles for the treatment of premium or discount applicable to certain securities subsequent to the recognition of an OTTI. It requires that, after recognizing an OTTI, the fair value on the impairment date becomes the new cost basis, and the insurer must amortize any premium or accrete any discount to the par value by the maturity date, or to realizable value if the anticipated recovery is less than par. The unaccrued discount would be accrued over the remaining life of the security based on the amount and timing of future estimated cash flows. It also clarifies that for reporting entities required to maintain such reserves, credit related OTTI losses are to be recorded through the AVR, while interest related OTTI losses are to be recorded through the IMR. This guidance was issued as SSAP No. 99, "Accounting for Certain Securities Subsequent to an Other-Than-Temporary Impairment," and was effective January 1, 2009. The Company recorded an impact of \$12 million of additional income in 2009.

b. Future adoption of new accounting standards

In October 2010, the NAIC revised guidance pertaining to disclosure of withdrawal characteristics. These revisions expand the disclosure requirements for annuity actuarial reserves and deposit liabilities by withdrawal characteristics in accordance with the following categories: general account, separate account with guarantees, separate account nonguaranteed and the total. This guidance was issued as SSAP No. 51, "Life Contracts," SSAP No. 52, "Deposit-Type Contracts" and SSAP No. 61, "Life, Deposit-Type and Accident and Health Reinsurance" and is effective as of January 1, 2011. The Company is in the process of assessing the impact of this new guidance.

In October 2010, the NAIC modified the definitions of loan-backed and structured securities included in SSAP No. 43R. The revisions to SSAP No. 43R change the definition of loan-backed securities from securitized loans to securitized assets for which the payment of principal or interest is directly proportional

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to the payments the issuer receives from the asset pool. The revised definition requires the underlying cash flows be from any asset pool and not just those emanating from either mortgages or securities. Consequently, every security structure with a special purpose entity, trust, or limited liability company regardless of collateral, will be evaluated as to whether it should be reported as a SSAP No. 43R security, not as an issuer obligation under SSAP No. 26, "Bonds, excluding Loan-Backed and Structured Securities." This guidance is effective January 1, 2011. The Company is in the process of assessing the impact of this new guidance.

In October 2010, the NAIC revised existing guidance pertaining to liabilities, contingencies and impairments of assets. Such revisions require reporting entities to recognize, at the inception of a guarantee, a liability for the obligations it has undertaken in issuing the guarantee, even if the likelihood of having to make payments under the guarantee is remote. This includes related party guarantees, except when the transaction is considered an "unlimited guarantee," such as a rating agency requirement to provide a commitment to support a subsidiary, or a guarantee made on behalf of a wholly owned subsidiary. New disclosures require a listing of all guarantees, the carrying amount of the liability, maximum exposure and any recourse provisions. This guidance was issued as SSAP No. 5R, "Liabilities, Contingencies and Impairments of Assets," and applies to all guarantees issued and outstanding as of December 31, 2011. The Company is in the process of assessing the impact of this new guidance.

In June 2010, the NAIC clarified its intent on bifurcation of all realized gains and losses on loan-backed securities between the IMR and AVR. This new guidance requires cash flow analysis at the date of sale and supersedes current guidance of allocation to the AVR if the NAIC rating changes by more than one rating class. Insurers that previously bifurcated gains and losses between the AVR and the IMR for sale transactions are not permitted to reverse previous bifurcations and cannot revert to a policy that does not bifurcate before the January 1, 2011 effective date. This guidance was issued as a revision to SSAP No. 43R and is effective for January 1, 2011. The Company is in the process of assessing the impact of this new guidance.

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4. Investments

The Company maintains a diversified investment portfolio. Investment policies limit concentration in any asset class, geographic region, industry group, economic characteristic, investment quality or individual investment.

a. Bonds

The carrying value and fair value of bonds were as follows:

	December 31, 2010			
	Carrying Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
(In Millions)				
U. S. government and agencies	\$ 9,269	\$ 592	\$ 496	\$ 9,365
All other governments	116	27	-	143
States, territories and possessions	1,474	41	57	1,458
Special revenue	2,046	173	8	2,211
Industrial and miscellaneous	36,428	2,234	968	37,694
Credit tenant loans	96	13	-	109
Parent, subsidiaries and affiliates	5,311	234	284	5,261
Total	<u>\$ 54,740</u>	<u>\$ 3,314</u>	<u>\$ 1,813</u>	<u>\$ 56,241</u>

Note: The unrealized loss column does not include \$66 million in unrealized losses which are embedded in the carrying value column. These unrealized losses embedded in the carrying value column include \$58 million from NAIC Category 6 bonds and \$8 million reclassified from NAIC Category 6 for RMBS and CMBS with ratings obtained from outside modelers.

	December 31, 2009			
	Carrying Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
(In Millions)				
U. S. government and agencies	\$ 14,012	\$ 159	\$ 1,046	\$ 13,125
All other governments	116	17	-	133
States, territories and possessions	1,179	109	10	1,278
Special revenue	1,553	113	3	1,663
Industrial and miscellaneous	30,627	1,378	1,971	30,034
Credit tenant loans	109	10	-	119
Parent, subsidiaries and affiliates	3,219	78	283	3,014
Total	<u>\$ 50,815</u>	<u>\$ 1,864</u>	<u>\$ 3,313</u>	<u>\$ 49,366</u>

Note: The unrealized loss column does not include \$105 million in unrealized losses which are embedded in the carrying value column. These unrealized losses embedded in the carrying value column include \$75 million from NAIC Category 6 bonds, \$13 million reclassified from NAIC Category 6 for RMBS with ratings obtained from outside modelers and \$17 million from other bonds.

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The Company used SVO ratings for the bond portfolio along with what it believes were the equivalent rating agency designations. The following tables set forth the ratings for the bond portfolio including RMBS and CMBS as of December 31, 2010 and 2009:

		December 31, 2010	
NAIC Class	Equivalent Rating Agency Designation	Carrying Value	% of Total
(\$ In Millions)			
1	Aaa/Aa/A	\$ 34,912	64 %
2	Baa	16,071	29
3	Ba	1,694	3
4	B	1,002	2
5	Caa and lower	849	2
6	In or near default	212	-
Total		\$ 54,740	100 %

		December 31, 2009	
NAIC Class	Equivalent Rating Agency Designation	Carrying Value	% of Total
(\$ In Millions)			
1	Aaa/Aa/A	\$ 33,597	67 %
2	Baa	12,936	26
3	Ba	1,752	3
4	B	1,628	3
5	Caa and lower	654	1
6	In or near default	248	-
Total		\$ 50,815	100 %

The following table summarizes the carrying value and fair value of bonds as of December 31, 2010 by contractual maturity. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without prepayment penalties. Securities that are not due on a single maturity date are included as of the final maturity date.

	Carrying Value	Fair Value
(In Millions)		
Due in one year or less	\$ 3,293	\$ 3,272
Due after one year through five years	13,118	13,761
Due after five years through ten years	17,549	18,671
Due after 10 years	20,780	20,537
Total	\$ 54,740	\$ 56,241

The proceeds from sales of bonds were \$9,070 million for the year ended December 31, 2010 and \$8,996 million for the year ended December 31, 2009.

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The majority of the unrealized losses are due to the decline in the credit markets, liquidity and other uncertainties that are reflected in current market values. These factors continue to impact the value of RMBS, leveraged loans and CMBS. Deterioration of underlying collateral, downgrades of credit ratings or other factors may lead to further declines in value.

As of December 31, 2010, investments in structured and loan-backed securities for which OTTI had not been recognized in earnings and which were in an unrealized loss position had a fair value of \$3,926 million. Structured and loan-backed securities in an unrealized loss position for less than 12 months had a fair value of \$1,696 million and unrealized losses of \$83 million. Structured and loan-backed securities in an unrealized loss position greater than 12 months had a fair value of \$2,230 million and unrealized losses of \$450 million. These structured and loan-backed securities were primarily categorized as industrial and miscellaneous and U.S. government and agency securities.

Based on the Company's policies, as of December 31, 2010 and 2009, the Company has not deemed these investments to be other-than-temporarily impaired because the carrying value of the investments is expected to be realized based on our analysis of fair value or, for loan-backed and structured securities, based on present value of cash flows, and the Company has the ability and intent not to sell these investments until recovery, which may be maturity.

In the course of the Company's asset management, securities may be sold and repurchased within 30 days of the sale date to enhance the Company's yield on its investment portfolio. The Company did not sell any securities at a loss or in a loss position with the NAIC's designation 3 or below for the years ended December 31, 2010 or 2009 that were reacquired within 30 days of the sale date.

The Company had assets which were on deposit with government authorities or trustees as required by law in the amount of \$78 million as of December 31, 2010 and \$51 million as of December 31, 2009.

Residential mortgage-backed exposure

RMBS are included in the U.S. government, special revenue, and industrial and miscellaneous bond categories. The Alt-A category includes option adjustable rate mortgages, and the subprime category includes "scratch and dent" or reperforming pools, high loan-to-value pools, and pools where the borrowers have very impaired credit but the average loan-to-value is low, typically 70% or below. In identifying Alt-A and subprime exposure, management used a combination of qualitative and quantitative factors, including FICO scores and loan-to-value ratios.

Beginning in 2007, market conditions for Alt-A and subprime investments deteriorated due to higher delinquencies, reduced home prices, and reduced refinancing opportunities. This market turbulence has spread to other credit markets. It is unclear how long it will take for a return to conditions in effect prior to that time.

Commercial mortgage-backed exposure

The Company holds bonds backed by pools of commercial mortgages. The mortgages in these pools have varying risk characteristics related to underlying collateral type, borrower's risk profile and ability to refinance, and the return provided to the borrower from the underlying collateral. These investments had actual cost of \$3,306 million and fair value of \$3,445 million as of December 31, 2010 and actual cost of \$3,594 million and fair value of \$3,403 million as of December 31, 2009.

b. Preferred stocks

The Company held preferred stocks with carrying values of \$322 million and fair values of \$342 million as of December 31, 2010 and carrying values of \$135 million and fair values of \$149 million as of December 31, 2009.

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 NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

As of December 31, 2010 and 2009, the Company did not have any preferred stock with RMBS exposure.

The Company held preferred stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$243 million as of December 31, 2010 and \$127 million as of December 31, 2009.

c. Common stocks - unaffiliated

The adjusted cost basis and carrying value of unaffiliated common stocks were as follows:

	December 31,	
	2010	2009
	(In Millions)	
Adjusted cost basis	\$ 184	\$ 233
Gross unrealized gains	64	51
Gross unrealized losses	(4)	(32)
Carrying value	<u>\$ 244</u>	<u>\$ 252</u>

As of December 31, 2010, investments in unaffiliated common stocks in an unrealized loss position included holdings with a fair value of \$113 million in 98 issuers. These holdings were in an unrealized loss position of \$4 million, \$2 million of which were in an unrealized loss position more than 12 months. As of December 31, 2009, investments in unaffiliated common stocks in an unrealized loss position included holdings with a fair value of \$32 million in 181 issuers. These holdings were in an unrealized loss position of \$33 million, \$30 million of which were in an unrealized loss position more than 12 months. Based upon the Company's impairment review process discussed in *Note 2aa. "Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses,"* the decline in value of these securities was not considered to be other than temporary as of December 31, 2010 or 2009.

As of December 31, 2010, the Company did not hold any common stock with RMBS exposure and held \$1 million of common stocks with RMBS exposure as of December 31, 2009.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$158 million as of December 31, 2010 and \$186 million as of December 31, 2009.

d. Common stocks - subsidiaries and affiliates

One of the Company's wholly owned subsidiaries, MMHLLC, is the parent of subsidiaries which include retail and institutional asset management, registered broker dealers, and international life and annuity operations.

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Summarized below is U.S. GAAP financial information for MMHLLC:

	As of and for the Years Ended	
	December 31,	
	2010	2009
	<u>(In Millions)</u>	
Total revenue	\$ 6,244	\$ 5,754
Net income (loss)	(349)	161
Assets	51,093	43,828
Liabilities	43,144	37,500
Equity	7,949	6,328

The U.S. GAAP equity values of \$7,949 million and \$6,328 million in the preceding table consist of MMHLLC statutory carrying values of \$2,502 million and \$2,627 million as of December 31, 2010 and 2009, respectively, plus the carrying value of MMHLLC that is nonadmitted under statutory accounting principles. MMHLLC's primary investments are in businesses such as its investment in the asset management operations and the related consolidated investment funds of OppenheimerFunds, Inc. (OFI), Babson Capital Management LLC (Babson Capital), Baring Asset Management, Inc. and its investment in international life insurance operations in Japan and Hong Kong.

Legal matters at the Company's subsidiaries, to the extent they develop adversely, may have a negative impact on the Company's investment in MMHLLC.

OFI, an indirect subsidiary of MMHLLC, has concluded settlement discussions with six states - Illinois, Oregon, Texas, Nebraska, Maine and New Mexico regarding investigations of the management of those states' 529 college savings plans or choice of funds offered as investment options. OFI accrued \$184 million in 2009 related to settlements with the foregoing states. Payments were made in 2009 and 2010 with no additional accrual required bringing these matters to conclusion.

Two lawsuits have been filed in the Circuit Court for Santa Fe County, New Mexico which seek to undermine the settlement discussed above regarding the New Mexico college savings plan. These suits were brought on behalf of the New Mexico Education Plan Trust. The lawsuits name various parties as defendants including OFI. Oppenheimer Acquisition Corp. (OAC), OFI's parent, believes that it is premature to render any opinion as to the likelihood of an outcome unfavorable to it and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

In April 2010, a lawsuit was filed in New York state court against OFI, HarbourView Asset Management Corporation and AAardvark IV Funding Limited in connection with the investment made by TSL (USA) Inc., an affiliate of National Australia Bank Limited in AAardvark IV. The complaint alleges breach of contract, breach of the covenant of good faith and fair dealing, gross negligence, unjust enrichment and conversion. The complaint seeks compensatory and punitive damages, along with attorney fees. OAC believes that it is premature to render any opinion as to the likelihood of an outcome unfavorable to it and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

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Two derivative actions on behalf of two OAC funds were filed in the U.S. District Court for the District of Colorado in March 2010 alleging that as a matter of law, asset-based payments made under each Fund's Rule 12b-1 Distribution and Service Plan or by OppenheimerFunds Distributor, Inc. (OFDI) to broker dealers that are not registered as investment advisers are impermissible. In September 2010, the court granted defendants' motion to transfer venue to the U.S. District Court for the Southern District of New York; and motions to dismiss have been fully briefed. OAC believes that it is premature to render any opinion as to the likelihood of an outcome unfavorable to it and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

In 2009, several lawsuits were filed as putative class actions and derivative claims in connection with the investment performance of Oppenheimer Core Bond Fund (Core Bond Fund) and Oppenheimer Champion Income Fund (Champion Income Fund) distributed and advised by OAC subsidiaries, indirect subsidiaries of MMHLLC. The lawsuits raise claims under federal securities laws alleging that, among other things, the disclosure documents of these funds contained misrepresentations and omissions, that the investment policies of these funds were not followed and that these funds and other defendants violated federal securities laws and regulations and certain state laws. The Core bond Fund and Champion Income Fund putative class action claims have been consolidated into two groups, one for each of the funds, and are currently pending in federal district court in Colorado. Accruals, representing the amount that management believes are sufficient to cover these matters and an offsetting insurance recovery, are included in the financial statements of the Company's subsidiary.

In addition, several individual actions that had been filed in Illinois state court in connection with the performance of Champion Income Fund have been removed to federal district court in Illinois, and motions to transfer those cases to the federal district court in Colorado are pending. The lawsuits allege fraud, negligent misrepresentation, negligent supervision and violations of state securities laws. OAC believes that each of these lawsuits is without merit and its subsidiaries intend to transfer them to federal court and to defend them vigorously. OAC believes that it is premature to render any opinion as to the likelihood of an outcome unfavorable to it and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

Beyond these matters, MMHLLC's subsidiaries are involved in litigation and investigations arising in the ordinary course of the subsidiaries' businesses. While the Company is not aware of any actions or allegations that should reasonably give rise to a material adverse impact to the Company's financial position or liquidity, because of the uncertainties involved with some of these matters, future revisions to the estimates of the potential liability could materially affect the Company's financial position.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$136 million as of December 31, 2010 and did not hold any as of December 31, 2009.

The Company does not rely on dividends from its subsidiaries to meet its operating cash flow requirements. For the domestic life insurance subsidiaries, substantially all of their statutory shareholder's equity of approximately \$837 million as of December 31, 2010 was subject to dividend restrictions imposed by various state regulations.

As of December 31, 2010, international insurance subsidiaries primarily include operations in Japan and Hong Kong. Historically, the Company has reinvested a substantial portion of its unrestricted earnings in these operations. In 2010, the Company sold its interests in its indirect Taiwan subsidiary, MassMutual Mercuries Life Insurance Company. This sale resulted in a \$119 million increase to the statutory value of MMHLLC.

Goodwill of \$338 million was written off in 2010 due to a change in valuation assumptions based on current market conditions of the Company's unconsolidated Japanese affiliate, which did not impact the Company's surplus.

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In 2010, MassMutual did not contribute capital to its subsidiaries, including MMHLLC. In 2009, MassMutual contributed capital of \$60 million to C.M. Life.

MassMutual received \$225 million and \$130 million of cash dividends, recorded in net investment income, from MMHLLC through December 2010 and 2009, respectively.

The Company held debt issued by MMHLLC and its subsidiaries that amounted to \$1,993 million and \$1,493 million as of December 31, 2010 and 2009, respectively. The Company recorded interest income on MMHLLC debt of \$113 million and \$91 million in 2010 and 2009, respectively.

On March 25, 2010, MassMutual and MMHLLC completed an equity for debt swap. MMHLLC swapped \$500 million of MassMutual's contributed capital for \$500 million of additional MMHLLC debt. No cash was distributed by MMHLLC.

e. Mortgage loans

Mortgage loans are comprised of commercial mortgage loans and residential mortgage loan pools. The carrying value of mortgage loans was \$12,166 million, net of valuation allowances of \$140 million as of December 31, 2010. The carrying value of mortgage loans was \$12,171 million, net of valuation allowances of \$191 million as of December 31, 2009.

On occasion, the Company advances funds for the payment of taxes, assessments and other amounts such as real estate taxes, legal bills, and appraisals prepared by a designated external appraiser to protect collateral. Typically, advances are made on problem loans for which the Company is in negotiations with the borrower. To the extent that advances are not recoverable, they are written off as a realized loss. There were no taxes, assessments or other amounts advanced on behalf of a third party as of December 31, 2010. As of December 31, 2009, there were less than \$1 million of taxes, assessments or other amounts advanced on behalf of a third party. These advances were excluded from the mortgage loan carrying value.

Residential mortgage loan pools are pools of homogeneous residential mortgage loans substantially backed by FHA and VA guarantees. The Company purchases seasoned loan pools, most of which are FHA insured or VA guaranteed. The Company does not originate any residential mortgages but invests in residential mortgage loan pools which may contain mortgages of subprime credit quality. As of December 31, 2010 and 2009, the Company did not have any direct subprime exposure through the purchases of unsecuritized whole-loan pools.

The Company's commercial mortgage loans primarily finance various types of commercial real estate properties throughout the U.S. and Canada. The Company holds commercial mortgage loans for which it is the primary lender and mezzanine loans for which the Company is a secondary lender, often for a commercial property in development. These loans have varying risk characteristics including, among others, the borrower's liquidity, the underlying percentage of completion of a project, the returns generated by the collateral, the refinance risk associated with maturity of the loan and deteriorating collateral value.

Geographical concentration is considered prior to the purchase of mortgage loans and residential mortgage loan pools. Shareholder's equity was not materially impacted by the geographical concentrations for the years ended December 31, 2010 or 2009.

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As of December 31, 2010, scheduled mortgage loan maturities, net of valuation allowances, for commercial and residential loans were as follows (in millions):

2011	\$ 1,272
2012	1,856
2013	716
2014	853
2015	838
Thereafter	<u>4,118</u>
Commercial mortgage loans	9,653
Residential loan pools	<u>2,513</u>
Total	<u>\$ 12,166</u>

The following table sets forth the internal ratings for the Company's mortgage loan portfolio, which the Company believes reflect the equivalent nationally recognized credit quality ratings:

	December 31, 2010						Total
	AAA and AA	A	BBB and BB	B	CCC-C	D	
	(In Millions)						
Commercial mortgage loans							
Primary lender	\$ 1,860	\$3,774	\$2,519	\$1,412	\$ 9	\$ 9	\$ 9,583
Mezzanine loans	-	7	-	11	50	2	70
Total commercial mortgage loans	<u>1,860</u>	<u>3,781</u>	<u>2,519</u>	<u>1,423</u>	<u>59</u>	<u>11</u>	<u>9,653</u>
Residential mortgage loans							
FHA insured and VA guaranteed	2,485	-	-	-	-	-	2,485
Other residential loans	28	-	-	-	-	-	28
Total residential mortgage loans	<u>2,513</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2,513</u>
Total mortgage loans	<u>\$ 4,373</u>	<u>\$3,781</u>	<u>\$2,519</u>	<u>\$1,423</u>	<u>\$ 59</u>	<u>\$ 11</u>	<u>\$ 12,166</u>

As of December 31, 2010 and 2009, the Company had one restructured loan. Restructured loans typically have been modified to defer a portion of the contracted interest payments to future periods. No interest was deferred to future periods for the years ended December 31, 2010 or 2009.

The following table presents an analysis of the Company's commercial mortgage loans on which a valuation allowance has been recorded:

	December 31, 2010				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Valuation Allowance	Interest Income
	(In Millions)				
Commercial mortgage loans					
Primary lender	\$ 586	\$ 591	\$ 666	\$ (79)	\$ 38
Mezzanine loans	26	29	89	(61)	2
Total mortgage loans	<u>\$ 612</u>	<u>\$ 620</u>	<u>\$ 755</u>	<u>\$ (140)</u>	<u>\$ 40</u>

Note: As of December 31, 2010, the Company did not hold any impaired residential mortgage loans with a valuation allowance recorded. All mortgage loans included in the table above were individually valued for impairment.

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As of December 31, 2010, the Company had \$19 million of unpaid principal balance in impaired commercial mortgage loans with no related valuation allowance recorded.

As of December 31, 2010, the Company did not hold any impaired residential mortgage loans.

The following table represents the valuation allowance recorded for the Company's mortgage loans:

	December 31, 2010		
	Commercial		
	Primary lender	Mezzanine	Total
	(In Millions)		
Beginning balance	\$ (133)	\$ (58)	\$ (191)
Additions	(31)	(9)	(40)
Decreases	33	6	39
Write-downs	52	-	52
Ending balance	<u>\$ (79)</u>	<u>\$ (61)</u>	<u>\$ (140)</u>

Note: As of December 31, 2010, the Company did not hold any FHA insured or VA guaranteed residential loans with a valuation allowance.

The following table represents the valuation allowance recorded for the Company's mortgage loans as of December 31, 2009 (in millions):

Beginning balance	\$ (66)
Additions	(176)
Decreases	4
Write-downs	47
Ending balance	<u>\$ (191)</u>

As of December 31, 2010, the Company did not hold any past due commercial or residential mortgage loans.

The change in the valuation allowance is recorded in change in net unrealized capital gains (losses) in the Condensed Consolidated Statutory Statements of Changes in Surplus.

Mortgage loans with valuation allowances consisted of the following:

	December 31,	
	2010	2009
	(In Millions)	
Mortgage loans with valuation allowance	\$ 752	\$ 937
Less: Valuation allowance on impaired loans	(140)	(191)
Net carrying value of mortgage loans with valuation allowances	<u>\$ 612</u>	<u>\$ 746</u>
Average recorded mortgage loans with valuation allowances	\$ 620	\$ 736

The Company recorded \$40 million in interest income on impaired loans as of December 31, 2010 and \$52 million as of December 31, 2009.

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During the years ended December 31, 2010 and 2009, mortgage loan lending rates, including fixed and variable, on the portfolio of mortgage loans were:

	December 31, 2010			December 31, 2009		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	1.0%	10.4%	5.5%	1.0%	12.0%	5.7%
Residential mortgage loan pools	3.3%	13.7%	6.5%	3.6%	13.7%	6.5%
Mezzanine mortgage loans	3.0%	18.0%	9.0%	3.0%	17.0%	8.7%

During the years ended December 31, 2010 and 2009, mortgage loan lending rates, including fixed and variable, on new issues were:

	December 31, 2010			December 31, 2009		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	2.3%	7.8%	4.9%	1.2%	12.0%	7.5%
Residential mortgage loan pools	5.3%	6.0%	5.7%	- %	- %	- %
Mezzanine mortgage loans	- %	- %	- %	15.0%	15.0%	15.0%

The maximum percentage of any one commercial mortgage loan to the estimated value of secured collateral at the time the loan was originated, exclusive of mezzanine, insured, guaranteed or purchase money mortgages, was 89.5% as of December 31, 2010 and 2009. The maximum percentage of any one mezzanine loan to the estimated value of secured collateral at the time the loan was originated was 97.5% as of December 31, 2010 and 2009.

There was less than \$1 million in interest deferred to future periods from mortgage loans on properties under development as of December 31, 2010 and no interest deferred to future periods from mortgage loans on properties under development as of December 31, 2009.

As of December 31, 2010, the carrying value of commercial mortgage loans for which the Company has suspended interest accruals was (in millions):

Primary lender	\$	76
Mezzanine loans		49
Total commercial mortgage loans	<u>\$</u>	<u>125</u>

Note: As of December 31, 2010, the Company did not have any residential mortgage loans for which it had suspended interest accruals.

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The geographic distribution of commercial mortgage loans was as follows:

	December 31, 2010	
	Carrying Value	Average Loan-to-Value Ratio
	(\$ In Millions)	
California	\$ 2,362	83%
Texas	994	86%
Massachusetts	644	71%
Illinois	633	79%
New York	475	58%
Virginia	470	70%
All other states	3,415	82%
Canada	660	74%
Total commercial mortgage loans	<u>\$ 9,653</u>	79%

Note: All other states in this table consist of 33 states, with no individual state exposure exceeding \$350 million.

	December 31, 2009	
	Carrying Value	Average Loan-to-Value Ratio
	(\$ In Millions)	
California	\$ 2,340	83%
Texas	891	79%
Massachusetts	663	73%
Illinois	542	90%
Washington	415	81%
Arizona	382	87%
All other states	3,672	78%
Canada	649	75%
Total commercial mortgage loans	<u>\$ 9,554</u>	80%

Note: All other states in this table consist of 35 states, with no individual state exposure exceeding \$374 million.

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f. Real estate

The carrying value of real estate was as follows:

	December 31,	
	2010	2009
	<u>(In Millions)</u>	
Held for the production of income	\$ 2,133	\$ 2,028
Accumulated depreciation	(847)	(781)
Encumbrances	(283)	(279)
Held for the production of income, net	<u>1,003</u>	<u>968</u>
Held for sale	40	27
Accumulated depreciation	(4)	-
Held for sale, net	<u>36</u>	<u>27</u>
Occupied by the Company	221	217
Accumulated depreciation	(111)	(101)
Occupied by the Company, net	<u>110</u>	<u>116</u>
Total real estate	<u>\$ 1,149</u>	<u>\$ 1,111</u>

The Company invests in real estate as part of its diversified investment strategy. Properties are acquired and managed for net income growth and increasing value. Upon management's approval for the sale of a property it is classified as held for sale. Most properties acquired through foreclosure are classified as held for sale.

Nonincome producing real estate includes properties under construction and land. The carrying value of nonincome producing real estate was \$13 million as of December 31, 2010, including one residential complex for \$7 million, an office complex under renovation for \$5 million and two land parcels for less than \$1 million. The carrying value of nonincome producing real estate was \$31 million as of December 31, 2009, including a residential complex for \$25 million, an office complex for \$6 million and two land parcels for less than \$1 million.

Of the four properties classified as held for sale as of December 31, 2009, three single family residences were sold as well as some units of a condominium complex for a net loss of \$3 million. The remaining units of the condominium complex remain classified as held for sale as of December 31, 2010.

In 2010, eight single family residences were acquired as part of an employee relocation program and classified as held for sale, as well as one residential complex that was transferred to held for sale in 2010. Of these residences, three were sold for a net loss of less than \$1 million. As of December 31, 2010, the Company held seven properties classified as held for sale. Additionally, an office complex was transferred to held for sale and sold in 2010, with proceeds of \$118 million, including a gain of \$68 million.

In 2009, nine single family residences were acquired as part of an employee relocation program and classified as held for sale. Of these residences, six were sold for a net loss of \$1 million. As of December 31, 2009, the Company held four properties classified as held for sale.

Depreciation expense on real estate was \$93 million for the year ended December 31, 2010 and \$95 million for the year ended December 31, 2009.

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g. Partnerships and limited liability companies

Partnership and LLC holdings, at carrying value, had characteristics of:

	December 31,	
	2010	2009
	(In Millions)	
Common stocks	\$ 2,655	\$ 2,506
Fixed maturities/preferred stock	1,204	874
Real estate	1,125	1,259
Mortgage loans	376	142
LIHTC	198	222
Other	48	54
Total	\$ 5,606	\$ 5,057

As of December 31, 2010 and 2009, the Company did not hold any partnerships or LLC with significant Alt-A or subprime exposure.

There were no write-downs or reclassifications on LIHTC made during the years ended December 31, 2010 or 2009 due to forfeiture or ineligibility of tax credits or similar issues. In addition, there are no LIHTC properties currently subject to regulatory review.

h. Net investment income

Net investment income was derived from the following sources:

	Years Ended December 31.	
	2010	2009
	(In Millions)	
Bonds	\$ 2,832	\$ 2,540
Preferred stocks	6	5
Common stocks - subsidiaries and affiliates	236	136
Common stocks - unaffiliated	11	5
Mortgage loans	686	729
Policy loans	671	698
Real estate	160	164
Partnerships and LLC	376	249
Derivatives	135	223
Cash, cash equivalents and short-term investments	6	19
Other	2	4
Subtotal investment income	5,121	4,772
Amortization of the IMR	79	24
Net gains (losses) from separate accounts	(1)	(1)
Less: Investment expenses	(451)	(432)
Net investment income	\$ 4,748	\$ 4,363

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i. Net realized capital gains and losses

Net realized capital gains (losses) including OTTI were comprised of the following:

	Year Ended December 31, 2010			
	Realized Gains	Realized Losses	OTTI	Net Realized Gains (Losses)
	(In Millions)			
Bonds	\$ 277	\$ (174)	\$ (193)	\$ (90)
Preferred stocks	8	-	-	8
Common stocks - subsidiaries and affiliates	12	(6)	(1)	5
Common stocks - unaffiliated	25	(5)	(2)	18
Mortgage loans	8	(14)	(38)	(44)
Real estate	68	(3)	-	65
Partnerships and LLC	64	(11)	(98)	(45)
Derivatives and other	859	(875)	-	(16)
	<u>\$ 1,321</u>	<u>\$ (1,088)</u>	<u>\$ (332)</u>	<u>(99)</u>
Federal and state taxes				(22)
Net realized capital gains (losses) before deferral to the IMR				<u>(121)</u>
Net (gains) losses deferred to the IMR				(160)
Less: taxes				(13)
Net after tax (gains) losses deferred to the IMR				<u>(147)</u>
Net realized capital gains (losses)				<u>\$ (268)</u>

	Year Ended December 31, 2009			
	Realized Gains	Realized Losses	OTTI	Net Realized Gains (Losses)
	(In Millions)			
Bonds	\$ 449	\$ (141)	\$ (658)	\$ (350)
Preferred stocks	5	-	(4)	1
Common stocks - subsidiaries and affiliates	14	(3)	(73)	(62)
Common stocks - unaffiliated	122	(21)	(68)	33
Mortgage loans	-	(20)	(68)	(88)
Real estate	-	(4)	-	(4)
Partnerships and LLC	-	-	(261)	(261)
Derivatives and other	605	(862)	-	(257)
	<u>\$ 1,195</u>	<u>\$ (1,051)</u>	<u>\$ (1,132)</u>	<u>(988)</u>
Federal and state taxes				136
Net realized capital gains (losses) before deferral to the IMR				<u>(852)</u>
Net (gains) losses deferred to the IMR				(312)
Less: taxes				(251)
Net after tax (gains) losses deferred to the IMR				<u>(61)</u>
Net realized capital gains (losses)				<u>\$ (913)</u>

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Portions of realized capital gains and losses, which were determined to be interest related, were deferred into the IMR. The IMR balance was a liability of \$76 million and a nonadmitted asset of \$54 million as of December 31, 2010. The IMR balance was a liability of \$37 million and nonadmitted asset of \$54 million as of December 31, 2009. Since IMR is not calculated on a consolidated basis and an IMR asset must be nonadmitted, there is no netting of liabilities and assets between MassMutual and its subsidiaries which contribute to the consolidation.

Refer to *Note 2t. "Interest maintenance reserve"* for information on the Company's policy for IMR.

Loan-backed and structured securities

For the first two quarters of 2009, statutory OTTI of structured and other loan-backed securities were based on undiscounted cash flow models which produced \$184 million of impairments. As discussed in *Note 3 "New accounting standards,"* the Company adopted a new accounting standard for determining whether or not an impairment is other than temporary for structured and loan-backed securities. The effect of adopting the new standard, as of July 1, 2009, was a \$109 million decrease in the book value of the associated bonds. This adjustment was recorded as a cumulative effect of an accounting change in surplus, with an offsetting tax adjustment of \$38 million and a corresponding adjustment to AVR of less than \$1 million.

The following table contains loan-backed and structured securities that recognized OTTI through the year ended December 31, 2010 and six months ended December 31, 2009 as described in *Note 2aa. "Realized capital gains and losses including other-than-temporary impairments and unrealized capital gains and losses"* classified on the following bases for recognizing OTTI:

	Year Ended December 31, 2010	Six Months Ended December 31, 2009
(In Millions)		
Intent to sell	\$ (3)	\$ -
Inability or lack of intent to retain for a period of time sufficient to recover amortized cost basis	-	-
Present value of cash flows expected to be collected is less than amortized cost basis	(161)	(216)
Total	\$ (164)	\$ (216)

j. Securities sold under agreements to repurchase

The Company had securities sold under agreements to repurchase with total carrying values of \$4,163 million as of December 31, 2010 and \$3,739 million as of December 31, 2009. As of December 31, 2010, the maturities of these agreements were January 4, 2011 through March 3, 2011 and the interest rates ranged from 0.2% to 0.3%. The outstanding amounts were collateralized by bonds with a fair value of \$4,235 million as of December 31, 2010 and \$3,700 million as of December 31, 2009.

k. Derivative financial instruments

The Company uses derivative financial instruments in the normal course of business to manage risks, primarily to reduce interest rate and duration imbalances determined in asset/liability analyses. The Company also uses a combination of derivatives and fixed income investments to create synthetic investment positions. These combined investments are created opportunistically when they are economically more attractive than the simulated instrument or when the simulated instruments are unavailable. Synthetic assets can be created to either hedge and reduce the Company's exposure or increase

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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the Company's exposure to a particular asset. The Company held synthetic assets which increased the Company's exposure to \$2,301 million as of December 31, 2010 and \$2,039 million as of December 31, 2009. Of this amount, \$362 million as of December 31, 2010 and \$95 million as of December 31, 2009, were considered replicated asset transactions as defined under statutory accounting principles as the pairing of a long derivative contract with a cash instrument held. The Company's derivative strategy employs a variety of derivative financial instruments, including interest rate swaps, currency swaps, equity and credit default swaps, options, interest rate caps and floors, forward contracts, and financial futures. Investment risk is assessed on a portfolio basis and individual derivative financial instruments are not designated in hedging relationships; therefore, as allowed by accounting rules, the Company specifically and intentionally made the decision not to apply hedge accounting.

Under interest rate swaps, the Company agrees, at specified intervals, to an exchange of variable rate and fixed rate interest payments calculated by reference to an agreed upon notional principal amount. Typically, no cash is exchanged at the outset of the contract and no principal payments are made by either party. Cash is paid or received based on the terms of the swap. These transactions are entered into pursuant to master agreements that provide for a single net payment to be made by one counterparty at each due date. Interest rate swaps are primarily utilized to more closely match the interest rate cash flows of assets and liabilities. Interest rate swaps are also used to mitigate changes in the value of assets anticipated to be purchased and other anticipated transactions and commitments.

Under currency swaps, the Company agrees to an exchange of principal denominated in two different currencies at current rates, under an agreement to repay the principal at a specified future date and rate. The Company utilizes currency swaps for the purpose of managing currency exchange risks in its assets and liabilities.

Credit default swaps involve a transfer of the credit risk of fixed income instruments from one party to another in exchange for periodic premium payments. The buyer of the credit default swap receives credit protection, whereas the seller of the swap guarantees the credit worthiness of the underlying security. This transfers the risk of default from the buyer of the swap to the seller. If a specified credit event occurs, as defined by the agreement, the seller is obligated to pay the counterparty the contractually agreed upon amount and receives in return the underlying security in an amount equal to the notional value of the credit default swap. A credit event is generally defined as default on contractually obligated interest or principal payments or bankruptcy. The Company does not write credit default swaps as a participant in the credit insurance market but does sell swaps to generate returns consistent with bond returns when the actual bond is not available or the market price is more expensive.

The Company uses credit default swaps to either reduce exposure to particular issuers by buying protection or increase exposure to issuers by selling protection against specified credit events. The Company buys protection as an efficient means to reduce credit exposure to particular issuers or sectors in the Company's investment portfolio. The Company sells protection to enhance the return on its investment portfolio by providing comparable exposure to fixed income securities that might not be available in the primary market or to enter into synthetic transactions by buying a high quality liquid bond to match against the credit default swap.

Options grant the purchaser the right to buy or sell a security or enter into a derivative transaction at a stated price within a stated period. The Company's option contracts have terms of up to 15 years. A swaption is an option to enter into an interest rate swap at a future date. The Company purchases these options in order to protect against undesirable financial effects resulting from interest rate exposures that exist in its assets and/or liabilities.

Interest rate cap agreements are option contracts in which the seller agrees to limit the purchaser's risk associated with an increase in a reference rate or index in return for a premium. Interest rate floor agreements are option contracts in which the seller agrees to limit the purchaser's risk associated with a decline in a reference rate or index in return for a premium. The Company is exposed to policyholder

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surrenders during a rising interest rate environment. Interest rate cap and swaption contracts are used to mitigate the Company's loss in this environment. These derivative instruments are used to reduce the duration risk of fixed maturity investments to match certain life insurance products in accordance with the Company's asset and liability management policy.

The Company utilizes certain other agreements including forward contracts and financial futures to reduce exposures to various risks. Forward contracts and financial futures are used by the Company to manage market risks relating to interest rates. Currency forwards are contracts in which the Company agrees with other parties to exchange specified amounts of identified currencies at a specified future date. Typically, the exchange is agreed upon at the time of the contract. The Company also uses "to be announced" (TBAs) forward contracts to participate in the investment return on mortgage-backed securities. The Company believes that TBAs can provide a more liquid and cost effective method of participating in the investment return on mortgage-backed securities than purchasing or selling individual mortgage-backed pools. Typically, the price is agreed upon at the time of the contract and payment is made at a specified future date. The Company usually does not purchase TBAs with settlement by the first possible delivery date and thus accounts for these TBAs as derivatives. TBAs which settle on the first possible delivery date are accounted for as bonds. The Company's futures contracts are exchange traded and have credit risk. Margin requirements are met with the deposit of securities. Futures contracts are generally settled with offsetting transactions.

The Company's principal derivative market risk exposures are interest rate risk, which includes the impact of inflation and credit risk. Interest rate risk pertains to the change in fair value of the derivative instruments as market interest rates move. The Company is exposed to credit-related losses in the event of nonperformance by counterparties to derivative financial instruments. In order to minimize credit risk, the Company and its derivative counterparties require collateral to be posted in the amount owed under each transaction, subject to threshold and minimum transfer amounts that are functions of the rating on the counterparty's long-term, unsecured, unsubordinated debt. Additionally, in many instances, the Company enters into agreements with counterparties that allow for contracts in a positive position, where the Company is due amounts, to be offset by contracts in a negative position. This right of offset, combined with collateral obtained from counterparties, reduces the Company's exposure. Collateral pledged by the counterparties was \$2,182 million as of December 31, 2010 and \$2,292 million as of December 31, 2009. In the event of default the full market value exposure at risk in a net gain position, net of offsets and collateral was \$30 million as of December 31, 2010 and \$85 million as of December 31, 2009. The amount at risk using NAIC prescribed rules was \$314 million as of December 31, 2010 and \$250 million as of December 31, 2009. Negative values in the carrying value of a particular derivative category can result from a counterparty's right to offset positions in multiple derivative financial instruments. The Company regularly monitors counterparty credit ratings and exposures, derivative positions and valuations and the value of collateral posted to ensure counterparties are credit-worthy and the concentration of exposure is minimized. The Company monitors this exposure as part of its management of the Company's overall credit exposures.

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The following tables summarize the carrying values and notional amounts of the Company's derivative financial instruments:

	December 31, 2010			
	Assets		Liabilities	
	Carrying Value	Notional Amount	Carrying Value	Notional Amount
	(In Millions)			
Interest rate swaps	\$ 2,130	\$ 57,239	\$ 158	\$ 6,992
Currency swaps	92	1,059	75	592
Options	274	6,092	(50)	732
Asset and credit default swaps	27	1,636	-	65
Forward contracts	13	1,646	(9)	1,792
Financial futures - short positions	-	462	-	-
Financial futures - long positions	-	2,959	-	-
Total	\$ 2,536	\$ 71,093	\$ 174	\$ 10,173

	December 31, 2009			
	Assets		Liabilities	
	Carrying Value	Notional Amount	Carrying Value	Notional Amount
	(In Millions)			
Interest rate swaps	\$ 1,979	\$ 48,048	\$ 95	\$ 4,240
Currency swaps	112	1,057	87	665
Options	387	8,756	(46)	740
Asset and credit default swaps	53	1,110	(1)	93
Interest rate caps and floors	3	340	-	-
Forward contracts	2	1,617	(9)	1,814
Financial futures - long positions	-	580	-	-
Total	\$ 2,536	\$ 61,508	\$ 126	\$ 7,552

Notional amounts do not represent amounts exchanged by the parties and thus are not a measure of the Company's exposure. The amounts exchanged are calculated on the basis of the notional amounts and the other terms of the instruments, which relate to interest rates, exchange rates, security prices, or financial and other indices.

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5. Fair value of financial instruments

The following fair value disclosure summarizes the Company's financial instruments:

	December 31, 2010		December 31, 2009	
	Carrying Value	Fair Value	Carrying Value	Fair Value
(In Millions)				
Financial assets:				
Bonds				
U. S. government and agencies	\$ 9,269	\$ 9,365	\$ 14,012	\$ 13,125
All other governments	116	143	116	133
States, territories and possessions	1,474	1,458	1,179	1,278
Special revenue	2,046	2,211	1,553	1,663
Industrial and miscellaneous	36,428	37,694	30,627	30,034
Credit tenant loans	96	109	109	119
Parent, subsidiaries and affiliates	5,311	5,261	3,219	3,014
Preferred stocks	322	342	135	149
Common stock - unaffiliated	244	244	252	252
Common stock - affiliated ⁽¹⁾	401	401	274	274
Mortgage loans - commercial	9,653	9,792	9,554	9,183
Mortgage loans - residential	2,513	2,420	2,617	2,436
Cash, cash equivalents and short-term investments	1,590	1,590	2,707	2,707
Derivatives				
Interest rate caps and floors	-	-	3	3
Forward contracts	13	13	2	2
Interest rate swaps	2,130	2,130	1,979	1,979
Currency swaps	92	92	112	112
Asset and credit default swaps	27	27	53	53
Options	274	274	387	387
Financial liabilities:				
Commercial paper	250	250	250	250
Securities sold under agreements to repurchase	4,163	4,163	3,739	3,739
Funding agreements	2,299	2,373	1,525	1,588
Investment-type insurance contracts:				
Group annuity investment contracts	6,787	7,275	6,953	7,317
Individual annuity investment contracts	7,303	7,514	6,819	6,883
Guaranteed investment contracts	18	18	26	27
Supplementary investment contracts	1,045	1,045	1,035	1,035

⁽¹⁾ Common stocks - affiliated does not include MMHLLC which had a statutory carrying value of \$2,502 million as of December 31, 2010 and \$2,627 million as of December 31, 2009.

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	December 31, 2010		December 31, 2009	
	Carrying Value	Fair Value	Carrying Value	Fair Value
(In Millions)				
Financial liabilities (continued):				
Derivatives				
Forward contracts	\$ (9)	\$ (9)	\$ (9)	\$ (9)
Interest rate swaps	158	158	95	95
Currency swaps	75	75	87	87
Asset and credit default swaps	-	-	(1)	(1)
Options	(50)	(50)	(46)	(46)

The use of different assumptions or valuation methodologies may have a material impact on the estimated fair value amounts.

Level 3 bonds as defined below were 27.2% of the total fair value of bonds as of December 31, 2010 and 25.0% as of December 31, 2009.

The average fair value of outstanding derivative financial instrument assets over the course of the year was \$2,536 million as of December 31, 2010 and \$3,157 million as of December 31, 2009. The average fair value of outstanding derivative financial instrument liabilities over the course of the year was \$150 million as of December 31, 2010 and \$254 million as of December 31, 2009.

Fair value hierarchy

For the year ended December 31, 2010, there were no significant changes to the Company's valuation techniques.

The Company's valuation techniques are based upon observable and unobservable pricing inputs. Observable inputs reflect market data obtained from independent sources based on trades of securities, while unobservable inputs reflect the Company's market assumptions. These inputs comprise the following fair value hierarchy:

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 and 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 quotable 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 quotable 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 an inactive market. Investments which 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 that are not directly observable or correlated with observable market data. Typical inputs which are integrated in the Company's internal discounted cash flow models

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and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings, benchmark yields such as the London Inter-bank Offering Rate, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments which are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

The fair value for investment-type insurance contracts and funding agreements is determined as follows:

The fair value of group annuity investment contracts is determined by multiplying the book value of the contract by an average market value adjustment factor. The market value adjustment factor is directly related to the difference between the book value of client liabilities and the present value of installment payments discounted at current market value yields. The market value yield is measured by the Barclay's Aggregate Bond Index and the installment period is equivalent to the duration of the Company's invested asset portfolio.

The fair value of individual annuity investment 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 market value. For contracts with longer durations, guaranteed investment contracts, funding agreements, and 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 receiving dividends are accumulated at the average minimum guaranteed rate and discounted at the risk-free rate. All others are valued using cash flow projections from the Company's asset-liability management analysis.

The fair value of short-term debt instruments with a maturity less than 30 days is assumed to be equal to the book value. The Company generally uses unadjusted quotable market prices from independent brokers, when available, to determine the fair value of debt instruments with a maturity greater than 30 days.

Assets that are carried at fair value on a recurring basis are those that are marked to market at regular intervals. All of the Company's financial instruments that are carried at fair value are measured on a recurring basis.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The following tables present the Company's fair value hierarchy for financial instruments which are carried at fair value:

	December 31, 2010				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
	(In Millions)				
Financial assets:					
Bonds					
Industrial and miscellaneous	\$ -	\$ 74	\$ 46	\$ -	\$ 120
Parent, subsidiaries and affiliates	-	10	20	-	30
Preferred stocks NAIC 4-6	2	-	-	-	2
Common stock - unaffiliated	77	9	158	-	244
Common stock - affiliated ⁽²⁾	-	332	69	-	401
Cash equivalents and					
short-term investments ⁽³⁾	-	1,166	-	-	1,166
Separate account assets ⁽⁴⁾	35,704	9,419	272	-	45,395
Derivatives					
Forward contracts	-	38	-	(25)	13
Interest rate swaps	-	3,799	-	(1,669)	2,130
Currency swaps	-	159	-	(67)	92
Asset and credit default swaps	-	40	-	(13)	27
Options	-	338	-	(64)	274
Total financial assets carried at fair value	\$ 35,783	\$ 15,384	\$ 565	\$ (1,838)	\$ 49,894
Financial liabilities:					
Derivatives					
Forward contracts	\$ -	\$ 16	\$ -	\$ (25)	\$ (9)
Interest rate swaps	-	1,827	-	(1,669)	158
Currency swaps	-	142	-	(67)	75
Asset and credit default swaps	-	13	-	(13)	-
Options	-	14	-	(64)	(50)
Total financial liabilities carried at fair value	\$ -	\$ 2,012	\$ -	\$ (1,838)	\$ 174

⁽¹⁾ Netting adjustments represent offsetting positions that may exist under a master-netting agreement with a counterparty where amounts due from the counterparty are offset against amounts due to the counterparty.

⁽²⁾ Common stocks – affiliated does not include MMHLLC which had a statutory carrying value of \$2,502 million.

⁽³⁾ Does not include cash of \$424 million.

⁽⁴⁾ \$1,249 million of book value separate account assets and \$641 million of market value separate account assets are not carried at fair value and therefore, not included in this table. In addition, \$370 million was reclassified from Level 3 to Level 2 to conform with management's classifications.

For the year ended December 31, 2010 there were no significant transfers between Level 1 and Level 2.

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	December 31, 2009				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
	(In Millions)				
Financial assets:					
Bonds	\$ -	\$ 126	\$ -	\$ -	\$ 126
Preferred stocks NAIC 4-6	3	3	13	-	19
Common stocks - unaffiliated	64	27	161	-	252
Common stock - affiliated ⁽²⁾	-	210	64	-	274
Derivative financial instruments	-	3,566	1	(1,031)	2,536
Cash equivalents and short-term investments ⁽³⁾	-	2,028	-	-	2,028
Separate account assets ⁽⁴⁾	31,959	9,444	301	-	41,704
Total financial assets carried at fair value	\$ 32,026	\$ 15,404	\$ 540	\$ (1,031)	\$ 46,939
Financial liabilities:					
Derivative financial instruments	\$ -	\$ 1,155	\$ 2	\$ (1,031)	\$ 126

⁽¹⁾ Netting adjustments represent offsetting positions that may exist under a master-netting agreement with a counterparty where amounts due from the counterparty are offset against amounts due to the counterparty.

⁽²⁾ Common stocks – affiliated does not include MMHLLC which had a statutory carrying value of \$2,627 million.

⁽³⁾ Does not include cash of \$679 million.

⁽⁴⁾ \$1,370 million of book value separate account assets and \$568 million of market value separate account assets are not carried at fair value and therefore, not included in this table. In addition, \$370 million was reclassified from Level 3 to Level 2 to conform with management's classifications.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The following tables present changes in the Company's Level 3 financial instruments which are carried at fair value:

	Balance as of 12/31/2009	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Transfers into Level 3 ⁽¹⁾	Transfers out of Level 3 ⁽¹⁾	Balance as of 12/31/2010
(In Millions)										
Financial assets:										
Bonds										
Industrial and miscellaneous Parent, subsidiaries and affiliates	\$ -	\$ 4	\$ (1)	\$ 10	\$ 28	\$ (20)	\$ (32)	\$ 175	\$ (118)	\$ 46
Preferred stocks NAIC 4-6	13	-	(1)	1	-	(8)	-	-	(5)	-
Common stock - unaffiliated	161	7	(1)	6	1	(16)	-	-	-	158
Common stock - affiliated	64	4	4	136	6	(136)	(9)	-	-	69
Separate account assets ⁽²⁾	301	18	24	71	-	(125)	(20)	3	-	272
Derivatives:										
Interest rate swaps	1	(1)	-	-	-	-	-	-	-	-
Total Level 3 financial assets carried at fair value	\$ 540	\$ 32	\$ 33	\$ 224	\$ 103	\$ (305)	\$ (129)	\$ 190	\$ (123)	\$ 565
Financial liabilities:										
Derivatives										
Interest rate swaps	\$ 2	\$ (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

⁽¹⁾ The majority of transfers into/out of Level 3 for bonds are related to NAIC Category 6 bonds. These bonds had previously been separately stated as being held at fair value on a non-recurring basis. The NAIC recently stated that all assets carried at fair value should be reported together.

⁽²⁾ Reclassed \$370 million from Level 3 to Level 2 to conform with management's classifications.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

	Balance as of 12/31/2008	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Acquisitions and (Dispositions)	Transfers Into (Out of) Level 3	Balance as of 12/31/2009
(In Millions)						
Financial assets:						
Preferred stocks NAIC 4-6	\$ 7	\$ 2	\$ 6	\$ (2)	\$ -	\$ 13
Common stock - unaffiliated	73	1	15	87	(15)	161
Common stock - affiliated	126	(6)	6	(47)	(15)	64
Derivative financial instruments	8	(7)	-	-	-	1
Cash, cash equivalents and short-term investments	1	-	-	-	(1)	-
Separate account assets ⁽¹⁾	358	(28)	53	(54)	(28)	301
Total Level 3 financial assets carried at fair value	<u>\$ 573</u>	<u>\$ (38)</u>	<u>\$ 80</u>	<u>\$ (16)</u>	<u>\$ (59)</u>	<u>\$ 540</u>
Financial liabilities:						
Derivative financial instruments	\$ 5	\$ (3)	\$ -	\$ -	\$ -	\$ 2

⁽¹⁾ Reclassed \$370 million from Level 3 to Level 2 to conform with management's classifications.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

6. Fixed assets

The Company's fixed assets, both admitted and nonadmitted, primarily include internally developed and purchased software, electronic data processing equipment, office equipment and furniture. The following summarizes fixed assets:

	December 31, 2010		Year Ended December 31, 2010
	Carrying Amount	Accumulated Depreciation	Depreciation
	(In Millions)		
Data processing	\$ 18	\$ 78	\$ 10
Workstations	2	31	2
Connectivity	3	41	2
Subtotal EDP	23	150	14
Internally developed software	106	160	2
Leasehold improvements	8	16	2
Furniture	5	66	1
Other	-	1	-
Total fixed assets	\$ 142	\$ 393	\$ 19

	December 31, 2009		Year Ended December 31, 2009
	Carrying Amount	Accumulated Depreciation	Depreciation
	(In Millions)		
Data processing	\$ 15	\$ 68	\$ 8
Workstations	2	30	2
Connectivity	3	39	3
Subtotal EDP	20	137	13
Internally developed software	60	164	31
Leasehold improvements	9	14	2
Furniture	2	65	9
Other	1	1	-
Total fixed assets	\$ 92	\$ 381	\$ 55

7. Deferred and uncollected life insurance premium

Deferred and uncollected life insurance premium, net of loading and reinsurance, are included in other than invested assets in the Company's Condensed Consolidated Statutory Statements of Financial Position. The table below summarizes the deferred and uncollected life insurance premium on a gross basis as well as net of loading and reinsurance.

	December 31,			
	2010		2009	
	Gross	Net	Gross	Net
	(In Millions)			
Ordinary new business	\$ 61	\$ 23	\$ 59	\$ 23
Ordinary renewal	456	511	510	563
Group life	11	11	16	16
Total	\$ 528	\$ 545	\$ 585	\$ 602

Deferred premium is the portion of the annual premium not earned at the reporting date. Loading on deferred premium is an amount obtained by subtracting the valuation net deferred premium from the gross deferred premium and generally includes allowances for acquisition costs and other expenses. Deferred premium adjusts for the overstatement created in the calculation of reserves as the reserve computation assumes the entire year's net premium is collected annually at the beginning of the policy year and does not take into account installment or modal payments. Refer to *Note 2p. "Policyholders' reserves"* for information on the Company's accounting policies regarding gross premium and net premium.

Uncollected premium is gross premium net of reinsurance that is due and unpaid as of the reporting date, net of loading. Net premium is the amount used in the calculation of reserves. The change in loading is included as an expense and is not shown as a reduction to premium income.

Ordinary new business and ordinary renewal business consist of the basic amount of premium required on the underlying life insurance policies.

8. Surplus notes

The following table summarizes the surplus notes issued and outstanding as of December 31, 2010:

Issue Year	Face Amount	Carrying Value	Interest Rate	Maturity Date
	(\$ In Millions)			
1993	\$ 250	\$ 250	7.625%	2023
1994	100	100	7.500%	2024
2003	250	249	5.625%	2033
2009	750	741	8.875%	2039
Total	\$ 1,350	\$ 1,340		

These notes are unsecured and subordinate to all present and future indebtedness of the Company, all policy claims and all prior claims against the Company as provided by the Massachusetts General Laws. The surplus notes are all held by bank custodians for unaffiliated investors. All issuances were approved by the Division. Surplus notes are included in surplus on the Condensed Consolidated Statutory Statements of Financial Position.

All payments of interest and principal are subject to the prior approval of the Division. Anticipated sinking fund payments are due for the notes issued in 1993 and 1994 as follows: \$62 million in 2021, \$88 million in 2022, \$150 million in 2023 and \$50 million in 2024. There are no sinking fund requirements for the

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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notes issued in 2003 and 2009. Scheduled interest on the notes issued in 2003 and 1993 is payable on May 15 and November 15 of each year to holders of record on the preceding May 1 or November 1, respectively. Scheduled interest on the note issued in 1994 is payable on March 1 and September 1 of each year to holders of record on the preceding February 15 or August 15, respectively. Scheduled interest on the note issued in 2009 is payable on June 1 and December 1 of each year to holders of record on the preceding May 15 and November 15, respectively. Interest expense is not recorded until approval for payment is received from the Division. Through December 31, 2010, the unapproved interest was \$12 million. As of December 31, 2010, the Company has paid cumulative interest of \$653 million on surplus notes. Interest of \$107 million and \$74 million was approved and paid during the years ended December 31, 2010 and 2009, respectively.

9. Related party transactions

The following transactions are between MassMutual and related parties.

As of December 31, 2010 and 2009, the Company reported \$28 million as amounts due from subsidiaries and affiliates and \$44 million and \$41 million, respectively, as amounts due to subsidiaries and affiliates. Terms require settlement of these amounts within 30 to 90 days.

MassMutual has an outstanding amount due to Cornerstone Real Estate Advisers, LLC of \$5 million. The note matures December 31, 2011. Interest is payable semi-annually in arrears at a 3.7% interest rate as of December 31, 2010. Interest accrued and paid was less than \$1 million for the years ended December 31, 2010 and 2009.

The Company has modified coinsurance (Modco) agreements with its unconsolidated Japanese affiliate, MassMutual Life Insurance Company, on certain life insurance products. Under these Modco agreements, the Company is the reinsurer and the Japanese affiliate retains the reserve and associated assets on traditional individual life insurance policies. The predominant contract types are whole life, endowments and term insurance. The Modco agreements are used to allow the Japanese affiliate to keep control of the investment and management of the assets supporting the reserves. The Modco adjustment is the mechanism by which the Company funds the reserve on the reinsured portion of the risk. It is needed to adjust for the financial effect of the Japanese affiliate holding the reserves on the ceded coverage rather than the Company. The net amounts due from the Japanese affiliate were \$1 million and \$2 million as of December 31, 2010 and 2009, respectively. These outstanding balances are due and payable within 90 days.

The following table summarizes the related party reinsurance transactions between the Company and the Japanese affiliate:

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Premium assumed	\$ 26	\$ 33
Modified coinsurance adjustments, included in fees and other income (expense)	30	47
Expense allowances on reinsurance assumed, included in fees and other income (expense)	(3)	(3)
Policyholders' benefits	(48)	(69)

MassMutual has management and service contracts and cost-sharing arrangements with various subsidiaries and affiliates where MassMutual, for a fee, will furnish a subsidiary or affiliate, as required, operating facilities, human resources, computer software development and managerial services.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

MassMutual has agreements with its subsidiaries and affiliates, including OFI and Baring International Investment Limited (Baring), where MassMutual receives revenue for certain recordkeeping and other services that MassMutual provides to customers who select, as investment options, mutual funds managed by these affiliates.

MassMutual has agreements with its subsidiaries, Babson Capital and Cornerstone Real Estate Advisers, LLC, which provide investment advisory services to MassMutual.

The following table summarizes the transactions between MassMutual and the related parties:

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Fee income:		
Management and service contracts and cost-sharing arrangements	\$ 58	\$ 76
Recordkeeping and other services	44	32
Investment advisory income	5	4
Fee expense:		
Investment advisory services	154	154

The Company's subsidiary, Babson Capital, invests a portion of its non-qualified compensation plan in an interest guarantee contract with the Company. The Company credited interest of \$4 million and \$1 million on deposits to this Babson Capital contract for the years ended December 31, 2010 and 2009, respectively.

10. Reinsurance

The Company cedes insurance to affiliated and unaffiliated insurers in order to limit its insurance risk. Such transfers do not relieve the Company of its primary liability and, as such, failure of reinsurers to honor their obligations could result in losses. The Company reduces this risk by evaluating the financial condition of reinsurers and monitoring for possible concentrations of credit risk. The Company reinsures a portion of its life business under either a first dollar quota-share arrangement or an in excess of the retention limit arrangement. The Company also reinsures a portion of its disability and long-term care business. The amounts reinsured are on a yearly renewable term, coinsurance or modified coinsurance basis.

Refer to *Note 9 "Related party transactions"* for more information about the Company's affiliated reinsurance transactions.

The Company did not reinsure any policies with a company chartered in a country other than the U.S., excluding U.S. branches of these companies and which was owned in excess of 10% or controlled directly or indirectly by an insured, a beneficiary, a creditor or any other person not primarily engaged in the insurance business. There are no reinsurance agreements in effect under which the reinsurer may unilaterally cancel any reinsurance for reasons other than for nonpayment of premium or other similar credits. The Company has no reinsurance agreements in effect such that the amount of losses paid or accrued through the statement date may result in a payment to the reinsurer of amounts which, in aggregate and allowing for offset of mutual credits from other reinsurance agreements with the same reinsurer, exceed the total direct premium collected under the reinsured policies.

If all reinsurance agreements were terminated by either party as of December 31, 2010, the resulting reduction in surplus due to loss of reinsurance reserve credits, net of unearned premium, would be approximately \$2,266 million assuming no return of the assets backing these reserves from the reinsurer to the Company.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
 NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Reinsurance amounts included in the Condensed Consolidated Statutory Statements of Income (Loss) were as follows:

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Direct premium	\$ 12,360	\$ 13,942
Premium assumed	110	122
Premium ceded	(853)	(819)
Total net premium	<u>\$ 11,617</u>	<u>\$ 13,245</u>
Reinsurance recoveries		
Assumed	\$ (72)	\$ (66)
Ceded	577	525

Reinsurance amounts included in the Condensed Consolidated Statutory Statements of Financial Position were as follows:

	December 31,	
	2010	2009
	(In Millions)	
Reinsurance reserves		
Assumed	\$ 728	\$ 732
Ceded	(3,297)	(3,051)
Amounts recoverable from reinsurers		
Assumed	(16)	(20)
Ceded	138	156

Reinsurance reserves ceded as of December 31, 2010 include \$2,606 million associated with life insurance policies, \$602 million for long-term care, \$73 million for disability and \$16 million for group life and health. Reinsurance reserves ceded as of December 31, 2009 include \$2,466 million associated with life insurance policies, \$488 million for long-term care, \$80 million for disability and \$17 million for group life and health.

As of December 31, 2010, one reinsurer accounted for 25% of the outstanding reinsurance recoverable and the next largest reinsurer had 15% of the balance. The Company believes that no exposure to a single reinsurer represents an inappropriate concentration of risk to the Company, nor is the Company's business substantially dependent upon any single reinsurer.

11. Policyholders' liabilities

a. Policyholders' reserves

The Company had total life insurance in force of \$446,011 million and \$438,711 million as of December 31, 2010 and 2009, respectively. Of this total, the Company had \$20,545 million and \$27,376 million of life insurance in force as of December 31, 2010 and 2009, respectively, for which the gross premium was less than the net premium according to the standard valuation set by the Division and the Department. The gross premium is less than the net premium needed to establish the reserves because the statutory reserves must use standard conservative valuation mortality tables, while the gross premium calculated in pricing uses mortality tables that reflect both the Company's experience and the transfer of mortality risk to reinsurers.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The following table summarizes policyholders' reserves, net of reinsurance, and the range of interest rates by type of product:

	December 31,							
	2010				2009			
	Amount	Interest Rates			Amount	Interest Rates		
(\$ In Millions)								
Individual life	\$ 34,578	2.5%	-	6.0%	\$ 33,388	2.5%	-	6.0%
Group life	9,502	2.5%	-	4.5%	9,327	2.5%	-	4.5%
Individual annuities	9,032	2.3%	-	11.3%	8,203	2.3%	-	11.3%
Group annuities	8,856	2.3%	-	11.3%	9,109	2.3%	-	11.3%
Individual universal and variable life	4,903	3.5%	-	6.0%	4,557	3.5%	-	6.0%
Disabled life claim reserves	1,828	3.5%	-	6.0%	1,825	3.5%	-	6.0%
Disability active life reserves	581	3.5%	-	6.0%	574	3.5%	-	6.0%
Other	194	2.5%	-	6.0%	171	2.5%	-	4.5%
Guaranteed investment contracts	18	4.4%	-	13.0%	26	4.0%	-	13.0%
Total	<u>\$ 69,492</u>				<u>\$ 67,180</u>			

Individual life includes whole life and term insurance. Group life includes corporate-owned life insurance, bank-owned life insurance, group universal life, group variable universal life and private client group products. Individual annuities include individual annuity contracts and structured settlements. Group annuities include group annuities and single premium annuity contracts. Individual universal and variable life products include universal life, variable life and long-term care products. Disabled life claim reserves include disability income and long-term care claims that have been incurred but not reported. Disability active life reserves include disability income and long-term care contracts issued. Other is comprised of disability life and accidental death insurance.

b. Liabilities for deposit-type contracts

The following table summarizes liabilities for deposit-type contracts and the range of interest rates by type of product:

	December 31,							
	2010				2009			
	Amount	Interest Rates			Amount	Interest Rates		
(\$ In Millions)								
Funding agreements	\$ 2,299	0.3%	-	10.2%	\$ 1,525	0.4%	-	10.2%
Supplementary contracts	623	0.3%	-	8.0%	594	0.3%	-	8.0%
Dividend accumulations	583	3.4%	-	4.2%	594	3.4%	-	4.8%
Other	101	4.0%	-	8.0%	115	4.0%	-	8.0%
Total	<u>\$ 3,606</u>				<u>\$ 2,828</u>			

Funding agreements are investment contracts sold to domestic and international institutional investors. The terms of the funding agreements do not give the holder the right to terminate the contract prior to the contractually stated maturity date. No funding agreements have been issued with put provisions or ratings-sensitive triggers. Currency swaps are employed to eliminate foreign exchange risk from all funding agreements issued to back non-U.S. dollar denominated notes. Assets received for funding agreements may be invested in either the general investments of the Company or in a separate account. As of December 31, 2010 and 2009, respectively, funding agreement balances in the general investments of the Company totaled \$2,299 million and \$1,525 million, consisting of \$2,280 million and \$1,496 million in note programs and \$19 million and \$29 million in various other agreements.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Under most of the Company's funding agreement programs, the Company creates an investment vehicle or trust for the purpose of issuing medium-term notes to investors. Proceeds from the sale of the medium-term notes issued by these unconsolidated affiliates are used to purchase funding agreements from the Company. The payment terms of any particular series of notes are matched by the payment terms of the funding agreement securing the series. Notes were issued from the Company's \$2 billion European Medium-Term Note Program, with approximately \$455 million remaining in run-off, and are now issued from its \$8 billion Global Medium-Term Note Program.

As of December 31, 2010, the Company's funding agreement balances by maturity year were as follows (in millions):

2011	\$	201
2012		310
2013		633
2014		402
2015		402
Thereafter		351
Total	\$	2,299

c. Unpaid claims and claim expense reserves

The Company establishes unpaid claims and claim expense reserves to provide for the estimated costs of paying claims made under individual disability and long-term care policies written by the Company. These reserves include estimates for both claims that have been reported and those that have been incurred but not reported, and include estimates of all future expenses associated with the processing and settling of these claims. This estimation process is primarily based on the assumption that past experience is an appropriate indicator of future events and involves a variety of actuarial techniques that analyze experience, trends and other relevant factors. The amounts recorded for unpaid claims and claim expense reserves represent the Company's best estimate based upon currently known facts and actuarial guidelines. Accordingly, actual claim payouts may vary from these estimates.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The following table summarizes the disabled life unpaid claims and claim expense reserves:

	December 31,	
	2010	2009
	(In Millions)	
Claim reserves, beginning of year	\$ 1,960	\$ 1,893
Less: Reinsurance recoverables	110	84
Net claim reserves, beginning of year	1,850	1,809
Claims paid related to:		
Current year	(14)	(16)
Prior years	(293)	(280)
Total claims paid	(307)	(296)
Incurred related to:		
Current year's incurred	217	246
Current year's interest	5	6
Prior years' incurred	4	(2)
Prior years' interest	81	81
Total incurred	307	331
Adjustments through surplus	-	6
Net claim reserves, end of year	1,850	1,850
Plus reinsurance recoverables	115	110
Claim reserves, end of year	\$ 1,965	\$ 1,960

The changes in reserves for incurred claims related to prior years are generally the result of recent loss development trends. The \$4 million increase in the prior years' incurred claims for 2010 was due to unfavorable experience and the \$2 million decrease in the prior years' incurred claims for 2009 was due to actual claim terminations being more than those anticipated by the morbidity table.

The following table reconciles disabled life claim reserves to the net claim reserves at the end of the years presented in the previous table. Disabled life claim reserves are recorded in policyholders' reserves. Accrued claim liabilities are recorded in other liabilities.

	December 31,	
	2010	2009
	(In Millions)	
Disabled life claim reserves	\$ 1,828	\$ 1,825
Accrued claim liabilities	22	25
Net claim reserves, end of year	\$ 1,850	\$ 1,850

d. Additional liability for annuity contracts

Certain variable annuity contracts include additional death or other insurance benefit features, such as GMDBs, GMIBs, GMABs and GMWBs. In general, these benefit guarantees require the contract or policyholder to adhere to a company-approved asset allocation strategy. Election of these benefits on annuity contracts is generally only available at contract issue. In 2009, the Company initially suspended issuing contracts with GMIBs and GMWBs. Beginning in the first quarter of 2010 the Company began offering a newly designed GMWB on a variable annuity product.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The following table shows the liabilities for guaranteed minimum death, income, accumulation and withdrawal benefits as required by the actuarial guidelines (in millions):

Liability as of December 31, 2008	\$ 763
Incurred guarantee benefits in 2009	(233)
Paid guarantee benefits in 2009	(12)
Liability as of December 31, 2009	518
Incurred guarantee benefits in 2010	(4)
Paid guarantee benefits in 2010	(5)
Liability as of December 31, 2010	<u>\$ 509</u>

The Company held reserves in accordance with the stochastic and standard scenarios as of December 31, 2010 and 2009, respectively. As of December 31, 2010 the Company held additional reserves above those indicated based on the stochastic scenarios in order to maintain a prudent level of reserve adequacy. As of December 31, 2009 the Company held additional reserves above those indicated based on the standard scenarios in order to maintain a prudent level of reserve adequacy.

The following table summarizes the account values, net amount at risk and weighted average attained age for variable annuity contracts with guaranteed minimum death, income, accumulation and withdrawal benefits classified as policyholders' reserves and separate account liabilities. The net amount at risk is defined as the minimum guarantee less the account value calculated on a policy-by-policy basis, but not less than zero.

	December 31, 2010			December 31, 2009		
	Account Value	Net Amount at Risk	Weighted Average Attained Age	Account Value	Net Amount at Risk	Weighted Average Attained Age
	(\$ In Millions)					
Annuity:						
GMDB	\$ 11,013	\$ 283	61	\$ 9,936	\$ 735	61
GMIB	4,293	509	61	3,868	661	61
GMAB	1,416	29	57	1,050	77	58
GMWB	161	8	65	147	11	66

Account balances of variable annuity contracts with guaranteed minimum death, income, accumulation and withdrawal benefits are summarized in the table below:

	December 31, 2010				December 31, 2009			
	GMDB	GMIB	GMAB	GMWB	GMDB	GMIB	GMAB	GMWB
	(In Millions)							
Separate account	\$ 9,866	\$ 4,279	\$ 1,346	\$ 161	\$ 8,893	\$ 3,854	\$ 988	\$ 147
Company's general investments	1,147	14	70	-	1,043	14	62	-
Total	<u>\$ 11,013</u>	<u>\$ 4,293</u>	<u>\$ 1,416</u>	<u>\$ 161</u>	<u>\$ 9,936</u>	<u>\$ 3,868</u>	<u>\$ 1,050</u>	<u>\$ 147</u>

e. Additional liability for individual life contracts

Certain universal life and variable universal life contracts include features such as GMDBs or other guarantees that ensure continued death benefit coverage when the policy would otherwise lapse. The value of the guarantee is only available to the beneficiary in the form of a death benefit.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The net liability for guarantees on universal life and variable universal life type contracts was as follows:

	December 31,	
	2010	2009
	(In Millions)	
Beginning balance	\$ 1,664	\$ 1,438
Net liability increase	193	226
Ending balance	<u>\$ 1,857</u>	<u>\$ 1,664</u>

12. Debt

The Company issues commercial paper in the form of Notes in minimum denominations of \$250 thousand up to a total aggregation of \$1 billion. These Notes have maturities up to a maximum of 270 days from the date of issue and are sold at par less a discount representing an interest factor or, if interest bearing, at par. The Notes are not redeemable or subject to voluntary prepayments by the Company. Commercial paper had a carrying value and face amount of \$250 million as of December 31, 2010 and 2009. The commercial paper issued in 2010 had interest rates ranging from 0.25% to 0.37% with maturity dates ranging from 1 day to 42 days. Interest expense for the commercial paper was less than \$1 million and \$1 million for the years ended December 31, 2010 and 2009, respectively.

As of April 2010, MassMutual signed a \$1 billion 3-year credit facility, which replaced the \$500 million 5-year credit facility, with a syndicate of lenders that could be used for general corporate purposes and to support commercial paper borrowings. The new facility has an upsize option for an additional \$500 million. The terms of the credit facility provide for, among other provisions, covenants pertaining to liens, fundamental changes, transactions with affiliates and adjusted statutory surplus. As of and for the years ended December 31, 2010 and 2009, the Company was in compliance with all covenants under the credit facilities. For the years ended December 31, 2010 and 2009, there were no draws on the credit facilities. For the years ended December 31, 2010 and 2009, there were credit facility fees of less than \$1 million.

13. Employee benefit plans

The Company provides multiple benefit plans including retirement plans and life and health benefits to employees, certain employees of unconsolidated subsidiaries, agents and retirees.

a. Pension plans

The Company has funded and unfunded noncontributory defined benefit pension plans that cover substantially all employees, agents and retirees. For participants, benefits are calculated as the greater of (1) a formula based on age, service and salary during their careers or (2) a formula based on final average earnings and length of service.

The Company's policy is to fund qualified pension costs in accordance with the Employee Retirement Income Security Act of 1974. In 2010 and 2009, the Company contributed to its qualified defined benefit plan \$116 million and \$150 million, respectively.

b. Defined contribution plans

The Company sponsors funded (qualified 401(k) thrift savings) and unfunded (nonqualified deferred compensation thrift savings) defined contribution plans for all of its employees, agents and retirees. The qualified 401(k) thrift savings plan's net assets available for benefits were \$1,384 million and \$1,218 million as of December 31, 2010 and 2009, respectively. The Company match for the 401(k) thrift savings plan is 5% of eligible W-2 compensation.

The total matching thrift savings contributions by the Company were \$29 million and \$22 million for the years ended December 31, 2010 and 2009, respectively and were included in general insurance expenses.

The Company also maintains a defined contribution plan for agents, which was frozen in 2001. The net assets available for these benefits were \$192 million and \$189 million as of December 31, 2010 and 2009, respectively.

c. Other postretirement and postemployment benefits

The Company provides certain life insurance and health care benefits (other postretirement benefits) for its retired employees and agents, their beneficiaries and covered dependents. MMHLLC has the obligation to pay the Company's other postretirement benefits. Even though MMHLLC holds the obligation to pay the Company's other postretirement and postemployment benefits, this transfer does not relieve the Company of its primary liability.

MMHLLC is allocated other postretirement expenses related to interest cost, amortization of actuarial gains and losses and expected return on plan assets, whereas service cost and amortization of the transition obligation are recorded by the Company.

The health care plan is contributory; while a portion of the basic life insurance plan is noncontributory. Substantially all of the Company's U.S. employees and agents may become eligible to receive other postretirement benefits. These benefits are funded as the benefits are provided to the participants. The postretirement health care plans include a limit on the Company's share of costs for recent and future retirees.

In 2009, the Company announced a change to other postretirement benefit plans for the Company's agents to eliminate retiree life insurance coverage. This change was effective January 1, 2010 for participants retiring on or after January 1, 2010. This change to the plans had an immaterial impact to the benefit obligations. The Company provides retiree life insurance coverage for home office employees who, as of January 1, 2010, were age 50 with at least 10 years of service or had attained 75 points, generally age plus service, with a minimum 10 years of service.

Accrued Postemployment Benefits

The Company provides severance related postemployment benefits for home office employees. The net accumulated liability recorded for these benefits was \$25 million as of December 31, 2010 and 2009.

The Company accrues postemployment benefits for agents' health benefits for those agents that qualify for long-term disability and are not retired. The net accumulated liability for these benefits was \$12 million as of December 31, 2010 and 2009.

d. Benefit obligations

The initial transition obligation for other postretirement benefits of \$138 million is being amortized over 20 years through 2012, the remaining balance is \$9 million. The initial transition obligation represents the phased recognition on the Condensed Consolidated Statutory Statements of Income (Loss) of the differences between the plan's funded status and the accrued cost on the Company's Condensed Consolidated Statutory Statements of Financial Position when the Company first transitioned to statutory guidance regarding postretirement benefits other than pensions. See Section *f.* of this Note, "*Amounts recognized in the Condensed Consolidated Statutory Statements of Financial Position,*" for details on the Plan's funded status.

Accumulated benefit obligations represent the present value of pension benefits earned as of a December 31 measurement date based on service and compensation and do not take into consideration future salary.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Projected benefit obligations for pension benefits represent the present value of pension benefits earned as of a December 31 measurement date projected for estimated salary increases to an assumed date with respect to retirement, termination, disability or death.

Accumulated postretirement benefit obligations and projected postretirement benefit obligations for other postretirement benefits represent the present value of postretirement medical and life insurance benefits earned as of a December 31 measurement date projected for estimated salary and medical claim rate increases to an assumed date with respect to retirement, disability or death.

Actuarial (gains) losses represent the difference between the expected results and the actual results used to determine the projected benefit obligation, accumulated benefit obligation and current year expense. A few of the major assumptions used in this calculation include: expected future compensation levels, healthcare cost trend, mortality and expected retirement age.

The following table sets forth the change in the projected benefit obligation of the defined benefit pension and other postretirement plans:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Change in vested projected benefit obligation:				
Projected benefit obligation, beginning of year	\$ 1,647	\$ 1,547	\$ 311	\$ 285
Service cost	44	54	8	8
Interest cost	96	87	17	16
Contributions by plan participants	-	-	9	9
Plan amendments	-	-	-	(1)
Actuarial (gains) losses	(24)	71	(6)	18
Medicare prescription drug direct subsidy	-	-	2	1
Benefits paid	(90)	(84)	(26)	(26)
Change in discount rate	91	(28)	15	1
Projected benefit obligation, end of year	<u>\$ 1,764</u>	<u>\$ 1,647</u>	<u>\$ 330</u>	<u>\$ 311</u>

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The following table sets forth the change in the accumulated benefit obligation of the defined benefit pension and postretirement plans:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
(In Millions)				
Change in vested accumulated benefit obligation:				
Accumulated benefit obligation, beginning of year	\$ 1,626	\$ 1,537	\$ 311	\$ 285
Service cost	45	54	8	8
Interest cost	95	87	17	16
Contributions by plan participants	-	-	9	9
Plan amendments	-	-	-	(1)
Actuarial (gains) losses	(24)	60	(6)	18
Medicare prescription drug direct subsidy	-	-	2	1
Benefits paid	(90)	(84)	(26)	(26)
Change in discount rate	91	(28)	15	1
Accumulated benefit obligation, end of year	<u>\$ 1,743</u>	<u>\$ 1,626</u>	<u>\$ 330</u>	<u>\$ 311</u>

The following table presents the pension and other postretirement projected and accumulated benefit obligation for vested and non-vested employees:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
(In Millions)				
Projected benefit obligation for:				
Vested employees	\$ 1,764	\$ 1,647	\$ 330	\$ 311
Non-vested employees	31	25	35	31
Total projected benefit obligation	<u>\$ 1,795</u>	<u>\$ 1,672</u>	<u>\$ 365</u>	<u>\$ 342</u>
Accumulated benefit obligation for:				
Vested employees	\$ 1,743	\$ 1,626	\$ 330	\$ 311
Non-vested employees	16	10	35	31
Total accumulated benefit obligation	<u>\$ 1,759</u>	<u>\$ 1,636</u>	<u>\$ 365</u>	<u>\$ 342</u>

The determination of the discount rate is based upon rates commensurate with current yields on high quality corporate bonds as of a measurement date of December 31, 2010. A spot yield curve is developed from this data that is then used to determine the present value for the obligation. The projected plan cash flows are discounted to the measurement date based on the spot yield curve. A single discount rate is computed so that the present value of the benefits cash flow equals the present value computed using the spot yield curve. A 25 basis point change in the discount rate results in approximately a \$51 million change in the projected pension benefit obligation. The methodology includes producing a cash flow of annual accrued benefits as required by current statutory accounting guidance regarding retirement benefits. For active participants, service is projected to the end of 2010 and pensionable earnings are projected to the date of probable termination.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

e. Plan assets

The change in plan assets represents a reconciliation of beginning and ending balances of the fair value of the plan assets used to fund future benefit payments. The following table sets forth the change in plan assets:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Change in plan assets:				
Fair value of plan assets, beginning of year	\$ 1,244	\$ 964	\$ 5	\$ 6
Actual return on plan assets	148	197	-	-
Employer contributions	136	167	17	16
Contributions by plan participants	-	-	9	9
Benefits paid	(90)	(84)	(26)	(26)
Fair value of plan assets, end of year	\$ 1,438	\$ 1,244	\$ 5	\$ 5

All investments of the qualified pension plan are invested through a MassMutual group annuity contract. This contract invests in the General Investment Account option of the Company, pooled separate accounts and nonpooled separate accounts. Pooled separate account assets support more than one group annuity contract, managed by the Company. These assets are assigned for the purposes of allocating investment returns and asset gains and losses. Nonpooled separate accounts are managed by the Company and unaffiliated asset managers.

The Company's qualified pension plan assets were invested in a group annuity contract in the Company's general assets and separate accounts managed by the Company as follows:

	December 31,	
	2010	2009
	(In Millions)	
General Investment Account option	\$ 242	\$ 275
Babson Long Term Duration Bond Fund	121	-
Oppenheimer Small Capitalization Core Fund	103	116
MM Premier International Equity Fund	78	68
Oppenheimer Large Core Fund	63	159
Babson Enhanced Index Value Fund	59	52
MM Premier Capital Appreciation Fund	49	140
Oppenheimer Large Capitalization Value Fund	44	29
MM Premier Strategic Emerging Markets Fund	38	-
MM Select Small Cap Growth Fund	28	-
MM Select Small Cap Value Fund	28	-
Oppenheimer Real Estate Fund	19	15
MM Premier High Yield Fund	-	21
MM Premier Value Fund	-	17
MM Premier Enhanced Value Equity Fund	-	6
Oppenheimer Tremont Core Diversified Hedge Fund	-	5
	\$ 872	\$ 903

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The remaining balance of the Company's pension plan assets were invested with unaffiliated asset managers in the Company's separate accounts. The approximate amount of annual benefits to plan participants covered by a group annuity contract issued by the employer or related parties is estimated at \$57 million in 2011.

The Company employs a total return investment approach whereby a mix of equities and fixed-income investments are used to maximize the long-term return of plan assets with a prudent level of risk. Risk tolerance is established through consideration of plan liabilities, plan funded status and corporate financial condition. The investment portfolio contains a diversified blend of equity and fixed-income investments. Alternative assets such as a private equity fund, an equity index exchange traded fund and a bond index exchange traded fund are used to improve portfolio diversification. Investment risk is measured and monitored on an ongoing basis through quarterly investment portfolio reviews, annual liability measurements, and periodic asset and liability studies.

The target range allocations for the qualified pension plan assets are 25% to 35% domestic equity securities, 20% to 30% long duration bond securities, 15% to 25% General Investment Account option, 13% to 18% international equity securities and 5% to 15% alternative investments. Domestic equities primarily include investments in large capitalization (large-cap) companies and small capitalization (small-cap) companies. Long duration bond securities invest in several long duration bond exchange traded funds. International equities include investments in American Depository Receipts and limited partnerships which trade primarily in foreign markets in Europe, Latin America and Asia. The pension plan asset's General Investment Account option earns fixed interest, primarily comprised of an investment in an unallocated insurance contract, held by the Company. Approximately 17% and 22% of the assets of the Company's pension plan were invested in the Company's General Investment Account option through the unallocated group annuity insurance contract as of December 31, 2010 and 2009, respectively.

Plan assets have increased \$194 million, or 16%, from \$1,244 million as of December 31, 2009 to \$1,438 million as of December 31, 2010. Of the \$194 million, the actual return on plan assets was a gain of \$148 million in 2010 compared to a gain of \$197 million in 2009.

Fair Value Measurements

The Company's fair value hierarchy is defined in Note 5 "*Fair value of financial instruments.*"

The following is a description of the valuation methodologies used to measure fair value for investments.

Pooled separate accounts: Valued using the unit value calculated based on the net asset value (NAV) of the underlying pool of securities which are mutual funds. Mutual funds trade on one or more U.S. or foreign exchanges and the fair value is derived based on the closing prices for the underlying securities.

Nonpooled separate accounts: Valued using the closing price reported on the active market on which the individual securities are traded.

Cash: Is stated at cost, which is equal to fair value and held by an unaffiliated bank.

General investment account: Liquidation value based on an actuarial formula as defined under the terms of the contract. There is no observable price.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The following tables present the fair value hierarchy of the Company's pension plan assets by asset class:

	Fair Value as of December 31, 2010			
	Level 1	Level 2	Level 3	Total
	(In Millions)			
Investments:				
Pooled separate accounts:				
Common stocks				
U.S. large capitalization	\$ -	\$ 121	\$ -	\$ 121
U.S. small capitalization value	-	56	-	56
International large capitalization value	-	78	-	78
International emerging markets	-	38	-	38
Real estate	-	19	-	19
Total pooled separate accounts	-	312	-	312
Nonpooled separate accounts:				
Common stocks				
U.S. large capitalization	217	-	-	217
U.S. small capitalization	53	-	-	53
U.S. mid capitalization	81	-	-	81
International large capitalization value	8	-	80	88
International small/mid capitalization	5	-	-	5
Corporate bonds	-	1	-	1
Long duration bonds	65	-	-	65
Short term bonds	2	-	-	2
Government securities	-	157	-	157
Fixed income	72	102	-	174
Short term cash equivalents	5	-	-	5
Cash	-	36	-	36
Total nonpooled separate accounts	508	296	80	884
Total General Investment Account option	-	-	242	242
Total	\$ 508	\$ 608	\$ 322	\$ 1,438

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

	Fair Value as of December 31, 2009			
	Level 1	Level 2	Level 3	Total
	(In Millions)			
Investments:				
Pooled separate accounts:				
Common stocks				
U.S. large capitalization	\$ -	\$ 140	\$ -	\$ 140
International large capitalization value	-	68	-	68
Total pooled separate accounts	-	208	-	208
Nonpooled separate accounts:				
Common stocks				
U.S. large capitalization	222	30	-	252
U.S. small capitalization	100	-	-	100
U.S. mid capitalization	78	1	-	79
International large capitalization value	1	-	66	67
International small/mid capitalization	1	1	-	2
U.S. fixed income: High yield	-	21	-	21
Bond fund	210	-	-	210
Real estate	15	-	-	15
Multi-strategy hedge fund	-	-	5	5
Money market fund	-	4	-	4
Cash	6	-	-	6
Total nonpooled separate accounts	633	57	71	761
Total General Investment Account option	-	-	275	275
Total	\$ 633	\$ 265	\$ 346	\$ 1,244

The assets in the preceding table are held in the following funds:

General Investment Account option

The General Investment Account option is not a separate account and is offered through a group annuity contract issued by the Company.

The General Investment Account option is designed to provide stable, long-term investment growth. The option is backed by MassMutual's general investment account, which is a diversified portfolio composed primarily of high-quality, fixed-income investments, including public bonds, private placements, commercial mortgage loans and short-term investments.

The following table presents the General Investment Account option allocation by type of investment:

	December 31,	
	2010	2009
Bonds	67 %	65 %
Mortgage loans	15	15
Partnerships and LLCs	7	7
Common stocks - subsidiaries and affiliate	4	5
Other investments	3	3
Cash and cash equivalents	2	2
Real estate	1	2
Short-term investments	1	1
	<u>100 %</u>	<u>100 %</u>

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The pooled and nonpooled separate account options below are also offered through the group annuity contract issued by the Company.

Babson Enhanced Index Value Fund

This nonpooled separate account invests in domestic small-cap, mid-cap, large-cap and other fixed income securities and normally invests substantially all (but not less than 80%) of its net assets in common stocks of companies whose market capitalizations, at the time of purchase, are included in the range of companies in the Russell 1000® Value Index, the fund's benchmark index.

The nonpooled separate account subadviser, Babson Capital, believes that a systematic strategy that exploits market inefficiencies can be used to produce a portfolio for the fund that will outperform the fund's benchmark index while maintaining risk characteristics similar to the benchmark. Babson Capital will not automatically sell the stock of a company it already owns just because the company's market capitalization grows or falls outside the range of companies in the index. Babson Capital uses quantitative analysis to identify groups of stocks included within the fund's benchmark index that Babson Capital believes will outperform or underperform the index over time. Babson Capital identifies these stocks through a proprietary quantitative model that ranks all stocks within the index based on several factors relating to a company's valuation, earnings quality, stock price momentum and earnings improvement. Based on these rankings, Babson Capital constructs a broadly diversified portfolio by (a) overweighting high-ranking stocks, (b) underweighting low-ranking stocks (or not holding them at all) and (c) market-weighting those stocks that do not have especially high or low rankings.

Oppenheimer Large Capitalization Value Fund

This nonpooled separate account invests in domestic small-cap, mid-cap and large-cap common stocks. The fund can also buy other investments, including preferred stocks, rights and warrants and convertible debt securities. The fund invests in both U.S. and foreign companies, although the fund generally will not invest more than 25% of its total assets in foreign securities, including securities of issuers based in emerging markets.

In selecting securities for purchase or sale, the fund's subadviser, OFI Institutional Asset Management (OFI Institutional), selects securities one at a time. OFI Institutional uses fundamental analyses to select securities for the fund that it believes are undervalued. While this process and the interrelationship of the factors used may change over time and its implementation may vary in particular cases, OFI Institutional generally may consider one or more of the following factors when assessing a company's business prospects: future supply/demand conditions for its key products, product cycles, quality of management, competitive position in the market place, reinvestment plans for cash generated and better-than-expected earnings reports. Not all factors are relevant for every individual security. OFI Institutional may consider selling a stock for one or more of the following reasons: the stock price has reached OFI Institutional's target, the company's fundamentals appear to be deteriorating or better stock selections are believed to have been identified.

Davis Large Value Fund

This nonpooled separate account (Davis) invests in domestic small-cap, mid-cap, large-cap and international small/mid-cap and large-cap securities. The fund represents a relative value fund that is either an alternative or complement to a more traditional or deep value fund. Because of the fund's combination of a growth orientation and price discipline, it has historically participated in both growth and value oriented markets. The fund's advantage is that it provides investors the return and diversification benefits of a value fund, while participating in the upside potential of growth. Davis employs a strong price discipline with a focus on growing companies selling at value prices.

Oppenheimer Large Core Fund

This nonpooled separate account invests in a diversified mix of larger company stocks for capital appreciation potential. The portfolio managers combine fundamental research and quantitative models to identify investment opportunities among large, competitively advantaged companies whose earnings are growing faster than average, or whose shares appear to be mispriced by the market.

MM Premier Capital Appreciation Fund

This pooled separate account invests primarily in domestic large-cap common stocks of growth companies. The focus of the pooled separate account is on companies in rapidly expanding industries. These companies may be newer or established companies of any capitalization range that the subadviser believes may appreciate in value over the long term. It does not expect to invest more than 35% of assets in foreign securities, although it has the ability to invest in them without limit.

Select Blue Chip Growth

This pooled separate account seeks growth of capital over the long term. The Fund's subadviser, T. Rowe Price Associates, Inc. (T. Rowe Price), currently defines blue chip growth companies to mean firms that, in its view, are well-established in their industries and have the potential for above-average earnings growth. In selecting securities, T. Rowe Price generally seeks to identify companies with a leading market position, seasoned management and strong financial fundamentals. T. Rowe Price believes that solid company fundamentals (with an emphasis on strong growth in earnings per share or operating cash flow) combined with a positive industry outlook may potentially reward investors with strong investment performance. It is anticipated that some of the companies targeted will have good prospects for dividend growth.

Select Aggressive Growth

This pooled separate account seeks long-term capital appreciation and is managed by two subadvisers, Sands Capital Management, LLC (Sands Capital) and Delaware Management Company (DMC), each being responsible for a portion of the portfolio, but not necessarily equally weighted. Sands Capital seeks long-term capital appreciation by investing in stocks believed to have potential for dramatic wealth creation using bottom-up, fundamental research and focusing on six key investment criteria: sustainable, above average earnings growth, a leadership position, competitive advantages, a value-added focus with a clear mission, financial strength and rational valuation. Sands Capital does not typically invest in companies with market capitalizations less than \$1 billion. DMC seeks to select securities that it believes are undervalued in relation to their intrinsic value, as indicated by multiple factors, including the return on capital above its cost of capital. DMC will normally invest in common stocks of companies with market capitalizations of at least \$3 billion at the time of purchase. Each subadviser may consider selling a security for the Fund, if, for example, in its judgment, the prospects for future growth do not look promising, a more attractive opportunity is identified, if fundamentals unexpectedly change or if valuations are stretched past fair value.

MM Select Small Cap Value Fund

This pooled separate account seeks to maximize total return through investing primarily in small-cap equity securities. The fund is managed by two subadvisers, each being responsible for a portion of the portfolio, but not necessarily equally weighted. Each subadviser employs a value-based investment approach and may perform a number of analyses in considering whether to buy or sell a security for the fund. In selecting investments for the fund, one subadviser generally employs a bottom-up stock selection process that utilizes proprietary, fundamental research to identify companies it considers to be undervalued and to have the potential for significant longer-term returns. In selecting securities for the fund, the other subadviser typically seeks to exploit market inefficiencies by using proprietary research to identify small-cap companies that it considers to be undervalued and to have the potential to generate superior returns while subjecting the fund to below average levels of risk.

Oppenheimer Small Capitalization Core Fund

This nonpooled separate account invests in domestic small-cap, mid-cap, other fixed income securities and international small/mid-cap securities. The fund aims to maintain a broadly diversified portfolio across all major economic sectors by applying risk controls for both sector and position size. The fund's strategy uses separate fundamental research and quantitative models to select portfolio securities. The fundamental approach analyzes issuers on factors such as a company's financial performance and prospects, position in the industry, and strength of business model and management. OFI Institutional may also consider an industry's outlook, market trends and general economic conditions. The quantitative approach uses models to rank securities within each sector to identify potential buy and sell candidates. A number of company specific factors are analyzed in constructing the models, including valuation, fundamentals and price and earnings momentum. The combined portfolio is constructed and regularly monitored based upon several analytical tools, including quantitative investment models.

MM Select Small Cap Growth Fund

This pooled separate account invests in domestic small-cap equity securities and seeks long-term capital appreciation. The fund is managed by two subadvisers, each being responsible for a portion of the portfolio, but not necessarily equally weighted. Each subadviser employs a growth-based investment approach and may perform a number of analyses in considering whether to buy or sell a security for the fund. Each of the subadvisers uses a combination of fundamental and quantitative analyses to identify small-cap companies that it believes are experiencing or will experience rapid earnings or revenue growth.

Alternative Investment Separate Account

This nonpooled separate account includes holdings of a private equity fund, an equity index exchange traded fund and a bond index exchange traded fund.

Oppenheimer Real Estate

A fund that invests in companies that provide exposure to the commercial real estate market. The portfolio manager uses a fundamental, research driven approach to search for what he believes are high quality companies in the Real Estate Investment Trust market, among other investments. In selecting investments, the manager combines "bottom-up," or company-level, analysis with strategic sector weights based on economic and broad growth themes. Research on property, geography and capital markets helps him uncover long-term values and short-term pricing anomalies.

Harris International

This nonpooled separate account invests in international large-cap value securities and seeks to achieve its objective by investing at least 80% of its net assets in stocks of foreign companies, including companies located in Europe, Latin America and Asia. The fund may invest in securities of issuers in emerging markets. Equity securities in which the fund may invest include common stocks, preferred stocks, securities that are convertible into common stocks, depositary receipts, and rights and warrants to buy common stocks.

Harris International (Harris) utilizes a fundamental, bottom-up investment strategy. Harris seeks out companies that it believes to be trading in the market at significant discounts to their underlying values. These businesses must offer, in Harris' opinion, significant profit potential and be run by managers who think and act as owners. Harris' research analysts are generalists and search for value in the stock market wherever it may be, regardless of industry, as well as in both established and emerging markets. This structure provides analysts with a much broader perspective and allows them to assess relative values among companies in different industry sectors.

Harris' portfolio managers and analysts also look for value based on a company's normalized earnings, after adjusting for cyclical influences and asset value. A company must be selling at a significant discount to its value to be a candidate for purchase. Stocks are analyzed in terms of financial strength, the position of the company in its industry and the attractiveness of the industry. Stocks are generally sold when Harris believes that the market price has reached its intrinsic value, when Harris believes a better investment opportunity is available or when Harris loses confidence in the company's management.

MM Premier International Equity Fund

This pooled separate account invests in international large-cap securities. The fund seeks a high total rate of return over the long term. The fund invests at least 80% of assets in stocks traded primarily in foreign markets, including markets in Europe, Latin America and Asia. It focuses on well-positioned, well-managed businesses that have strong revenue growth, sustainable profit margins, capital efficiency and/or business integrity. The fund also considers the macroeconomic outlook for various regional economies. The fund tends to have less than 20% of assets invested in U.S. stocks.

T. Rowe Price Emerging Markets Stock Fund

The T. Rowe Price Emerging Markets Stock nonpooled separate account seeks long-term growth of capital through investments primarily in the common stocks of companies located (or with primary operations) in emerging markets. The fund expects to make substantially all of its investments in common stocks of companies located (or with primary operations) in emerging markets in Latin America, Asia, Europe, Africa and the Middle East.

MM Premier Strategic Emerging Markets Fund

The pooled separate account invests in international emerging markets and seeks long-term capital growth. Under normal circumstances, the fund invests at least 80% of its net assets in investments tied economically to emerging market countries. The fund considers an investment to be tied economically to an emerging market country if it is headquartered, trades on an exchange or has a substantial portion of its assets in, or derives a substantial portion of its revenues from, emerging market countries. The fund's subadviser, Baring, determines the universe of emerging market countries in which to invest, and this list may change from time to time based on Baring's assessment of a country's suitability for investment.

Goldman Sachs Asset Management Long Duration Bond Fund

The Goldman Sachs Asset Management Long Duration Bond nonpooled separate account's objective is to achieve a rate of return consistent with prudent investment risk and the preservation of capital by investing in a diversified portfolio of fixed income and government securities. The specific performance objective is to outperform the total return of the Barclays Capital U.S. Long Government/Credit Bond index (the benchmark).

Pacific Investment Management Company Long Duration Bond Fund

The Pacific Investment Management Company Long Duration Bond nonpooled separate account's objective is to achieve a rate of return consistent with prudent investment risk and the preservation of capital by investing in a diversified portfolio of fixed income, short-term bonds, government securities and cash. The specific performance objective is to outperform the total return of the Barclays Capital U.S. Long Government/Credit Bond index (the benchmark).

Babson Long Term Duration Fund

The Babson Long Term Duration nonpooled separate account's objective is to achieve a rate of return consistent with prudent investment risk and the preservation of capital by investing in a diversified portfolio of fixed income securities. The specific performance objective is to outperform the total return of the Barclays Capital U.S. Long Government/Credit Bond index (the benchmark).

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The tables below set forth a summary of changes in the fair value of the Plan's Level 3 investment assets:

	International Large Cap Value	General Investment Account Option	Multi- Strategy Hedge Fund	Total
(In Millions)				
Balance, January 1, 2010	\$ 66	\$ 275	\$ 5	\$ 346
Realized gains and (losses)	-	5	-	5
Unrealized gains	14	-	-	14
Purchases	-	33	-	33
Sales	-	(71)	(5)	(76)
Balance, December 31, 2010	\$ 80	\$ 242	\$ -	\$ 322

	International Large Cap Value	General Investment Account Option	Multi- Strategy Hedge Fund	Total
(In Millions)				
Balance, January 1, 2009	\$ 42	\$ 325	\$ 37	\$ 404
Realized gains and (losses)	-	18	(13)	5
Unrealized gains	24	-	9	33
Sales	-	(68)	(28)	(96)
Balance, December 31, 2009	\$ 66	\$ 275	\$ 5	\$ 346

Postretirement Investments

The fair value of the postretirement benefits investment of \$5 million for the years ended December 31, 2010 and 2009 are categorized as Level 1 type investments and are invested in the domestic fixed-income fund. The fund is a money market mutual fund that seeks the maximum current income that is consistent with stability of principal. The fund seeks to achieve this objective by investing in money market securities meeting specific credit quality standards.

The Company invests in cash, cash equivalents and liquid fixed-income securities to the extent necessary to satisfy reasonably anticipated routine current benefit liability amounts, with additional funds sufficient to satisfy reasonably unanticipated spikes in such liability activity.

f. Amounts recognized in the Condensed Consolidated Statutory Statements of Financial Position

Unrecognized prior service cost is the adjustment to the projected benefit obligation as a result of plan amendments. It represents the increase or decrease in benefits for service performed in prior periods. For pension benefits, this cost is amortized into net periodic benefit cost over the average remaining service-years of active employees at the time of the amendment. For other postretirement benefits, this cost is amortized into net periodic benefit cost over the average remaining lifetime of eligible employees and retirees at the time of the amendment.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

Unrecognized net actuarial gains and losses are variances between assumptions used and actual experience. These assumptions include return on assets, demographics and mortality. The unrecognized net actuarial gains and losses are amortized if they exceed 10% of the projected benefit obligation and are amortized starting in the period after they occur. For pension benefits, they exceed the limit so they are amortized into net periodic benefit cost over the remaining service-years of active employees. For other postretirement benefits for home office employees they exceed this limit so they are amortized into net periodic benefit cost over the average remaining lifetime of eligible employees and retirees.

The unrecognized net transition obligation represents the difference between the plan's funded status and the accrued cost on the Company's Condensed Consolidated Statutory Statements of Financial Position when the Company first transitioned to current statutory guidance. This is amortized into net periodic benefit cost over a period of years from adoption through 2013 for pension benefits and through 2012 for other postretirement benefits.

The prepaid pension asset is a cumulative balance of employer contributions made to the plan netted against the plan's accumulated net periodic benefit costs. The prepaid pension asset is a nonadmitted asset.

The funded status of the plan is the fair value of assets less projected benefit obligation.

The funded status of the plan is the net amount recognized adjusted for the remaining balance of unrecognized prior service cost, unrecognized net actuarial loss, unrecognized net transition obligation and the nonadmitted prepaid pension asset.

The following table sets forth the funded status of the plans and then shows how the funded status is reconciled to the net asset and/or liability recognized in the Condensed Consolidated Statutory Statements of Financial Position:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Fair value of plan assets, end of year	\$ 1,438	\$ 1,244	\$ 5	\$ 5
Less: Projected benefit obligations, end of year	1,764	1,647	330	311
Funded status, projected benefit obligation	\$ (326)	\$ (403)	\$ (325)	\$ (306)
Funded status	\$ (326)	\$ (403)	\$ (325)	\$ (306)
Unrecognized prior service cost	-	-	2	2
Unrecognized net actuarial (gains) losses	823	852	56	49
Unrecognized net transition obligation	3	4	9	14
Net amount recognized prior to nonadmitted asset	500	453	(258)	(241)
Less: Assets nonadmitted	660	609	-	-
Net amount recognized	\$ (160)	\$ (156)	\$ (258)	\$ (241)
Fair value of plan assets, end of year	\$ 1,438	\$ 1,244	\$ 5	\$ 5
Less: Accumulated benefit obligations, end of year	1,743	1,626	330	311
Funded status, accumulated benefit obligation	\$ (305)	\$ (382)	\$ (325)	\$ (306)

The qualified pension plan was underfunded by \$93 million and \$166 million for the years ended December 31, 2010 and 2009, respectively. The nonqualified pension plans are not funded and have total projected benefit obligations of \$233 million and \$237 million for the years ended December 31, 2010 and 2009, respectively.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
 NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

g. Prepaid and accrued benefit costs

The net pension amount recognized is broken into its respective prepaid and accrued benefit costs which are included in other invested assets and other liabilities, respectively, in the Company's Condensed Consolidated Statutory Statements of Financial Position.

The status of these plans is summarized below:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Amounts recognized in the Condensed Consolidated Statutory Statements of Financial Position:				
Prepaid benefit cost	\$ 660	\$ 609	\$ -	\$ -
Intangible assets	3	4	-	-
Nonadmitted asset	(660)	(609)	-	-
Total assets	<u>\$ 3</u>	<u>\$ 4</u>	<u>\$ -</u>	<u>\$ -</u>
Accrued benefit cost recognized, end of year	\$ (160)	\$ (156)	\$ (258)	\$ (241)
Additional minimum liability	(145)	(226)	-	-
Total liabilities	<u>\$ (305)</u>	<u>\$ (382)</u>	<u>\$ (258)</u>	<u>\$ (241)</u>

The change in the net amount recognized for net pension benefits is as follows:

	December 31,	
	2010	2009
	Pension Benefits	
	(In Millions)	
Net amount recognized, including nonadmitted asset, beginning of year	\$ 453	\$ 358
Employer contributions	136	167
Net periodic cost	(89)	(72)
Subtotal net amount recognized, including nonadmitted asset	<u>500</u>	<u>453</u>
Nonadmitted asset	(660)	(609)
Accrued benefit cost recognized, end of year	<u>\$ (160)</u>	<u>\$ (156)</u>

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

h. Net periodic (benefit) cost

The net periodic (benefit) cost represents the annual accounting expense or income that the Company recognized and included in general insurance expenses. The net periodic (benefit) cost in the Condensed Consolidated Statutory Statements of Income (Loss) is as follows:

	Years Ended December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Components of net periodic (benefit) cost:				
Service cost	\$ 44	\$ 54	\$ 8	\$ 8
Interest cost	96	87	17	16
Expected return on plan assets	(108)	(103)	-	-
Amortization of unrecognized transition obligation	1	1	5	5
Amortization of unrecognized net actuarial and other (gains) losses	56	33	1	1
Total net periodic cost	<u>\$ 89</u>	<u>\$ 72</u>	<u>\$ 31</u>	<u>\$ 30</u>

An additional minimum liability is required if the plan's accumulated benefit obligation exceeds plan assets and the net amount recognized. The additional minimum liability was \$145 million and \$226 million for the years ended December 31, 2010 and 2009, respectively. Increases (decreases) in the additional minimum liability, less allowable intangible assets, are included in change in minimum liability included in surplus.

The following table sets forth the change in additional minimum liability and shows the components resulting in this change. The major contributors in the change from prior year include a lower discount rate resulting in a higher accumulated benefit obligation and growth in assets primarily due to company contributions to the qualified pension plan and favorable market performance.

	December 31,	
	2010	2009
	Pension Benefits	
	(In Millions)	
Change in additional minimum liability:		
Accumulated benefit obligation, end of year	\$ (1,743)	\$ (1,626)
Fair value of plan assets, end of year	1,438	1,244
Funded status, accumulated benefit obligation	(305)	(382)
Accrued benefit cost recognized, end of year	(160)	(156)
Additional minimum liability	<u>\$ (145)</u>	<u>\$ (226)</u>

The Company anticipates that it will spend \$80 million to meet its expected obligations under its qualified and nonqualified pension plans and other postretirement benefit plans in 2011.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The expected future pension and other postretirement benefit payments and Medicare prescription drug government subsidy receipts, which reflect expected future service, are as follows:

	Pension Benefits	Other Postretirement Benefits	Medicare Prescription Drug Government Subsidy
	(In Millions)		
2011	\$ 73	\$ 22	\$ (3)
2012	77	23	(3)
2013	81	24	(3)
2014	85	25	(3)
2015	90	25	(4)
2016-2020	528	138	(21)

The net expense charged to operations for all employee and agent benefit plans are as follows:

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Pension	\$ 89	\$ 72
Health	64	60
Postretirement	31	30
Thrift	29	22
Life	3	3
Disability	2	2
Postemployment	1	5
Other benefits	5	6
Total	<u>\$ 224</u>	<u>\$ 200</u>

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
 NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

i. Assumptions

The assumptions the Company used to calculate the benefit obligations and to determine the benefit costs are as follows:

	December 31,			
	2010	2009	2010	2009
	Pension Benefits		Other Postretirement Benefits	
Weighted-average assumptions used to determine:				
Benefit obligations:				
Discount rate	5.50%	5.95%	5.30%	5.75%
Expected rate of compensation increase	4.00%	4.00%	4.00%	4.00%
Net periodic benefit cost:				
Discount rate	5.95%	5.80%	5.75%	5.80%
Expected long-term rate of return on plan assets	7.75%	8.00%	3.00%	3.00%
Expected rate of compensation increase	4.00%	4.00%	4.00%	4.00%
Assumed health care cost trend rates:				
Health care cost trend rate	-	-	7.00%	7.00%
Ultimate health care cost trend rate after gradual decrease until 2018 and 2016 for 2010 and 2009, respectively	-	-	5.00%	5.00%

The discount rate used to determine the benefit obligations as of year-end is then used to determine the expense in the next fiscal year.

The Company determines its assumptions for the expected rate of return on plan assets for its plans using a “building block” approach, which focuses on ranges of anticipated rates of return for each asset class. A weighted range of nominal rates is then determined based on target allocations for each asset class.

Assumed health care cost trend rates have a significant effect on the amounts reported for the health care plans. A one percentage point change in the assumed health care cost trend rate would have had the following effects in 2010:

	One Percentage Point Increase	One Percentage Point Decrease
	(In Millions)	
Effect on total service and interest cost	\$ 3	\$ (2)
Effect on other postretirement benefit obligation	31	(25)

14. Employee compensation plans

The Company has a long-term incentive compensation plan under which certain employees of the Company and its subsidiaries may be issued phantom share-based compensation awards. These awards include PSAR and PRS. These awards do not grant an equity or ownership interest in the Company.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

PSAR provide the participant the right to receive the appreciation in phantom stock price over the award period, providing an individual with the opportunity to share in the value created in the total enterprise. Awards can only be settled in cash equal to the gain, if any, related to the number of PSAR exercised. PSAR cliff vest at the end of three years and expire five years after the date of grant. Vested PSAR may be exercised during quarterly two-week exercise periods prior to expiration. The compensation expense for an individual award is recognized over the service period.

PRS provides the participant with the opportunity to receive the full phantom share value over the award period. This value is determined by grant price plus/minus any change in share price. PRS vests on a graded basis over five years, one third per year after years three, four and five. On each vesting date, a lump sum cash settlement is paid to the participant based on the number of shares vested multiplied by the most recent phantom stock price. Compensation expense is recognized on the accelerated attribution method. The accelerated attribution method recognizes compensation expense over the vesting period by which each separate payout year is treated as if it were, in substance, a separate award.

All awards granted under the Company's plans are compensatory classified awards. Compensation costs are based on the most recent quarterly calculated intrinsic value of the PSAR (current share price less grant price per share not less than zero) and PRS (current share price per share), considering vesting provisions, net of forfeiture assumptions and are included in the Condensed Consolidated Statutory Statements of Financial Position as a liability in general expenses due or accrued. The compensation expense for an individual award is recognized over the service period. The cumulative compensation expense for all outstanding awards in any period is equal to the change in calculated liability period over period. The requisite service period for the awards is the vesting period. Awards contain vesting conditions, whereby employees' unvested awards immediately vest at the time of retirement, death or disability with a one year exercise period after termination. A formula has been established, which serves as the basis for the phantom share price, based on the core operating earnings of the Company and its subsidiaries. This phantom share price will be calculated and communicated to all participants quarterly and used in calculating the liability of the Company based on intrinsic value.

A summary of share-based payment details representing the weighted average grant price of PRS and PSAR shares that were granted, the intrinsic value of PSAR shares exercised, the PRS liabilities paid and the fair value of shares vested during the year is as follows:

	As of and for the Years Ended	
	December 31,	
	2010	2009
Weighted average grant date fair value:		
PSAR granted during the year (whole \$)	\$ 50.31	\$ 33.00
PRS granted during the year (whole \$)	50.31	33.00
Intrinsic value:		
PSAR options exercised (in thousands)	784	42
PRS liabilities paid (in thousands)	59	133
Fair value of shares vested during the year (in thousands)	42,578	21,092

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

A summary of PSAR and PRS vested and nonvested shares is as follows:

	PSAR			PRS		
	Number of Share Units (In Thousands)	Weighted Average		Number of Share Units (In Thousands)	Weighted Average	
		Price (Whole \$)	Remaining Contract Terms (In Years)		Price (Whole \$)	Remaining Contract Terms (In Years)
Outstanding as of						
January 1, 2009	1,483	\$ 60.86	1.3	123	\$ 61.24	4.7
Granted	1,991	33.00		602	33.00	
Exercised	(128)	32.56		(4)	32.12	
Forfeited	<u>(44)</u>	31.45		<u>(16)</u>	32.28	
Outstanding as of						
December 31, 2009	3,302	44.62	2.2	705	37.62	4.1
Granted	977	50.31		429	50.31	
Exercised	(76)	43.06		(1)	34.69	
Forfeited	<u>(55)</u>	43.06		<u>(29)</u>	43.57	
Outstanding as of						
December 31, 2010	<u>4,148</u>	46.02	1.5	<u>1,104</u>	42.39	3.6
Exercisable as of						
December 31, 2010	846	\$ 47.86	-	-	\$ -	-

The PSAR compensation expense was \$25 million and \$13 million for the years ending December 31, 2010 and 2009, respectively. The PSAR accrued compensation liability was \$38 million and \$13 million as of December 31, 2010 and 2009, respectively. Unrecognized compensation expense related to nonvested PSAR awards was \$19 million and \$14 million for the years ending December 31, 2010 and 2009, respectively. The PSAR unrecognized compensation expense represents the total intrinsic value of all shares issued if 100% vested at current share price, minus current compensation liability. The nonadmitted related deferred tax benefit for the years ending December 31, 2010 and 2009 was \$8 million and \$4 million, respectively.

The PRS compensation expense was \$17 million and \$8 million for the years ending December 31, 2010 and 2009, respectively. The PRS accrued compensation liability was \$26 million and \$8 million as of December 31, 2010 and 2009, respectively. Unrecognized compensation expense related to nonvested PRS awards for the years ending December 31, 2010 and 2009 was \$39 million and \$25 million, respectively. The PRS unrecognized compensation expense represents the total value of all shares issued if 100% vested at the current share price, minus current compensation liability. Nonadmitted related deferred tax benefit for the years ending December 31, 2010 and 2009 was \$5 million and \$2 million, respectively.

All PSAR and PRS shares were canceled and reissued on June 29, 2009 in order to implement a change in formula calculation of enterprise value used to determine the phantom stock price. Original grant prices and vesting schedules remained unchanged.

15. Federal income taxes

As discussed in Note 3 "New accounting standards," the Company adopted new guidance in 2009 pertaining to accounting requirements for income taxes, which increased the potential admittance of DTAs. It provided an increase in the admissibility limitation from 10% to 15% of surplus and an increase in the reversal/realization periods from one to three years. This guidance was initially effective for 2009 annual statements and 2010 interim and annual statements and has been subsequently extended for 2011 interim and annual statements.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The net DTA or net DTL recognized in the Company's assets, liabilities and surplus are as follows:

	December 31, 2010		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 3,088	\$ 804	\$ 3,892
Statutory valuation allowance adjustment	-	(1)	(1)
Total adjusted gross DTAs	3,088	803	3,891
Total gross DTLs	(695)	(1,572)	(2,267)
Net DTA(L)	2,393	(769)	1,624
Total DTAs nonadmitted	(73)	(5)	(78)
Net admitted DTA(L)	\$ 2,320	\$ (774)	\$ 1,546

	December 31, 2009		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 2,548	\$ 598	\$ 3,146
Statutory valuation allowance adjustment	-	-	-
Total adjusted gross DTAs	2,548	598	3,146
Total gross DTLs	(629)	(791)	(1,420)
Net DTA(L)	1,919	(193)	1,726
Total DTAs nonadmitted	(753)	198	(555)
Net admitted DTA(L)	\$ 1,166	\$ 5	\$ 1,171

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 540	\$ 206	\$ 746
Statutory valuation allowance adjustment	-	(1)	(1)
Total adjusted gross DTAs	540	205	745
Total gross DTLs	(66)	(781)	(847)
Net DTA(L)	474	(576)	(102)
Total DTAs nonadmitted	680	(203)	477
Net admitted DTA(L)	\$ 1,154	\$ (779)	\$ 375

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

As permitted under this recent guidance, the Company has chosen to admit DTAs for the current reporting period in accordance with the NAIC approved revisions effective for 2009 and 2010. The amount of adjusted gross DTA admitted under each component and the resulting increased amount by tax character are as follows:

	December 31, 2010		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Federal income taxes that can be recovered	\$ 122	\$ 61	\$ 183
Remaining adjusted gross DTAs expected to be realized within 1 year	715	249	964
Total gross DTLs	1,780	487	2,267
Total admitted DTA realized within 1 year	2,617	797	3,414
Admitted DTA 3 years:			
Federal income taxes that can be recovered	122	61	183
Remaining adjusted gross DTAs expected to be realized within 3 years	1,206	249	1,455
Total gross DTLs	1,688	487	2,175
Total admitted DTA realized within 3 years	3,016	797	3,813
Increase in net admitted DTA 1 year versus 3 years	\$ 399	\$ -	\$ 399

	December 31, 2009		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Federal income taxes that can be recovered	\$ 179	\$ 37	\$ 216
Remaining adjusted gross DTAs expected to be realized within 1 year	666	(32)	634
Total gross DTLs	629	791	1,420
Total admitted DTA realized within 1 year	1,474	796	2,270
Admitted DTA 3 years:			
Federal income taxes that can be recovered	179	37	216
Remaining adjusted gross DTAs expected to be realized within 3 years	987	(32)	955
Total gross DTLs	629	791	1,420
Total admitted DTA realized within 3 years	1,795	796	2,591
Increase in net admitted DTA 1 year versus 3 years	\$ 321	\$ -	\$ 321

The ultimate realization of DTAs depends on the generation of future taxable income during the periods in which the temporary differences are deductible. Management considers the scheduled reversal of DTLs (including the impact of available carryback and carryforward periods), projected taxable income and tax-planning strategies in making this assessment. The availability of tax-planning strategies had no impact on the Company's adjusted gross DTA. The impact of available tax-planning strategies on the Company's net admitted DTA was approximately 35%, all of which was ordinary for tax purposes.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The Company's authorized control level RBC is \$1,225 million and total adjusted capital is \$12,421 million. Total admitted assets and statutory surplus at December 31, 2010 were \$141,102 million and \$10,352 million, respectively. Admitted assets and statutory surplus increased by \$399 million as disclosed in the previous table.

The provision for current tax expense on earnings is as follows:

	Years Ended December 31,	
	2010	2009
	(In Millions)	
Federal income tax expense (benefit) on operating earnings	\$ (230)	\$ (61)
Foreign income tax expense (benefit) on operating earnings	13	13
Total federal and foreign income tax expense (benefit) on operating earnings	(217)	(48)
Federal income tax expense (benefit) on net realized capital gains (losses)	22	(136)
Total federal and foreign income tax expense (benefit)	\$ (195)	\$ (184)

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The tax effects of temporary differences that give rise to significant portions of the DTAs and DTLs are as follows:

	December 31,		
	2010	2009	Change
	(In Millions)		
DTAs:			
Ordinary			
Reserve items	\$ 827	\$ 845	\$ (18)
Policy acquisition costs	547	553	(6)
Unrealized investment losses	528	-	528
Nonadmitted assets	462	334	128
Policyholders' dividends	303	305	(2)
Pension and compensation related items	250	163	87
Expense items	45	38	7
Tax credits	39	41	(2)
Investment items	-	229	(229)
Other	87	40	47
Total ordinary DTAs	3,088	2,548	540
Nonadmitted DTAs	(73)	(753)	680
Admitted ordinary DTAs	3,015	1,795	1,220
Capital			
Investment items	527	462	65
Unrealized investment losses	277	136	141
Total capital DTAs	804	598	206
Nonadmitted DTAs	(6)	198	(204)
Admitted capital DTAs	798	796	2
Admitted DTAs	3,813	2,591	1,222
DTLs:			
Ordinary			
Unrealized investment gains	-	-	-
Pension items	231	212	19
Deferred and uncollected premium	214	207	7
Reserve for audits and settlements	79	91	(12)
Other	171	119	52
Total ordinary DTLs	695	629	66
Capital			
Unrealized investment gains	1,572	791	781
Total capital DTLs	1,572	791	781
Total DTLs	2,267	1,420	847
Net admitted DTA	\$ 1,546	\$ 1,171	\$ 375

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The change in net deferred income taxes before the exclusion of amounts nonadmitted, less the deferred tax portions of the components of the Condensed Consolidated Statutory Statements of Changes in Surplus shown below which are reported net of taxes, results in the reported change in net deferred income taxes.

	Years Ended December 31,	
	2010	2009
	<u>(In Millions)</u>	
Net DTA(L)	\$ (102)	\$ 478
Less: Items not recorded in the change in net deferred income taxes:		
Tax-effect of unrealized gains/losses	112	(393)
Cumulative effect of adoption of accounting principles	-	(20)
Change in net deferred income taxes	<u>\$ 10</u>	<u>\$ 65</u>

As of December 31, 2010, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has total tax credit carryforwards of \$39 million in deferred taxes.

The components of federal and foreign income tax on operating items is recorded on the Condensed Consolidated Statutory Statements of Income (Loss) and Condensed Consolidated Statutory Statements of Changes in Surplus and is different from that which would be obtained by applying the prevailing federal income tax rate to operating income before taxes. The significant items causing this difference are as follows:

	Years Ended December 31,	
	2010	2009
	<u>(In Millions)</u>	
Provision computed at statutory rate	\$ 191	\$ (142)
Investment items	(203)	(129)
Nonadmitted assets	(129)	10
Tax credits	(42)	(46)
Expense items	(40)	58
Change in reserve valuation basis	12	(12)
Foreign governmental income taxes	10	7
Other	(4)	5
Total statutory income tax expense (benefit)	<u>\$ (205)</u>	<u>\$ (249)</u>
Federal and foreign income tax expense (benefit)	\$ (195)	\$ (184)
Change in net deferred income taxes	(10)	(65)
Total statutory income tax expense (benefit)	<u>\$ (205)</u>	<u>\$ (249)</u>

Based on cash taxes paid or refunded with respect to its filed returns, the Company received refunds of federal income taxes in the amount of \$299 million and \$513 million during the years ended December 31, 2010 and 2009, respectively. During the year ended December 31, 2008, the Company paid federal income taxes in the amount of \$3 million. As a result of the aforementioned refunds, there are no federal income taxes available for recovery of the current year or future net losses.

The Company and its eligible U.S. subsidiaries are included in a consolidated U.S. federal income tax return. The Company and its subsidiaries and affiliates also file income tax returns in various states and foreign jurisdictions. The Company and its eligible subsidiaries and certain affiliates (the Parties) have executed and are subject to a written tax allocation agreement (the Agreement). The Agreement sets forth the manner in which the total combined federal income tax is allocated among the Parties. The Agreement provides the Company with the enforceable right to recoup federal income taxes paid in prior years in the event of future net losses, which it may incur. Further, the Agreement provides the Company with the enforceable right to utilize its net losses carried forward as an offset to future net income subject to federal income taxes.

Companies generally are required to disclose unrecognized tax benefits, which are the tax effect of positions taken on their tax returns which may be challenged by the various taxing authorities, in order to provide users of financial statements more information regarding potential liabilities. For statutory purposes, the NAIC is still evaluating this disclosure requirement. Because statutory guidance has not been issued, the Company has not yet determined the statutory impact of adoption on its statutory financial statements. The Company continues to recognize tax benefits and related reserves in accordance with existing statutory accounting guidance for liabilities, contingencies and impairments of assets.

The Internal Revenue Service (IRS) has completed its examination of the years 2005 and prior. The IRS is currently auditing the years 2006 and 2007. The Company does not expect a material change in its financial position or liquidity as a result of these audits. MassMutual is currently in litigation with the federal government regarding the timing of the deduction for certain policyholder dividends for tax years 1995 to 1997. MassMutual is currently awaiting a decision from the U.S. Court of Federal Claims. As of December 31, 2010 and 2009, the Company had no protective deposits recognized as admitted assets.

The American Recovery and Reinvestment Act of 2009, enacted in February 2009, provided a one year extension of the 50% first year bonus depreciation. In addition, a deferral of up to five years is provided for income from reacquisition of business debt at a discount for 2009 and 2010. The Worker, Homeownership, and Business Assistance Act, enacted in November 2009, allows life insurance companies to carryback losses from operations in one taxable year beginning after December 31, 2007 and beginning before January 1, 2010, for up to five years, instead of three years as previously allowed. The amount of the loss that can be carried back to the fifth preceding year is limited to 50% of the taxable income for that year. The Small Business Jobs Act of 2010, enacted in September 2010, provided an additional one year extension of the 50% first year bonus depreciation for property placed in service in 2010. The Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010 became law on December 17, 2010. This Act allows the extension of 50% bonus depreciation through 2012 and 100% expensing allowance for property placed in service after September 8, 2010, through 2011. These new tax provisions will not have a material effect on the Company's financial position or liquidity.

16. Business risks, commitments and contingencies

a. Risks and uncertainties

The Company operates in a business environment subject to various risks and uncertainties. Such risks and uncertainties include, but are not limited to, currency exchange risk, interest rate risk and credit risk. Interest rate risk is the potential for interest rates to change, which can cause fluctuations in the value of investments and amounts due to policyholders. To the extent that fluctuations in interest rates cause the duration of assets and liabilities to differ, the Company controls its exposure to this risk by, among other things, asset/liability management techniques that account for the cash flow characteristics of the assets and liabilities.

Currency exchange risk

The Company has currency risk due to its non-U.S. dollar investments and medium-term notes along with its international operations. 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.

Investment and interest rate risks

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

As interest rates decline, certain securities are more susceptible to pay-downs and prepayments. During such periods, the Company generally will not be able to reinvest the proceeds at comparable yields. Lower interest rates will likely result in lower net investment income and, if declines are sustained for a long period of time, the Company may be subject to reinvestment risks. Declining interest rates also result in increases in the fair value of the investment portfolio.

Interest rates also have an impact on the Company's products with guaranteed minimum payouts and interest credited to account holders. As interest rates decrease, investment spreads may shrink as interest rates approach minimum guarantees, leading to an increased liability to the Company. Due to the continued low interest rate environment, management is expecting the lower yields on purchases of fixed maturity investments to persist.

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 equity markets may result in corresponding increases and decreases in the Company's separate account assets and related revenue.

Credit and other market risks

Credit risk is the risk that issuers of investments owned by the Company may default or that other parties may not be able to pay amounts due to the Company. The Company attempts to manage its investments to limit credit risk by diversifying its portfolio among various security types and industry sectors, as well as purchasing credit default swaps to transfer some of the risk.

Beginning in 2007, declining U.S. housing prices led to higher delinquency and loss rates, reduced credit availability, and reduced liquidity in the residential loan and securities markets. The decline in housing prices was precipitated by several years of rising residential mortgage rates, and relaxed underwriting standards by residential mortgage loan originators and substantial growth in affordability mortgage products including pay option adjustable rate mortgages and interest only loans.

The downturn in housing prices caused a decline in the credit performance of RMBS securities with unprecedented borrower defaults. Market pricing was affected both by the deterioration in fundamentals as well as reduced liquidity and higher risk premium demanded by investors. Housing fundamentals stabilized in late 2009 and in 2010, creating an improvement in liquidity in the housing market as well. However, the mortgage sector continues to be affected by significant uncertainty over the foreclosure process, including the possibility of further home price declines and other factors. These concerns continue to affect security valuations and liquidity conditions in the securitized mortgage market.

The Company has implemented a review process for determining the nature and timing of OTTI on securities containing these risk characteristics. Cash flows are modeled for all bonds deemed to be at risk for impairment using prepayment, default, and loan loss severity assumptions that vary according to collateral attributes and house price trends since origination. These assumptions are reviewed quarterly and changes are made as market conditions warrant.

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Internal models utilized in testing for impairment calculate the present value of cash flows expected to be received over the average life of the security, discounted at the purchase yield or discount margin. RMBS, CMBS and commercial mortgage loans are highly sensitive to evolving conditions that can impair the cash flows realized by investors and the ultimate emergence of losses is subject to uncertainty. If defaults were to increase above the stresses imposed in the Company's analysis or default severities were to be worse than expected, management would need to reassess whether such credit events have changed the Company's assessment of OTTI in light of changes in the expected performance of these assets. Weak new issue market conditions, coupled with uncertain rating agency requirements, continue to adversely affect lenders' underwriting appetite for new financing arrangements and hence could lead to a diminished ability to refinance the underlying mortgages. Also, a further downturn of the economy and the real estate market and high levels of unemployment could result in continued defaults and ultimately, additional recognition of OTTI.

Management's judgment regarding OTTI and estimated fair value depends upon evolving conditions that can alter the anticipated cash flows realized by investors and is also affected by the illiquid credit market environment, which makes it difficult to obtain readily determinable prices for RMBS and other investments, including leveraged loan exposure. Further deterioration in economic fundamentals, including factors such as high levels of unemployment and additional declines in the housing market, could affect management judgments regarding OTTI. In addition, deterioration in market conditions may affect carrying values assigned by management. These factors could negatively impact the Company's results of operations, surplus, and disclosed fair values.

The Company has investments in structured products that are exposed primarily to the credit risk of corporate bank loans, corporate bonds or credit default swap contracts referencing corporate credit risk. Most of these structured investments are backed by corporate loans and are commonly known as Collateral Loan Obligations which are classified as CDOs. The portfolios backing these investments are actively managed and diversified by industry and individual issuer concentrations. Due to the complex nature of CDOs and the reduced level of transparency to the underlying collateral pools for many market participants, the recovery in CDO valuations has generally lagged the overall recovery in the underlying assets. Management believes its scenario analysis approach, based on actual collateral data and forward looking assumptions, does capture the credit and most other risks in each pool. However, in a rapidly changing economic environment the credit and other risks in each collateral pool will be more volatile and actual credit performance of each CDO investment may differ from our assumptions.

In spite of ongoing concerns over sovereign issuers in certain parts of Europe, the risks related to the Company's investments in European leveraged loans have continued to decrease, as a strong recovery in European corporate earnings continues to take hold and secondary loan market liquidity and pricing steadily improved over the second half of 2010. Default rates continued to fall during 2010 from a peak during the third quarter of 2009, and are currently declining towards their long-term historical averages.

Current market conditions have resulted in increased risks in the Company's mortgage loan portfolio. Real estate fundamentals such as occupancy, rental rates and rental terms generally weakened across all property types during 2009. The current credit market environment has also resulted in a shortage of lending to address loans maturing in the near term. Accordingly, while default rates are currently at low levels and the Company continues to proactively manage its risks, the overall economic factors may lead to increased defaults until the market and economy recover.

Market risk arises within the Company's employee benefit plans to the extent that the obligations of the plans are not fully matched by assets with determinable cash flows. Pension and postretirement obligations are subject to change due to fluctuations in the discount rates used to measure the liabilities as well as factors such as changes in inflation, salary increases and participants living longer. The risks are that market fluctuations could result in assets which are insufficient over time to cover the level of projected benefit obligations. In addition, increases in inflation and members living longer could increase the pension and postretirement obligations. Management determines the level of this risk using reports prepared by independent actuaries and takes action, where appropriate, in terms of setting investment

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strategy and determining contribution levels. In the event that the pension obligations arising under the Company's employee benefit plans exceed the assets set aside to meet the obligations, the Company may be required to make additional contributions or increase its level of contributions to these plans.

b. Leases

The Company leases office space and equipment in the normal course of business under various noncancelable operating lease agreements. Additionally, the Company, as lessee, has entered into various sublease agreements with affiliates for office space, such as OFI and Babson Capital. Total rental expense on net operating leases, recorded in general insurance expenses, was \$82 million and \$45 million for the years ended December 31, 2010 and 2009, respectively. Net operating leases are net of \$28 million of sublease receipts for the years ended December 31, 2010 and 2009.

In November 2009, the Company entered into a sale-leaseback transaction with an unrelated party to sell and leaseback furniture, equipment and software, with a book value of \$190 million, which was previously included in other than invested assets. The lease terms are for five years with annual lease payments of \$38 million. At the end of the lease, the Company has the option of purchasing the furniture, equipment and software at fair value. The assets were sold at book value, resulting in no gain or loss recognition.

Future minimum commitments for all net operating lease contractual obligations as of December 31, 2010 were as follows:

	Gross Operating Leases	Affiliated Subleases	Unaffiliated Subleases	Net Operating Leases
	(In Millions)			
2011	\$ 98	\$ 22	\$ 1	\$ 75
2012	90	17	-	73
2013	83	15	-	68
2014	69	9	-	60
2015	26	9	-	17
Thereafter	69	36	-	33
Total	\$ 435	\$ 108	\$ 1	\$ 326

c. Guaranty funds

The Company is subject to insurance guaranty fund laws in the states in which it does business. These laws assess insurance companies amounts to be used to pay benefits to policyholders and policy claimants of insolvent insurance companies. Many states allow these assessments to be credited against future premium taxes. The Company believes such assessments in excess of amounts accrued will not materially impact its financial position, results of operations or liquidity.

d. Litigation

The Company is involved in litigation arising in and out of the normal course of business, which seeks both compensatory and punitive damages. While the Company is not aware of any actions or allegations that should reasonably 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 operating results for a particular period depending upon, among other factors, the size of the loss or liability and the level of the Company's income for the period.

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Monte K. Freeman (Freeman) filed a putative class action complaint against MML Bay State in January 2010 in federal court in Connecticut. Freeman alleges that MML Bay State breached its variable universal life insurance contract by deducting charges unrelated to mortality in the mortality component of its cost of insurance charges. Upon MML Bay State's motion, the Connecticut court transferred the case to federal court in New Jersey. On January 4, 2011, the court issued an order, dated December 22, 2010, granting MML Bay State's motion for summary judgment. Freeman has provided notice of intent to appeal the decision.

Christina Chavez (Chavez) filed a putative class action complaint against MassMutual in April 2010. Chavez alleges that MassMutual breached its obligations to its term life policyholders in California, by failing to pay dividends on those policies. Formal written discovery requests have been exchanged by all parties. No reasonable estimate can be made regarding the potential liability or the amount of any loss that may result from this claim.

In 2009, numerous lawsuits were filed as putative class actions in connection with the investment performance of certain municipal bond funds advised by OFI and distributed by its subsidiary, OFDI. The Rochester Suits (Rochester Suits) lawsuits raise claims under federal securities laws alleging that, among other things, the disclosure documents of these funds contained misrepresentations and omissions, that the investment policies of these funds were not followed and that these funds and other defendants violated federal securities laws and regulations and certain state laws. The Rochester Suits have been consolidated into seven groups, one for each of the funds, and are currently pending in federal district court in Colorado. Amended complaints and motions to dismiss have been filed in the Rochester Suits. MassMutual and OAC believe that it is premature to render any opinion as to the likelihood of an outcome unfavorable to it and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

In May 2009, MassMutual was named as a defendant in a private action related to certain losses in a Bank Owned Life Insurance (BOLI) contract issued by MassMutual. The plaintiff alleges, among other things, fraud, breach of contract and breach of fiduciary duty claims against MassMutual and seeks to recover losses arising from investments under the BOLI contract. MassMutual believes it has substantial defenses in this action. It is premature to render any opinion as to the likely extent of outcomes unfavorable to MassMutual or as to the aggregate amount or range of potential losses. No loss contingency has been recorded as of December 31, 2010.

Since December 2008, MassMutual and MMHLLC have been named as defendants in a number of putative class action and individual lawsuits filed by investors seeking to recover investments they allegedly lost as a result of the "Ponzi" scheme run by Bernard L. Madoff through his company, Bernard L. Madoff Investment Securities, LLC (BLMIS). The plaintiffs allege a variety of state law and federal securities claims against MassMutual and/or MMHLLC seeking to recover losses arising from their investments in several funds managed by Tremont Group Holdings, Inc. (Tremont) or Tremont Partners, Inc., including Rye Select Broad Market Prime Fund, L.P., Rye Select Broad Market Fund, L.P., American Masters Broad Market Prime Fund, L.P., American Masters Market Neutral Fund, L.P. and/or Tremont Market Neutral Fund, L.P. Tremont and its subsidiary, Tremont Partners, Inc., are indirect subsidiaries of MMHLLC. MassMutual and MMHLLC believe they have substantial defenses and will vigorously defend themselves in these actions. Certain of those lawsuits have been consolidated in three groups of suits pending in the U.S. District Court for the Southern District of New York. A number of these lawsuits have been filed in state courts in Florida, New York, California, Washington, Texas and Connecticut by investors in Tremont Funds against Tremont, and in certain cases against MassMutual, MMHLLC and other defendants, raising claims similar to those in the consolidated federal litigation. Those cases are in various stages of litigation, and some of them have been stayed pending the outcome of the federal litigation. MassMutual and MMHLLC have not recorded a loss contingency in their financial statements relating to these lawsuits because MassMutual and MMHLLC believe the uncertainties arising from the complexity of these suits and collateral proceedings, make it premature to render any opinion as to the likelihood of an outcome unfavorable to them, and that no estimate can yet be made with any degree of certainty as to the amount or range of any potential loss.

In 2009, the Trustee appointed under the Securities Investor Protection Act to liquidate BLMIS notified Tremont that the bankruptcy estate of BLMIS has purported preference and fraudulent transfer claims against Tremont's Rye Select Broad Market funds and certain other Tremont-managed funds to recover redemption payments received from BLMIS by certain of those Rye Select funds. In addition, in December 2010, the Trustee filed suit in the U.S. Bankruptcy Court for the Southern District of New York against Tremont, OAC, MassMutual and others. The suit was filed under seal and has not yet been served on any of the putative defendants. In the opinion of management, and after consultation with counsel, the Company does not expect to have any direct liability related to the resolution of any such claims that may be asserted by the Trustee. Certain of these Tremont funds, in turn, have notified the Trustee of substantial claims by them against BLMIS. Tremont has been negotiating with the Trustee on behalf of those funds in an attempt to reach a mutually acceptable settlement of the Trustee's claims. There is no guarantee that Tremont will be successful in effecting such settlement.

e. 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. The outcome of a particular matter may be material to the Company's operating results for a particular period depending upon, among other factors, the financial impact of the matter and the level of the Company's income for the period.

f. Commitments

In the normal course of business, the Company provides specified guarantees and funding to MMHLLC and certain of its subsidiaries. As of December 31, 2010 and 2009, the Company had approximately \$75 million of unsecured funding commitments. The unsecured commitments are included in private placements in the table below. As of December 31, 2010 and 2009, the Company had not funded, nor had an outstanding balance due on these commitments.

In the normal course of business, the Company enters into letter of credit arrangements. As of December 31, 2010 and 2009, the Company had approximately \$102 million and \$120 million of outstanding letter of credit arrangements, respectively. As of December 31, 2010, the Company did not have a funding request attributable to these letter of credit arrangements. As of December 31, 2009, the Company had a \$2 million funding request attributable to these letter of credit arrangements.

As of December 31, 2010 and 2009, MassMutual approved financing of \$1,475 million and \$700 million, respectively, for MassMutual Asset Finance LLC that can be used to finance ongoing asset purchases and refinance existing MassMutual provided lines of credit. Borrowings under the facility with MassMutual as of December 31, 2010 and 2009, were \$1,374 million and \$624 million, respectively, with interest of \$21 million and \$17 million for the years ended December 31, 2010 and 2009, respectively. The unfunded amount of the facility, totaling \$101 million as of December 31, 2010, is included in private placements in the table below. The interest of this facility adjusts monthly based on the 30-day London Interbank Offered Rate.

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In the normal course of business, the Company enters into commitments to purchase certain investments. The majority of these commitments have funding periods that extend between one and five years. The Company is not required to fund commitments once the commitment period expires.

As of December 31, 2010, the Company had the following commitments:

	2011	2012	2013	2014	There- after	Total
	(In Millions)					
Private placements	\$ 871	\$ 4	\$ 343	\$ 25	\$ 366	\$ 1,609
Mortgage loans	272	17	7	10	13	319
Partnerships and LLC	367	298	266	731	241	1,903
LIHTC investments (including equity contributions)	11	9	8	2	-	30
Total	\$ 1,521	\$ 328	\$ 624	\$ 768	\$ 620	\$ 3,861

In the normal course of business the Company enters into commitments related to property lease arrangements, certain indemnities, investments and other business obligations. As of December 31, 2010 and 2009, the Company had no outstanding obligations attributable to these commitments.

Certain commitments and guarantees of the Company provide for the maintenance of subsidiary regulatory capital and surplus levels and liquidity sufficient to meet certain obligations. These commitments and guarantees are not limited. As of December 31, 2010 and 2009, the Company had no outstanding obligations attributable to these commitments and guarantees.

17. Withdrawal characteristics

a. Annuity actuarial reserves and liabilities for deposit-type contracts

The withdrawal characteristics of the Company's annuity actuarial reserves and deposit-type contracts as of December 31, 2010 are illustrated below:

	Amount	% of Total
	(\$ In Millions)	
Subject to discretionary withdrawal:		
With fair value adjustment	\$ 6,113	10%
At book value less current surrender charge of 5% or more	1,933	3
At fair value	37,983	63
Subtotal	46,029	76
Subject to discretionary withdrawal:		
At book value without fair value adjustment	6,247	10
Not subject to discretionary withdrawal	8,225	14
Total	\$ 60,501	100%

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The following is the reconciliation of total annuity actuarial reserves and liabilities for deposit-type contracts as of December 31, 2010 (in millions):

Condensed Consolidated Statutory Statements of Financial Position:	
Policyholders' reserves - group annuities	\$ 8,856
Policyholders' reserves - individual annuities	9,032
Policyholders' reserves - guaranteed investment contracts	18
Liabilities for deposit-type contracts	3,606
Subtotal	21,512
Separate Account Annual Statement:	
Annuities	38,362
Other annuity contract deposit-funds and guaranteed interest contracts	627
Subtotal	38,989
Total	\$ 60,501

b. Separate accounts

The Company has guaranteed separate accounts classified as the following: (1) indexed, which are invested to outperform an established index based on the guarantee and (2) nonindexed, which have reserve interest rates at no greater than 4% and/or to fund a long-term interest guarantee in excess of a year that does not exceed 4%. The Company has nonguaranteed separate accounts which are variable accounts where the benefit is determined by the performance and/or market value of the investments held in the separate account with incidental risk, notional expense and minimum death benefit guarantees.

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Information regarding the separate accounts of the Company as of and for the year ended December 31, 2010 is as follows:

	Guaranteed			Total
	Indexed	Nonindexed Less Than/ Equal to 4%	Non- guaranteed	
	(In Millions)			
Net premium, considerations or deposits for the year ended December 31, 2010	\$ -	\$ 1,253	\$ 3,790	\$ 5,043
Reserves at December 31, 2010:				
For accounts with assets at:				
Fair value	\$ 250	\$ 3,729	\$ 40,996	\$ 44,975
Amortized cost/book value	375	947	-	1,322
Subtotal	625	4,676	40,996	46,297
Nonpolicy liabilities	-	8	967	975
Total	\$ 625	\$ 4,684	\$ 41,963	\$ 47,272
Reserves by withdrawal characteristics:				
Subject to discretionary withdrawal:				
At fair value	\$ -	\$ 3,348	\$ 40,996	\$ 44,344
At book value without market value adjustment and current surrender charge of less than 5%	-	1,328	-	1,328
Subtotal	-	4,676	40,996	45,672
Not subject to discretionary withdrawal	625	-	-	625
Nonpolicy liabilities	-	8	967	975
Total	\$ 625	\$ 4,684	\$ 41,963	\$ 47,272

The Company does not have any reserves for asset default risk in lieu of AVR.

The following is a summary reconciliation of amounts reported as transfers to (from) separate accounts in the summary of operations of the Company's NAIC Separate Account Annual Statement with the amounts reported as net transfers to (from) separate accounts in change in policyholders' reserves in the accompanying Condensed Consolidated Statutory Statements of Income (Loss):

	Years Ended December 31,	
	2010	2009
	(In Millions)	
From the Separate Account Annual Statement:		
Transfers to separate accounts	\$ 4,494	\$ 4,492
Transfers from separate accounts	(5,323)	(4,699)
Subtotal	(829)	(207)
Reconciling adjustments:		
Net deposits on deposit-type liabilities	547	663
Net transfers to (from) separate accounts	\$ (282)	\$ 456

Net deposits on deposit-type liabilities are not considered premium and therefore are excluded from the Condensed Consolidated Statutory Statements of Income (Loss).

18. Subsequent events

MassMutual has evaluated subsequent events through February 21, 2011, the date the financial statements were available to be issued, and no events have occurred subsequent to the balance sheet date and before the date of evaluation that would require disclosure.