

**MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY
AND SUBSIDIARIES**

CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS

As of and for the years ended December 31, 2011 and 2010

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES

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

	December 31,	
	2011	2010
	(In Millions)	
Assets:		
Bonds	\$ 58,391	\$ 54,740
Preferred stocks	343	322
Common stocks - subsidiaries and affiliates	4,052	2,903
Common stocks - unaffiliated	583	244
Mortgage loans	13,283	12,166
Policy loans	9,768	9,246
Real estate	1,217	1,149
Partnerships and limited liability companies	5,871	5,606
Derivatives and other invested assets	3,560	2,821
Cash, cash equivalents and short-term investments	1,788	1,590
Total invested assets	98,856	90,787
Investment income due and accrued	547	579
Deferred income taxes	1,119	1,546
Other than invested assets	833	905
Total assets excluding separate accounts	101,355	93,817
Separate account assets	47,245	47,285
Total assets	\$ 148,600	\$ 141,102
Liabilities and Surplus:		
Policyholders' reserves	\$ 73,751	\$ 69,492
Liabilities for deposit-type contracts	4,622	3,606
Contract claims and other benefits	343	312
Policyholders' dividends	1,335	1,230
General expenses due or accrued	901	652
Federal income taxes	102	157
Asset valuation reserve	1,731	1,459
Securities sold under agreements to repurchase	3,770	4,163
Commercial paper	250	250
Derivative collateral	1,776	1,433
Other liabilities	1,365	724
Total liabilities excluding separate accounts	89,946	83,478
Separate account liabilities	47,237	47,272
Total liabilities	137,183	130,750
Surplus	11,417	10,352
Total liabilities and surplus	\$ 148,600	\$ 141,102

See notes to condensed consolidated statutory financial statements

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

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Revenue:		
Premium income	\$ 13,893	\$ 11,617
Net investment income	5,127	4,748
Fees and other income	667	640
Total revenue	19,687	17,005
Benefits and expenses:		
Policyholders' benefits	10,960	11,020
Change in policyholders' reserves	5,001	2,066
General insurance expenses	1,317	1,393
Commissions	548	530
State taxes, licenses and fees	152	142
Total benefits and expenses	17,978	15,151
Net gain from operations before dividends and federal income taxes	1,709	1,854
Dividends to policyholders	1,313	1,209
Net gain from operations before federal income taxes	396	645
Federal income tax benefit	(290)	(217)
Net gain from operations	686	862
Net realized capital losses after tax and transfers to interest maintenance reserve	(227)	(268)
Net income	\$ 459	\$ 594

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,	
	2011	2010
	<u>(In Millions)</u>	
Surplus, beginning of year	\$ 10,352	\$ 9,259
Increase (decrease) due to:		
Net income	459	594
Change in net unrealized capital gains, net of tax	1,353	579
Change in net unrealized foreign exchange capital (losses) gains, net of tax	(55)	5
Change in special surplus funds - net deferred tax assets	(301)	79
Change in other net deferred income taxes	239	(69)
Change in nonadmitted assets	(73)	110
Change in reserve valuation basis	-	(9)
Change in asset valuation reserve	(272)	(305)
Prior period adjustments	(11)	32
Change in minimum pension liability included in surplus	(273)	80
Other	(1)	(3)
Net increase	<u>1,065</u>	<u>1,093</u>
Surplus, end of year	<u>\$ 11,417</u>	<u>\$ 10,352</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,	
	2011	2010
	<u>(In Millions)</u>	
Cash from operations:		
Premium and other income collected	\$ 14,538	\$ 12,304
Net investment income	4,822	4,598
Benefit payments	(10,799)	(10,914)
Net transfers (to) from separate accounts	(786)	347
Commissions and other expenses	(2,264)	(2,105)
Dividends paid to policyholders	(1,208)	(1,217)
Federal and foreign income taxes recovered	64	299
Net cash provided by operating activities	<u>4,367</u>	<u>3,312</u>
Cash from investments:		
Proceeds from investments sold, matured or repaid:		
Bonds	20,173	18,001
Common stocks - unaffiliated	105	85
Mortgage loans	2,163	2,056
Real estate	119	135
Partnerships	1,111	800
Preferred and affiliated common stocks	207	759
Other	893	(190)
Total investment proceeds	<u>24,771</u>	<u>21,646</u>
Cost of investments acquired:		
Bonds	(23,258)	(21,551)
Common stocks - unaffiliated	(444)	(55)
Mortgage loans	(3,266)	(2,013)
Real estate	(255)	(202)
Partnerships	(1,411)	(1,435)
Preferred and affiliated common stocks	(742)	(500)
Other	33	(16)
Total investments acquired	<u>(29,343)</u>	<u>(25,772)</u>
Net increase in policy loans	<u>(523)</u>	<u>(475)</u>
Net cash used in investing activities	<u>(5,095)</u>	<u>(4,601)</u>
Cash from financing and other sources:		
Net deposits on deposit-type contracts	909	711
Net securities (bought) sold under agreements to repurchase	(393)	424
Change in derivative collateral	343	(505)
Other cash provided (applied)	67	(458)
Net cash from financing and other sources	<u>926</u>	<u>172</u>
Net change in cash, cash equivalents and short-term investments	198	(1,117)
Cash, cash equivalents and short-term investments, beginning of year	<u>1,590</u>	<u>2,707</u>
Cash, cash equivalents and short-term investments, end of year	<u>\$ 1,788</u>	<u>\$ 1,590</u>

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 a global, diversified financial services organization comprised of Massachusetts Mutual Life Insurance Company (MassMutual) and its subsidiaries. MassMutual and its subsidiaries provide life insurance, disability income insurance, long-term care insurance, annuities, retirement 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 condensed 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 condensed 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) bonds are generally carried at amortized cost, whereas U.S. GAAP generally reports bonds at fair value; (b) 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; (c) 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; (d) 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; (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) 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; (g) assets are reported at admitted asset value and assets designated as nonadmitted are excluded through a charge against surplus, whereas U.S. GAAP recognizes all assets, subject to valuation allowances; (h) statutory policy reserves are based upon prescribed methods, such as the Commissioners' Reserve Valuation Method, Commissioners' Annuity Reserve Valuation Method 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; (i) policyholder reserves are presented net of reinsurance ceded, unearned ceded premium and unpaid ceded claims whereas U.S. GAAP would report these reinsurance balances as an asset; (j) 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 liability companies (LLCs) 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; (k) after-tax realized capital gains and losses that 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 (IMR) and amortized into revenue, whereas U.S. GAAP reports these gains and losses as revenue; (l) changes to the mortgage loan valuation allowance are recognized in net unrealized capital gains (losses) in surplus, whereas U.S. GAAP reports these changes in net realized capital gains (losses); (m) a prepaid pension asset and/or a liability is recorded for the difference between the fair value of the pension and other

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

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 with the change recorded through accumulated other comprehensive income; (n) surplus notes are reported in surplus, whereas U.S. GAAP would report these notes as liabilities; (o) payments received for universal and variable life insurance products, certain variable and fixed deferred annuities and group annuity contracts are reported as premium income and corresponding change in reserves, whereas U.S. GAAP would treat these payments as deposits to policyholders' account balances; (p) certain acquisition costs, such as commissions and other variable costs, 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; and (q) 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.

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 condensed 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 and 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 assets (DTAs), and the liability for taxes and litigation contingencies. Future events including, but not limited to, changes in the level of mortality, morbidity, interest rates, persistency, asset valuations and defaults could cause results to differ from the estimates used in the condensed consolidated statutory financial statements. Although some variability is inherent in these estimates, management believes the amounts presented are appropriate.

b. Corrections of errors and reclassifications

Under statutory accounting principles, corrections of prior year errors are recorded in current year surplus on a pretax basis with any associated tax impact reported through earnings. The following summarizes corrections of prior year errors for the year ended December 31, 2011:

	Increase (Decrease) to:			Correction of Asset or Liability Balances
	Prior Year Income	Prior Year Surplus	Current Year Surplus	
	(In Millions)			
Policyholders' reserves	\$ (18)	\$ -	\$ (18)	\$ 18
General insurance expenses	(8)	-	(8)	8
Partnership income	(7)	2	(5)	5
Derivatives	7	-	7	(7)
Fixed assets	5	-	5	(5)
Premium income	5	-	5	(5)
Other	3	-	3	(3)
Prepaid commissions and allowances	2	(2)	-	-
Total	<u>\$ (11)</u>	<u>\$ -</u>	<u>\$ (11)</u>	<u>\$ 11</u>

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

The following summarizes corrections of prior year errors for the year ended December 31, 2010:

	Increase (Decrease) to:			Correction of Asset or Liability Balances
	Prior Year Income	Prior Year Surplus	Current Year Surplus	
(In Millions)				
Partnership income	\$ (24)	\$ 24	\$ -	\$ -
Separate account income	(21)	-	(21)	21
Reinsurance	(5)	-	(5)	5
Policy loans	(4)	-	(4)	4
Policyholders' reserves	44	-	44	(44)
Prepaid commissions and allowances	36	(36)	-	-
Impaired asset	6	-	6	(6)
Total	<u>\$ 32</u>	<u>\$ (12)</u>	<u>\$ 20</u>	<u>\$ (20)</u>

The \$24 million in partnership income was a reclassification within surplus and therefore had no impact to surplus at December 31, 2010. Prepaid commissions and allowances of \$36 million were recorded and then nonadmitted through the Condensed Consolidated Statutory Statements of Changes in Surplus. Previously the Company directly expensed these costs.

Certain 2010 balances within these financial statements have been reclassified to conform to the current year presentation.

c. Bonds

Bonds are generally valued at amortized cost using the constant yield interest method with the exception of NAIC Category 6 bonds and certain residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers, that are carried at the lower of amortized cost or fair value. 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 the current estimated cash flows, using either the prospective or retrospective adjustment methodologies for each type of security. Certain fixed income securities with the highest ratings from a rating agency follow the retrospective method of accounting. Under the retrospective method, the recalculated effective yield equates the present value of the actual and anticipated cash flows, including new prepayment assumptions, to the original cost of the investment. Prepayment assumptions are based on borrower constraints and economic incentives such as the original term, age and coupon of the loan as affected by the interest rate environment. The current carrying value is then increased or decreased to the amount that would have resulted had the revised yield been applied since inception, and investment income is correspondingly decreased or increased. All other fixed income securities, such as floating rate bonds and interest only securities, including those that have been impaired, follow the prospective method of accounting. Under the prospective method, the recalculated future effective yield equates the carrying value of the investment to the present value of the anticipated future cash flows.

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

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 2bb. "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. Preferred stocks

Preferred stocks in good standing are generally valued at amortized cost. Preferred stocks not in good standing, those which are rated Categories 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 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 2bb. "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 - 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 MMHLLC at its underlying U.S. GAAP net equity adjusted to remove certain nonadmitted and intangible assets, as well as a portion of its noncontrolling interests (NCI) and appropriated retained earnings (ARE), after consideration of MMHLLC's 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 and 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.

Refer to *Note 2bb. "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. 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. The Company's internal models include estimates based upon comparable company analysis, review of financial statements, broker quotes and last traded price. 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 2bb. "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. 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 with the senior lender within the loan documents to maximize control with the objective of mitigating the Company's 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.

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 according to the terms of the original or modified mortgage loan agreement.

Refer to *Note 2bb. "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.

h. 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 nonadmitted amounts were approximately \$1 million and less than \$1 million as of December 31, 2011 and 2010, respectively. Policy loans earn interest calculated based upon either a fixed or a variable interest rate. 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.

i. 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, less selling costs, 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 annually. If an external appraisal is not obtained, an internal appraisal is performed.

Refer to *Note 2bb. "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. Partnerships and limited liability companies

Partnerships and LLCs, except for partnerships that 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 that 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.

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 2bb. "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.

k. Derivatives and other invested assets

Derivatives and other invested assets consist of investments in derivative financial instruments and 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) to enable the Company to incorporate currently held hedges in risk-based capital (RBC) calculations. The CDHS is used 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 RBC is calculated. The hedge portfolio has offsetting impacts relative to the total asset requirement for RBC and surplus for guaranteed minimum death benefits (GMDBs) and variable annuity guaranteed living benefits (VAGLBs).

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

l. 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 and carries them at amortized cost.

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.

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 with 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.

m. 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.

n. Other than invested assets

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

Fixed assets are carried at cost less accumulated depreciation and amortization. Depreciation and amortization 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 eleven years for all other fixed assets. Within fixed assets, most unamortized software and office equipment are nonadmitted assets.

o. 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 (EDP) equipment, the amount of DTAs (subject to certain limitations) that will not be realized by the end of the third calendar year, certain other receivables, furniture, uncollected premiums and certain intangible assets. Such amounts are excluded from the Condensed Consolidated Statutory Statements of Financial Position.

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

p. Separate accounts

Separate account assets and liabilities represent segregated funds administered and invested by the Company for the benefit of group and individual 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 and supplemental accounts, 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 guaranteed products and indexed separate account products, 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.

Premium income, benefits and expenses of the separate accounts are included in the Condensed Consolidated Statutory Statements of Income with the offset recorded as a transfer to/from the 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. 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.

q. 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 Commissioners' Reserve Valuation Method (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 Company charges a higher premium on certain contracts that cover substandard mortality risk. For these policies, the reserve calculations are based on a substandard mortality rate, which is a multiple of the standard mortality tables.

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

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 Commissioners' Annuity Reserve Valuation Method (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 and 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 products 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 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.

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

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. In addition, the Company elected to hold additional reserves above those indicated based on the stochastic or standard scenario in order to maintain a prudent level of reserve adequacy.

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." The value of the reserve guarantees under the standard scenario is driven primarily by equity markets.

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 are 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.

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 that 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.

r. 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.

s. 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 65% and 66% of the Company's policyholders' reserves and liabilities for deposit-type contracts as of December 31, 2011 and 2010, respectively.

t. Policyholders' dividends

Dividends expected to be paid to policyholders in the following year are approved annually by MassMutual's Board of Directors and are recorded as an expense in the current year. 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. The liability for policyholders' dividends includes the estimated amount of annual dividends and settlement dividends. Settlement dividends are an extra dividend payable at termination of a policy upon maturity, death or surrender.

u. Asset valuation reserve

The Company maintains an AVR that is a contingency reserve to stabilize surplus against fluctuations in the statement value of common stocks, real estate investments, partnerships and LLCs 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 as a liability and the change in AVR is reported in surplus.

v. Interest maintenance reserve

The Company maintains an IMR that 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 or if negative, is nonadmitted.

w. 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 securities. Securities sold under agreements 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. Securities sold under agreements to repurchase are used as a tool for overall portfolio management to help ensure the Company maintains adequate assets in order to provide yield, spread and duration to support liabilities and other corporate needs.

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.

x. 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. Due to the short-term nature of the Notes, the carrying value is assumed to approximate fair value.

y. Other liabilities

Other liabilities primarily include IMR, remittances and items not allocated, derivative payables, amounts held for agents and pending securities settlements.

z. 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 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.

aa. 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.

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.

bb. 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, and 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.

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

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.

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 sufficient to recover the amortized cost basis, an OTTI is recognized in earnings as a realized loss equal to the entire difference between the investment's amortized cost basis and its fair value 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.

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 subordination level 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 is recorded if this sixth scenario results in the loss of any principal or interest payments due.

For the most subordinated junior 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, 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.

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

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 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.

Mortgage loans

The Company performs internal reviews at least annually 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 external appraisal.

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 in collateral values 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, previously recorded valuation allowance adjustments are reversed from unrealized capital losses and a direct write-down is 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.

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 will be required if the property's estimated future net cash flows over ten years, undiscounted and without interest charges, is less than book value.

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

Partnerships and LLCs

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 is 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 that 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 0.2% for future benefits of two years to 2.1% for future benefits of ten years or greater and compares the results to its current book values. Impairments are recognized as realized capital losses.

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

Unrealized capital gains and losses

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

cc. 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 (PSARs) and Phantom Restricted Stock (PRS). These awards do not grant an equity or ownership interest in the Company.

PSARs 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 PSARs exercised. PSARs cliff vest at the end of three years and expire five years after the date of grant. Vested PSARs 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 PSARs (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 serves as the basis for the phantom share price, based on the management basis core operating earnings of the Company and its subsidiaries. This phantom share price is calculated and communicated to all participants quarterly and is used in calculating the liability of the Company based on intrinsic value.

dd. 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 various lines within surplus. 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 in the Condensed Consolidated Statutory Statements of Income that differ from the federal statutory tax rate.

3. *New accounting standards*

a. Adoption of new accounting standards

In June 2010, the NAIC clarified its intent regarding the bifurcation of all realized gains and losses on sales of loan-backed and structured securities. This guidance requires a cash flow analysis at the date of sale to bifurcate the realized gain or loss between credit and noncredit. The credit portion is reported in the AVR and the noncredit portion is deferred and amortized to the IMR. This guidance was issued as a revision to Statement of Statutory Accounting Principles (SSAP) No. 43R, "Loan-backed and Structured Securities," and was effective January 1, 2011. The adoption of this guidance did not have a significant impact on the Company's financial statements.

In October 2010, the NAIC modified the definitions of loan-backed and structured securities included in SSAP No. 43R. The revised definitions expand the requirement to include any securitized asset where the underlying cash flows are from all types of asset pools and not just those originating from either mortgages or securities. Regardless of the underlying collateral, each security structured through a special purpose entity, trust or LLC is expected to 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 was effective January 1, 2011. The adoption of this guidance did not have a significant impact on the Company's financial statements.

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 was effective January 1, 2011. The adoption of this guidance did not have a significant impact on the Company's financial statements.

In October 2010, the NAIC revised existing guidance pertaining to guarantees. These 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, the 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 adoption of this guidance did not have a significant impact on the Company's financial statements.

b. Future adoption of new accounting standards

In March 2011, the NAIC issued revisions to SSAP No. 100, "Fair Value Measurements," which requires additional fair value disclosures. These additional disclosures include a disclosure in the fair value hierarchy of items that are disclosed with a fair value measurement but are not valued at fair value in the balance sheet. Also, companies will be required to disclose purchases, sales, issuances and settlements on a gross basis in the Level 3 rollforward disclosure. These new requirements are effective January 1, 2012. The Company currently discloses a gross presentation within the Level 3 rollforward disclosure. The adoption of the other requirements of this guidance is not expected to have a significant impact on the Company's financial statements.

In November 2011, the NAIC issued SSAP No. 101, "Income Taxes, A Replacement of SSAP No. 10R and SSAP No. 10." This statement revises statutory accounting principles for current and deferred federal and foreign income taxes and current state income taxes. SSAP No. 101, which is effective on January 1, 2012, will: 1) restrict the ability to use the 3 years/15 percent of surplus admission rule to those reporting entities that meet a new modified risk based capital ratio (Ex-DTA RBC ratio) threshold, 2) change the recognition threshold for recording tax contingency reserves from a probable liability standard to a more-likely-than-not liability standard, 3) require the disclosure of tax planning strategies that relate to reinsurance and 4) require consideration of reversal patterns of DTAs and deferred tax liabilities (DTLs) in determining the extent to which DTLs could offset DTAs on the balance sheet. The Company is in the process of assessing the impact of adopting this standard.

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

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, 2011			
	Carrying	Gross	Gross	Fair
	Value	Unrealized Gains	Unrealized Losses	Value
(In Millions)				
U. S. government and agencies	\$ 9,813	\$ 1,929	\$ -	\$ 11,742
All other governments	112	36	-	148
States, territories and possessions	1,362	138	3	1,497
Special revenue	2,467	368	1	2,834
Industrial and miscellaneous	39,328	3,215	1,008	41,535
Parent, subsidiaries and affiliates	5,309	260	235	5,334
Total	<u>\$ 58,391</u>	<u>\$ 5,946</u>	<u>\$ 1,247</u>	<u>\$ 63,090</u>

Note: The unrealized losses exclude \$34 million of losses embedded in the carrying value, which include \$27 million from NAIC Category 6 bonds and \$7 million reclassified from NAIC Category 6 for RMBS and CMBS with ratings obtained from outside modelers.

	December 31, 2010			
	Carrying	Gross	Gross	Fair
	Value	Unrealized Gains	Unrealized Losses	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	36,524	2,247	968	37,803
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 losses exclude \$66 million of losses embedded in the carrying value, which 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.

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

The Company used SVO ratings for the bond portfolio along with what it believes were the equivalent rating agency designations except for RMBS and CMBS that were rated by outside modelers. The following sets forth the NAIC class ratings for the bond portfolio including RMBS and CMBS as of December 31, 2011 and 2010:

NAIC Class	Equivalent Rating Agency Designation	December 31,			
		2011		2010	
		Carrying Value	% of Total	Carrying Value	% of Total
(\$ In Millions)					
1	Aaa/Aa/A	\$ 36,563	63 %	\$ 34,912	64 %
2	Baa	18,150	31	16,071	29
3	Ba	1,754	3	1,694	3
4	B	1,008	2	1,002	2
5	Caa and lower	778	1	849	2
6	In or near default	138	-	212	-
	Total	<u>\$ 58,391</u>	<u>100 %</u>	<u>\$ 54,740</u>	<u>100 %</u>

The following summarizes the carrying value and fair value of bonds as of December 31, 2011 by contractual maturity. Expected maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations with or without prepayment penalties. Securities 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	\$ 1,361	\$ 1,382
Due after one year through five years	15,266	15,969
Due after five years through ten years	19,749	21,550
Due after 10 years	22,015	24,189
Total	<u>\$ 58,391</u>	<u>\$ 63,090</u>

The proceeds from sales of bonds were \$9,555 million for the year ended December 31, 2011 and \$9,070 million for the year ended December 31, 2010.

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

The following is an analysis of the fair values and gross unrealized losses aggregated by bond category and length of time that the securities were in a continuous unrealized loss position as of December 31, 2011 and 2010:

	December 31, 2011					
	Less Than 12 Months			12 Months or Longer		
	Fair Value	Unrealized Losses	Number of Issuers	Fair Value	Unrealized Losses	Number of Issuers
	(\$ In Millions)					
States, territories and possessions	\$ 67	\$ 1	6	\$ 32	\$ 2	1
Special revenue	28	1	79	-	-	-
Industrial and miscellaneous	5,079	219	658	3,844	810	785
Parent, subsidiaries and affiliates	2,222	82	26	546	166	18
Total	<u>\$ 7,396</u>	<u>\$ 303</u>	<u>769</u>	<u>\$ 4,422</u>	<u>\$ 978</u>	<u>804</u>

Note: The unrealized losses include \$34 million of losses embedded in the carrying value, which include \$27 million from NAIC Category 6 bonds and \$7 million reclassified from NAIC Category 6 for RMBS and CMBS with ratings obtained from outside modelers.

	December 31, 2010					
	Less Than 12 Months			12 Months or Longer		
	Fair Value	Unrealized Losses	Number of Issuers	Fair Value	Unrealized Losses	Number of Issuers
	(\$ In Millions)					
U. S. government and agencies	\$ 53	\$ 1	4	\$ 1,930	\$ 495	1
States, territories and possessions	763	47	26	29	10	1
Special revenue	165	8	24	-	-	-
Industrial and miscellaneous	5,583	256	451	3,966	733	532
Parent, subsidiaries and affiliates	2,284	125	13	516	204	24
Total	<u>\$ 8,848</u>	<u>\$ 437</u>	<u>518</u>	<u>\$ 6,441</u>	<u>\$ 1,442</u>	<u>558</u>

Note: The unrealized losses include \$66 million of losses embedded in the carrying value, which 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.

The decrease in unrealized losses for the less than 12 months category for states, territories and possessions is due to an improvement in the municipal securities market. The decrease in unrealized losses for the 12 months or longer category for U.S. government and agencies is due to the recovery in value of these securities and their subsequent sale. The majority of the unrealized losses occurred prior to 2010 due to the decline in the credit markets, liquidity and other uncertainties 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, 2011, investments in structured and loan-backed securities for which an OTTI has not been recognized in earnings and which were in an unrealized loss position had a fair value of \$5,075 million. Structured and loan-backed securities in an unrealized loss position for less than 12 months had a fair value of \$2,855 million and unrealized losses of \$98 million. Structured and loan-backed securities in an unrealized loss position for greater than 12 months had a fair value of \$2,220 million and unrealized losses of \$396 million. These structured and loan-backed securities were primarily categorized as industrial and miscellaneous and parent, subsidiaries and affiliates.

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

Based on the Company's policies, as of December 31, 2011 and 2010, 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 the Company's 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 investment management activities, securities may be sold at a loss 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, 2011 and 2010 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, 2011 and 2010.

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.

For the past few years, market conditions for Alt-A and subprime investments have been unusually weak 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.

Leveraged loan exposure

Leveraged loans are loans extended to companies that already have considerable amounts of debt. The Company reports leveraged loans as bonds. These leveraged loans have interest rates higher than typical loans reflecting the additional risk of default from issuers with high debt-to-equity ratios.

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 an actual cost of \$3,397 million, carrying value of \$3,395 million and fair value of \$3,576 million as of December 31, 2011 and an actual cost of \$3,306 million, carrying value of \$3,302 million and fair value of \$3,445 million as of December 31, 2010.

b. Preferred stocks

The Company held preferred stocks with carrying values of \$343 million and fair values of \$334 million as of December 31, 2011 and carrying values of \$322 million and fair values of \$342 million as of December 31, 2010.

As of December 31, 2011 and 2010, 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 \$265 million as of December 31, 2011 and \$243 million as of December 31, 2010.

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

c. Common stocks - unaffiliated

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

	December 31,	
	2011	2010
	(In Millions)	
Adjusted cost basis	\$ 545	\$ 184
Gross unrealized gains	77	64
Gross unrealized losses	(39)	(4)
Carrying value	<u>\$ 583</u>	<u>\$ 244</u>

As of December 31, 2011, investments in unaffiliated common stocks in an unrealized loss position included holdings with a fair value of \$273 million in 333 issuers. These holdings were in an unrealized loss position of \$39 million, \$3 million of which were in an unrealized loss position more than 12 months. 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. Based upon the Company's impairment review process discussed in *Note 2bb. "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, 2011 or 2010.

As of December 31, 2011 and 2010, the Company did not hold any unaffiliated common stock with RMBS exposure.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$227 million as of December 31, 2011 and \$158 million as of December 31, 2010.

d. Common stocks - subsidiaries and affiliates

MMHLLC is the parent of subsidiaries that include retail and institutional asset management entities, registered broker dealers, and international life and annuity operations.

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

	As of and for the Years Ended	
	December 31,	
	2011	2010
	(In Millions)	
Total revenue	\$ 4,943	\$ 6,244
Net income (loss)	400	(349)
Assets	50,885	51,093
Liabilities	42,447	43,144
Equity	8,438	7,949

The U.S. GAAP equity values of \$8,438 million and \$7,949 million in the preceding table consist of MMHLLC statutory carrying values of \$3,413 million and \$2,502 million as of December 31, 2011 and 2010, 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 Limited (Baring) and its investment in international life insurance operations in Japan and Hong Kong.

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

In 2009, several lawsuits were filed against OFI, and other parties in various federal courts, as putative class actions 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 Oppenheimer Acquisition Corp. (OAC) subsidiaries, indirect subsidiaries of MMHLLC. The lawsuits raised 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 were consolidated into two groups, one for each of the funds. The Company's subsidiary recorded an accrual in its 2010 financial statements which represented the amount that was sufficient to cover these matters, net of an offsetting insurance recovery. In June 2011, the parties to the suits executed a settlement agreement, which the Court approved in September. In November 2011, the loss contingency was paid.

In April 2010, a lawsuit was filed in New York state court against OFI, its subsidiary HarbourView Asset Management Corporation (HVAMC) and AAardvark IV Funding Limited (AAardvark IV) 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. The Court dismissed certain equitable claims against OFI and HVAMC, leaving only the claims for breach of contract. Plaintiffs filed an amended complaint with additional contractual claims. In October 2011, defendants moved to dismiss the complaint to the extent it seeks damages in the form of a return of the plaintiffs' full principal investment. In December 2011, plaintiffs filed a motion for partial summary judgment. In January 2012, the court granted in part defendant's motion to dismiss and denied plaintiff's motion for partial summary judgment. OFI believes it has substantial defenses to the remaining claims and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from these claims.

On July 15, 2011, a lawsuit was filed in New York State Supreme Court against OFI, HVAMC and AAardvark I Funding Limited (AAardvark I), in connection with investments made by TSL (USA) Inc. and other investors in AAardvark I. The complaint alleges breach of contract against each of the defendants and seeks compensatory damages and costs and disbursements, including attorney fees. In October 2011, defendants moved to dismiss the complaint to the extent it seeks damages in the form of a return of the plaintiffs' full principal investment. In January 2012, the court granted in part defendant's motion to dismiss. OFI believes it has substantial defenses to the remaining claims and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from these claims.

On November 9, 2011, a lawsuit was filed in New York State Supreme Court against OFI, HVAMC and AAardvark XS Funding Limited (AAardvark XS) in connection with the investment made by Scaldis Capital Limited, predecessor in interest to plaintiff Royal Park Investments SA/NV, in AAardvark XS. The complaint alleges breach of contract against the defendants and seeks compensatory damages and an award of attorney fees and litigation expenses. OFI believes it has substantial defenses and will vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from these claims.

In 2009, OFI concluded settlements with six states, including the State of New Mexico, regarding investigations of the management of those states' Section 529 college savings plans. However, two lawsuits were filed in the Circuit Court for Santa Fe County, New Mexico seeking to challenge the settlement with that state. Accordingly, the State has not released for payment to the State's 529 plan participants, the funds it received from OFI. In October 2011, the parties to these actions filed a joint motion to dismiss the lawsuits with prejudice, which the court granted.

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.

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

Historically, the Company has reinvested a substantial portion of its unrestricted earnings in its international insurance subsidiaries 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.

As of December 31, 2011, the inclusion of the Japanese subsidiary's value increased the Company's statutory carrying value of MMHLLC by \$564 million. In prior years, there was not an admitted carrying value related to this Japanese subsidiary.

In the second and third quarter of 2011, MassMutual received \$25 million and \$225 million of cash dividends from MMHLLC, respectively. In the first and second quarter of 2010, MassMutual received \$100 million and \$125 million of cash dividends from MMHLLC, respectively. Cash dividends are recorded in net investment income.

In the fourth quarter of 2011, MassMutual contributed capital of \$250 million to MMHLLC. In 2010, MassMutual did not contribute capital to its subsidiaries, including MMHLLC.

The Company held debt issued by MMHLLC that amounted to \$1,993 million as of December 31, 2011 and 2010. 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 notes payable to MassMutual. No cash was distributed by MMHLLC. The Company recorded interest income on MMHLLC debt of \$118 million and \$113 million in 2011 and 2010, respectively.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of \$8 million as of December 31, 2011 and \$136 million as of December 31, 2010.

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 \$930 million as of December 31, 2011 was subject to dividend restrictions imposed by various state regulations.

e. Mortgage loans

Mortgage loans are comprised of commercial mortgage loans and residential mortgage loan pools. The carrying value of mortgage loans was \$13,283 million, net of valuation allowances of \$48 million as of December 31, 2011. The carrying value of mortgage loans was \$12,166 million, net of valuation allowances of \$140 million as of December 31, 2010.

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, 2011 and 2010, 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. The mortgage loan portfolio is diverse with no significant concentrations in any particular geographic region of the country for the years ended December 31, 2011 or 2010.

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

The carrying value and fair value of the Company's mortgage loans were as follows:

	December 31,			
	2011		2010	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	(In Millions)			
Commercial mortgage loans				
Primary lender	\$ 10,832	\$ 10,847	\$ 9,583	\$ 9,723
Mezzanine loans	42	46	70	69
Total commercial mortgage loans	<u>10,874</u>	<u>10,893</u>	<u>9,653</u>	<u>9,792</u>
Residential mortgage loans				
FHA insured and VA guaranteed	2,331	2,315	2,485	2,392
Other residential loans	78	80	28	28
Total residential mortgage loans	<u>2,409</u>	<u>2,395</u>	<u>2,513</u>	<u>2,420</u>
Total mortgage loans	<u>\$ 13,283</u>	<u>\$ 13,288</u>	<u>\$ 12,166</u>	<u>\$ 12,212</u>

As of December 31, 2011, scheduled mortgage loan maturities, net of valuation allowances, for commercial and residential loans were as follows (in millions):

2012	\$ 1,653
2013	778
2014	893
2015	869
2016	2,232
Thereafter	<u>4,449</u>
Commercial mortgage loans	10,874
Residential mortgage loans	<u>2,409</u>
Total	<u>\$ 13,283</u>

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

The Company uses an internal rating system as its primary method of monitoring credit quality. The following table illustrates the Company's mortgage loan portfolio categorized by what it believes is the equivalent rating agency designation:

	December 31, 2011						Total
	AAA/AA	A	BBB/BB	B	CCC/C	D	
	(In Millions)						
Commercial mortgage loans							
Primary lender	\$ 3,537	\$ 4,593	\$ 1,607	\$ 1,071	\$ 24	\$ -	\$ 10,832
Mezzanine loans	-	-	-	28	14	-	42
Total commercial mortgage loans	3,537	4,593	1,607	1,099	38	-	10,874
Residential mortgage loans							
FHA insured and VA guaranteed	2,331	-	-	-	-	-	2,331
Other residential loans	78	-	-	-	-	-	78
Total residential mortgage loans	2,409	-	-	-	-	-	2,409
Total mortgage loans	<u>\$ 5,946</u>	<u>\$ 4,593</u>	<u>\$ 1,607</u>	<u>\$ 1,099</u>	<u>\$ 38</u>	<u>\$ -</u>	<u>\$ 13,283</u>

	December 31, 2010						Total
	AAA/AA	A	BBB/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	1,860	3,781	2,519	1,423	59	11	9,653
Residential mortgage loans							
FHA insured and VA guaranteed	2,485	-	-	-	-	-	2,485
Other residential loans	28	-	-	-	-	-	28
Total residential mortgage loans	2,513	-	-	-	-	-	2,513
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>

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

The geographic distribution of commercial mortgage loans was as follows:

	December 31, 2011	
	Average	
	Carrying Value	Loan-to-Value Ratio
	(\$ In Millions)	
California	\$ 2,555	70%
Texas	1,338	64%
Illinois	918	70%
Massachusetts	764	62%
New York	756	52%
Washington	473	66%
All other states	3,437	62%
Canada	633	69%
Total commercial mortgage loans	\$ 10,874	65%

Note: All other states in this table consist of 32 states, with no individual state exposure exceeding \$407 million.

	December 31, 2010	
	Average	
	Carrying Value	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	\$ 9,653	79%

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

During the years ended December 31, 2011 and 2010, mortgage loan lending rates, including fixed and variable, on the portfolio of mortgage loans were:

	December 31,					
	2011			2010		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	0.9%	9.8%	5.4%	1.0%	10.4%	5.5%
Residential mortgage loan pools	3.0%	12.9%	6.0%	3.3%	13.7%	6.5%
Mezzanine mortgage loans	8.5%	18.0%	11.9%	3.0%	18.0%	9.0%

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

During the years ended December 31, 2011 and 2010, mortgage loan lending rates, including fixed and variable, on new issues were:

	December 31,					
	2011			2010		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	3.5%	7.5%	4.8%	2.3%	7.8%	4.9%
Residential mortgage loan pools	5.1%	6.2%	5.3%	5.3%	6.0%	5.7%
Mezzanine mortgage loans	8.5%	8.5%	8.5%	- %	- %	- %

The maximum percentage of any 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 93.0% as of December 31, 2011 and 89.5% as of December 31, 2010. The maximum percentage of any mezzanine loan to the estimated value of secured collateral at the time the loan was originated was 97.0% as of December 31, 2011 and 97.5% as of December 31, 2010.

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

	December 31, 2011				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Valuation Allowance	Interest Income
	(In Millions)				
Commercial mortgage loans					
Primary lender	\$ 85	\$ 93	\$ 103	\$ (19)	\$ 7
Mezzanine loans	1	4	31	(29)	-
Total	<u>\$ 86</u>	<u>\$ 97</u>	<u>\$ 134</u>	<u>\$ (48)</u>	<u>\$ 7</u>

	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	<u>\$ 612</u>	<u>\$ 620</u>	<u>\$ 755</u>	<u>\$ (140)</u>	<u>\$ 40</u>

Note: As of December 31, 2011 and 2010, the Company did not hold any residential mortgage loan pools with a valuation allowance recorded. All mortgage loans included in the table above were individually valued for impairment.

As of December 31, 2011, the Company had \$40 million of unpaid principal balance in impaired commercial mortgage loans with no related valuation allowance recorded and \$19 million as of December 31, 2010.

As of December 31, 2011, the Company did not hold any impaired residential mortgage loans.

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

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

	December 31,					
	2011			2010		
	Commercial					
	Primary		Total	Primary		Total
Lender	Mezzanine	Lender		Mezzanine		
(In Millions)						
Beginning balance	\$ (79)	\$ (61)	\$ (140)	\$ (133)	\$ (58)	\$ (191)
Additions	(19)	(11)	(30)	(31)	(9)	(40)
Decreases	55	2	57	33	6	39
Write-downs	24	41	65	52	-	52
Ending balance	<u>\$ (19)</u>	<u>\$ (29)</u>	<u>\$ (48)</u>	<u>\$ (79)</u>	<u>\$ (61)</u>	<u>\$ (140)</u>

As of December 31, 2011, the Company did not hold any past due commercial or residential mortgage loans.

The Company recorded \$7 million in interest income on impaired loans as of December 31, 2011 and \$40 million as of December 31, 2010.

Less than \$1 million in interest was deferred to future periods from mortgage loans on properties under development as of December 31, 2011 and 2010.

The carrying value of commercial mortgage loans for which the Company has suspended interest accruals was:

	December 31,	
	2011	2010
	(In Millions)	
Primary lender	\$ -	\$ 76
Mezzanine loans	33	49
Total	<u>\$ 33</u>	<u>\$ 125</u>

As of December 31, 2011 and 2010, the Company had one restructured loan. No interest was deferred to future periods for the years ended December 31, 2011 or 2010.

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

f. Real estate

The carrying value of real estate was as follows:

	December 31,	
	2011	2010
	<u>(In Millions)</u>	
Held for the production of income	\$ 2,262	\$ 2,133
Accumulated depreciation	(891)	(847)
Encumbrances	<u>(268)</u>	<u>(283)</u>
Held for the production of income, net	<u>1,103</u>	<u>1,003</u>
Held for sale	14	40
Accumulated depreciation	<u>(5)</u>	<u>(4)</u>
Held for sale, net	<u>9</u>	<u>36</u>
Occupied by the Company	227	221
Accumulated depreciation	<u>(122)</u>	<u>(111)</u>
Occupied by the Company, net	<u>105</u>	<u>110</u>
Total real estate	<u>\$ 1,217</u>	<u>\$ 1,149</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 less than \$1 million as of December 31, 2011, including two land parcels. The carrying value of nonincome producing real estate was \$13 million as of December 31, 2010.

Depreciation expense on real estate was \$98 million for the year ended December 31, 2011 and \$93 million for the year ended December 31, 2010.

g. Partnerships and limited liability companies

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

	December 31,	
	2011	2010
	<u>(In Millions)</u>	
Common stocks	\$ 2,750	\$ 2,655
Real estate	1,398	1,125
Fixed maturities/preferred stock	1,158	1,204
Mortgage loans	304	376
LIHTC	195	198
Other	<u>66</u>	<u>48</u>
Total	<u>\$ 5,871</u>	<u>\$ 5,606</u>

As of December 31, 2011 and 2010, the Company did not hold any partnerships or LLCs with significant Alt-A or subprime exposure.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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There were no write-downs or reclassifications of LIHTC partnerships made during the years ended December 31, 2011 or 2010 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,	
	2011	2010
	<u>(In Millions)</u>	
Bonds	\$ 3,006	\$ 2,832
Preferred stocks	12	6
Common stocks - subsidiaries and affiliates	254	236
Common stocks - unaffiliated	14	11
Mortgage loans	718	686
Policy loans	672	671
Real estate	181	160
Partnerships and LLCs	432	376
Derivatives	150	135
Cash, cash equivalents and short-term investments	8	6
Other	7	2
Subtotal investment income	<u>5,454</u>	<u>5,121</u>
Amortization of the IMR	124	79
Net gains (losses) from separate accounts	-	(1)
Investment expenses	<u>(451)</u>	<u>(451)</u>
Net investment income	<u>\$ 5,127</u>	<u>\$ 4,748</u>

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

i. Net realized capital gains and losses

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

	Year Ended December 31, 2011			
	Realized	Realized	Net Realized	
	Gains	Losses	OTTI	Gains (Losses)
	(In Millions)			
Bonds	\$ 448	\$ (159)	\$ (176)	\$ 113
Preferred stocks	1	-	-	1
Common stocks - subsidiaries and affiliates	19	(1)	-	18
Common stocks - unaffiliated	31	(6)	(3)	22
Mortgage loans	3	-	(68)	(65)
Real estate	34	(4)	-	30
Partnerships and LLCs	37	(9)	(59)	(31)
Derivatives and other	1,436	(881)	-	555
	<u>\$ 2,009</u>	<u>\$ (1,060)</u>	<u>\$ (306)</u>	<u>643</u>
Federal and state taxes				(180)
Net realized capital gains (losses) before deferral to the IMR				463
Net (gains) losses deferred to the IMR				(814)
Less: taxes				(124)
Net after tax (gains) losses deferred to the IMR				(690)
Net realized capital gains (losses)				\$ (227)

	Year Ended December 31, 2010			
	Realized	Realized	Net Realized	
	Gains	Losses	OTTI	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 LLCs	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				(121)
Net (gains) losses deferred to the IMR				(160)
Less: taxes				(13)
Net after tax (gains) losses deferred to the IMR				(147)
Net realized capital gains (losses)				\$ (268)

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

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 \$582 million as of December 31, 2011. The IMR balance was a liability of \$76 million, and a nonadmitted asset of \$54 million as of December 31, 2010 resulting from the consolidation of the three insurance entities. 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 that contribute to the consolidation.

Refer to *Note 2u. "Interest maintenance reserve"* for information on the Company's policy for IMR.

j. Securities sold under agreements to repurchase

The Company had securities sold under agreements to repurchase with carrying values of \$3,770 million as of December 31, 2011 and \$4,163 million as of December 31, 2010. As of December 31, 2011, the maturities of these agreements were January 3, 2012 through January 12, 2012 and the interest rates ranged from 0.1% to 0.3%. The outstanding amounts were collateralized by bonds with a fair value of \$3,914 million as of December 31, 2011 and \$4,235 million as of December 31, 2010.

k. Derivative financial instruments

The Company uses derivative financial instruments in the normal course of business to manage risks, primarily to reduce currency, 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 actual instrument or when the simulated instruments are unavailable. Synthetic assets can be created to either hedge and reduce the Company's exposure or increase the Company's exposure to a particular asset. The Company held synthetic assets that increased the Company's exposure by a net notional amount of \$2,393 million as of December 31, 2011 and \$2,301 million as of December 31, 2010. Of this amount, \$214 million as of December 31, 2011 and \$362 million as of December 31, 2010, 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 decided 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 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 used 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 bond is not available or the market price is more expensive.

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

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 purchases 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 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 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 an interest rate swap at a future date. The Company purchases these options 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 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 that 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. 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 agreements with counterparties that allow for contracts in a positive position, in which 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 \$2,883 million as of December 31, 2011 and \$2,182 million as of December 31, 2010. In the event of default the full market value exposure at risk in a net gain position, net of offsets and collateral was \$100 million as of December 31, 2011 and \$30 million as of December 31, 2010. The amount at risk using NAIC prescribed rules was \$513 million as of December 31, 2011 and \$314 million as of December 31, 2010. 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.

If amounts are due from the counterparty, they are reported as an asset. If amounts are due to the counterparty, they are reported as a liability. Negative values in the carrying value of a particular derivative category can result from a counterparty's right to offset carrying value positions in multiple derivative financial instruments.

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

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

	December 31, 2011			
	Assets		Liabilities	
	Carrying	Notional	Carrying	Notional
	Value	Amount	Value	Amount
	(In Millions)			
Interest rate swaps	\$ 2,729	\$ 105,066	\$ 298	\$ 12,495
Options	603	6,201	(73)	980
Currency swaps	135	963	81	877
Forward contracts	53	4,155	(1)	66
Credit default swaps	37	1,334	(2)	68
Financial futures - long positions	-	2,051	-	-
Financial futures - short positions	-	1,276	-	-
Total	\$ 3,557	\$ 121,046	\$ 303	\$ 14,486

	December 31, 2010			
	Assets		Liabilities	
	Carrying	Notional	Carrying	Notional
	Value	Amount	Value	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
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

In most cases, notional amounts are not a measure of the Company's credit exposure. The exceptions to this rule are mortgage-backed forwards and credit default swaps that sell protection. In the event of default, the Company is exposed to the notional amounts of \$2,393 million as of December 31, 2011 and \$2,301 million as of December 31, 2010. Collateral is exchanged for all derivative types except mortgage-backed forwards. For all other contracts, 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 or other indices.

The following represents the Company's net notional interest rate swap positions:

	December 31,	
	2011	2010
	(In Millions)	
Open interest rate swaps in a fixed pay position	\$ 65,550	\$ 30,545
Open interest rate swaps in a fixed receive position	49,473	31,493
Other interest related swaps	2,538	2,193
Total interest rate swaps	\$ 117,561	\$ 64,231

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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The following summarizes the Company's net realized gains (losses) on closed contracts and change in net unrealized gains (losses) on the mark-to-market of open contracts by derivative type:

	December 31,			
	2011		2010	
	Net Realized	Change In Net Unrealized	Net Realized	Change In Net Unrealized
	Gains (Losses) Closed Contracts	Gains (Losses) Mark-to-Market Open Contracts	Gains (Losses) Closed Contracts	Gains (Losses) Mark-to-Market Open Contracts
(In Millions)				
Interest rate swaps	\$ -	\$ 460	\$ (88)	\$ 88
Currency swaps	(4)	38	-	(9)
Options	(114)	405	(28)	(118)
Credit default swaps	4	10	-	(22)
Interest rate caps and floors	-	-	4	(2)
Forward contracts	126	31	139	11
Financial futures - short positions	(287)	-	(100)	-
Financial futures - long positions	827	-	52	-
Total	\$ 552	\$ 944	\$ (21)	\$ (52)

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

5. Fair value of financial instruments

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

	December 31,			
	2011		2010	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	(In Millions)			
Financial assets:				
Bonds				
U. S. government and agencies	\$ 9,813	\$ 11,742	\$ 9,269	\$ 9,365
All other governments	112	148	116	143
States, territories and possessions	1,362	1,497	1,474	1,458
Special revenue	2,467	2,834	2,046	2,211
Industrial and miscellaneous	39,328	41,535	36,524	37,803
Parent, subsidiaries and affiliates	5,309	5,334	5,311	5,261
Preferred stocks	343	334	322	342
Common stock - unaffiliated	583	583	244	244
Common stock - affiliated ⁽¹⁾	639	639	401	401
Mortgage loans - commercial	10,874	10,893	9,653	9,792
Mortgage loans - residential	2,409	2,395	2,513	2,420
Cash, cash equivalents and short-term investments	1,788	1,788	1,590	1,590
Derivatives				
Forward contracts	53	53	13	13
Interest rate swaps	2,729	2,729	2,130	2,130
Currency swaps	135	135	92	92
Credit default swaps	37	37	27	27
Options	603	603	274	274
Financial liabilities:				
Commercial paper	250	250	250	250
Securities sold under agreements to repurchase	3,770	3,770	4,163	4,163
Funding agreements	3,344	3,457	2,299	2,373
Investment-type insurance contracts				
Group annuity investment contracts	7,315	7,915	6,787	7,275
Individual annuity investment contracts	8,212	8,853	7,303	7,514
Guaranteed investment contracts	-	-	18	18
Supplementary investment contracts	1,017	1,018	1,045	1,045

⁽¹⁾ Common stock - affiliated does not include MMHLLC which had a statutory carrying value of \$3,413 million as of December 31, 2011 and \$2,502 million as of December 31, 2010.

MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES
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	December 31,			
	2011		2010	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	(In Millions)			
Financial liabilities (continued):				
Derivatives				
Forward contracts	\$ (1)	\$ (1)	\$ (9)	\$ (9)
Interest rate swaps	298	298	158	158
Currency swaps	81	81	75	75
Credit default swaps	(2)	(2)	-	-
Options	(73)	(73)	(50)	(50)

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

The weighted average fair value of outstanding derivative financial instrument assets for the year ended December 31, 2011 was \$2,891 million and \$2,581 million for the year ended December 31, 2010. The weighted average fair value of outstanding derivative financial instrument liabilities for the year ended December 31, 2011 was \$246 million and \$161 million for the year ended December 31, 2010.

Fair value hierarchy

For the year ended December 31, 2011, 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 that are priced using these inputs are classified within Level 2 of the fair value hierarchy. When some of the necessary observable inputs are unavailable, fair value is based upon internally developed models. These models use inputs not directly observable or correlated with observable market data. Typical inputs that are integrated in the Company's internal discounted cash flow models and discounted earnings models include, but are not limited to, issuer spreads derived from internal credit ratings, benchmark yields such as the London Inter-bank Offering Rate, cash flow estimates and earnings before interest, taxes, depreciation and amortization estimates. Investments that are priced with such unobservable inputs are classified within Level 3 of the fair value hierarchy.

Annually, the Company conducts reviews of the primary pricing vendors to validate that the inputs used in that vendors' pricing process are deemed to be market observable as defined in the standard. While the Company was not provided access to proprietary models of the vendors, the reviews have included on-site walk-throughs of the pricing process, methodologies and control procedures for each asset class and level for which prices are provided. The review also included an examination of the underlying inputs and assumptions for a sample of individual securities across asset classes, credit rating levels and various durations, a process the Company continues to perform for each reporting period. In addition, the pricing vendors have an established challenge process in place

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for all security valuations, which facilitates identification and resolution of prices that fall outside expected ranges. The Company believes that the prices received from the pricing vendors are representative of prices that would be received to sell the assets at the measurement date (exit prices) and are classified appropriately in the 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 book 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.

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

The following presents the Company's fair value hierarchy for financial instruments that are carried at fair value:

	December 31, 2011				
	Level 1	Level 2	Level 3	Netting ⁽¹⁾	Total
	(In Millions)				
Financial assets:					
Bonds					
Industrial and miscellaneous	\$ -	\$ 23	\$ 20	\$ -	\$ 43
Common stock - unaffiliated	354	60	169	-	583
Common stock - affiliated ⁽²⁾	-	334	305	-	639
Cash equivalents and					
short-term investments ⁽³⁾	-	1,483	-	-	1,483
Separate account assets ⁽⁴⁾	34,157	11,571	267	-	45,995
Derivatives					
Forward contracts	-	75	-	(22)	53
Interest rate swaps	-	8,816	-	(6,087)	2,729
Currency swaps	-	174	-	(39)	135
Credit default swaps	-	48	-	(11)	37
Options	-	712	-	(109)	603
Total financial assets carried at fair value	<u>\$ 34,511</u>	<u>\$ 23,296</u>	<u>\$ 761</u>	<u>\$ (6,268)</u>	<u>\$ 52,300</u>
Financial liabilities:					
Derivatives					
Forward contracts	\$ -	\$ 21	\$ -	\$ (22)	\$ (1)
Interest rate swaps	-	6,385	-	(6,087)	298
Currency swaps	-	120	-	(39)	81
Credit default swaps	-	9	-	(11)	(2)
Options	-	36	-	(109)	(73)
Total financial liabilities carried at fair value	<u>\$ -</u>	<u>\$ 6,571</u>	<u>\$ -</u>	<u>\$ (6,268)</u>	<u>\$ 303</u>

⁽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 stock – affiliated does not include MMHLLC which had a statutory carrying value of \$3,413 million.

⁽³⁾ Does not include cash of \$305 million.

⁽⁴⁾ \$969 million of book value separate account assets and \$281 million of market value separate account assets are not carried at fair value and therefore, not included in this table.

For the year ended December 31, 2011 there were no significant transfers between Level 1 and Level 2.

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

	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
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
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.

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

	Balance as of 12/31/2010	Gains (Losses) in Net Income	Gains (Losses) in Surplus	Purchases	Issuances	Sales	Settlements	Transfers into Level 3 ⁽¹⁾	Transfers out of Level 3 ⁽¹⁾	Other Transfers ⁽²⁾	Balance as of 12/31/2011
(In Millions)											
Financial assets:											
Bonds											
Industrial and miscellaneous	\$ 46	\$ (10)	\$ (3)	\$ -	\$ 33	\$ -	\$ (47)	\$ -	\$ -	\$ 1	\$ 20
Parent, subsidiaries and affiliates	20	-	-	-	-	-	-	-	-	(20)	-
Common stock - unaffiliated	158	10	(12)	52	147	(6)	(155)	-	(25)	-	169
Common stock - affiliated	69	11	(18)	295	1	(48)	-	-	(5)	-	305
Separate account assets	272	(7)	-	23	-	(21)	-	-	-	-	267
Total Level 3 financial assets carried at fair value	\$ 565	\$ 4	\$ (33)	\$ 370	\$ 181	\$ (75)	\$ (202)	\$ -	\$ (30)	\$ (19)	\$ 761

⁽¹⁾ These columns identify assets and liabilities that are consistently carried at fair value but have had a level change. Generally transfers out of Level 3 occur when quoted prices are received in markets that have not been active, and therefore the assets or liabilities are moved to Level 2.

⁽²⁾ This column identifies assets and liabilities that are either no longer carried at fair value, or have just begun to be carried at fair value, such as assets or liabilities with no level changes but change in lower of cost or market carrying basis.

	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	-	-	8	-	68	-	(68)	12	-	20
Common stock - unaffiliated	13	-	(1)	1	-	(8)	-	-	(5)	-
Common stock - affiliated	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.

6. Fixed assets

The Company's admitted fixed assets, comprised of EDP equipment, were \$27 million and \$23 million, net of accumulated depreciation of \$164 million and \$150 million, as of December 31, 2011 and 2010, respectively. The depreciation expense on all fixed assets was \$30 million and \$19 million as of December 31, 2011 and 2010, respectively.

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 following summarizes the deferred and uncollected life insurance premium on a gross basis as well as net of loading and reinsurance.

	December 31,			
	2011		2010	
	Gross	Net	Gross	Net
	(In Millions)			
Ordinary new business	\$ 70	\$ 25	\$ 61	\$ 23
Ordinary renewal	489	540	456	511
Group life	10	10	11	11
Total	<u>\$ 569</u>	<u>\$ 575</u>	<u>\$ 528</u>	<u>\$ 545</u>

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. Refer to *Note 2q. "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 of premium 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 summarizes the surplus notes issued and outstanding as of December 31, 2011:

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	<u>\$ 1,350</u>	<u>\$ 1,340</u>		

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

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

million in 2023 and \$50 million in 2024. There are no sinking fund requirements for the 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, 2011, the unapproved interest was \$12 million. As of December 31, 2011, the Company has paid cumulative interest of \$760 million on surplus notes. Interest of \$107 million was approved and paid during the years ended December 31, 2011 and 2010.

Refer to *Note 20 "Subsequent events"* for information about the Company's surplus note issued on January 17, 2012.

9. Related party transactions

The Company reported \$41 million and \$28 million as amounts due from subsidiaries and affiliates as of December 31, 2011 and 2010, respectively. The Company reported \$53 million and \$44 million as amounts due to subsidiaries and affiliates as of December 31, 2011 and 2010, respectively. Terms generally require settlement of these amounts within 30 to 90 days.

The Company has modified coinsurance (Modco) agreements with the Japanese subsidiary of MMHLLC, MassMutual Life Insurance Company, on certain life insurance products. Under these Modco agreements, the Company is the reinsurer and the Japanese subsidiary 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 subsidiary 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 subsidiary holding the reserves on the ceded coverage rather than the Company. The net amounts due from the Japanese subsidiary were \$1 million as of December 31, 2011 and 2010. These outstanding balances are due and payable within 90 days.

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

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Premium assumed	\$ 23	\$ 26
Modified coinsurance adjustments, included in fees and other income (expense)	15	30
Expense allowances on reinsurance assumed, included in fees and other income (expense)	(2)	(3)
Policyholders' benefits	(32)	(48)

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.

MassMutual has agreements with its subsidiaries and affiliates, including OFI and Baring International Investment Limited, 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.

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

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

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Fee income:		
Management and service contracts and cost-sharing arrangements	\$ 96	\$ 58
Recordkeeping and other services	56	44
Investment advisory income	26	25
Fee expense:		
Investment advisory services	178	155

The Company's subsidiary, Babson Capital, invests a portion of its nonqualified compensation plan in an interest guarantee contract with the Company. For the years ended December 31, 2011 and 2010, the Company credited interest of \$4 million on deposits to this Babson Capital contract.

In the normal course of business, the Company provides specified guarantees and funding to MMHLLC and certain of its subsidiaries. Refer to *Note 17f. "Commitments"* for information on the Company's accounting policies regarding these related party commitments and *Note 17g. "Guarantees"* for information on the guarantees.

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, 2011, the resulting reduction in surplus due to loss of reinsurance reserve credits, net of unearned premium, would be approximately \$2,504 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 were as follows:

	Years Ended December 31,	
	2011	2010
	<u>(In Millions)</u>	
Direct premium	\$ 14,678	\$ 12,360
Premium assumed	102	110
Premium ceded	<u>(887)</u>	<u>(853)</u>
Total net premium	<u>\$ 13,893</u>	<u>\$ 11,617</u>
Reinsurance recoveries		
Assumed	\$ (91)	\$ (72)
Ceded	657	577

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

	December 31,	
	2011	2010
	<u>(In Millions)</u>	
Reinsurance reserves		
Assumed	\$ 760	\$ 728
Ceded	(3,586)	(3,297)
Amounts recoverable from reinsurers		
Assumed	(12)	(16)
Ceded	150	138

Reinsurance reserves ceded as of December 31, 2011 include \$2,786 million associated with life insurance policies, \$714 million for long-term care, \$66 million for disability and \$20 million for group life and health. 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.

As of December 31, 2011, one reinsurer accounted for 23% of the outstanding reinsurance recoverable and the next largest reinsurer had 14% 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 \$458,593 million and \$446,011 million as of December 31, 2011 and 2010, respectively. Of this total, the Company had \$17,729 million and \$20,545 million of life insurance in force as of December 31, 2011 and 2010, 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 summarizes policyholders' reserves, net of reinsurance, and the range of interest rates by type of product:

	December 31,					
	2011			2010		
	Amount	Interest Rates		Amount	Interest Rates	
(\$ In Millions)						
Individual life	\$ 35,511	2.5%	- 6.0%	\$ 34,069	2.5%	- 6.0%
Group life	10,085	2.5%	- 4.5%	9,502	2.5%	- 4.5%
Individual annuities	9,881	2.3%	- 11.3%	9,032	2.3%	- 11.3%
Group annuities	9,481	2.3%	- 11.3%	8,856	2.3%	- 11.3%
Individual universal and variable life	5,316	3.5%	- 6.0%	4,903	3.5%	- 6.0%
Disabled life claim reserves	1,855	3.5%	- 6.0%	1,828	3.5%	- 6.0%
Additional liability for annuity contracts	827	-	-	509	-	-
Disability active life reserves	595	3.5%	- 6.0%	581	3.5%	- 6.0%
Other	200	2.5%	- 6.0%	194	2.5%	- 6.0%
Guaranteed investment contracts	-	-	-	18	4.4%	- 13.0%
Total	<u>\$ 73,751</u>			<u>\$ 69,492</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 deferred annuities and single premium annuity contracts. Individual universal and variable life products include universal life and variable life 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 summarizes liabilities for deposit-type contracts and the range of interest rates by type of product:

	December 31,					
	2011			2010		
	Amount	Interest Rates		Amount	Interest Rates	
(\$ In Millions)						
Funding agreements	\$ 3,344	0.3%	- 10.2%	\$ 2,299	0.3%	- 10.2%
Supplementary contracts	642	0.3%	- 8.0%	623	0.3%	- 8.0%
Dividend accumulations	571	3.4%	- 3.5%	583	3.4%	- 4.2%
Other	65	4.0%	- 8.0%	101	4.0%	- 8.0%
Total	<u>\$ 4,622</u>			<u>\$ 3,606</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. Consistent with past years, 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 the general account of the Company. As of December 31, 2011, funding agreement balances in the general account of the Company totaled \$3,344 million, consisting of \$2,731 million in note programs, \$601 million in Federal Home Loan Bank of Boston (FHLB Boston) funding agreements and \$12 million in various other agreements. As of December 31, 2010 funding agreement balances in the general account of the Company totaled \$2,299 million, consisting of \$2,280 million in note programs and \$19 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 \$449 million remaining in run-off, and are now issued from its \$12 billion Global Medium-Term Note Program.

During 2011, the Company entered into funding agreements with the FHLB Boston in exchange for cash. The Company uses these funds in an investment spread strategy, consistent with its other investment spread operations. These funding agreements are collateralized by securities with estimated fair values of \$670 million as of December 31, 2011. The Company's borrowing capacity with the FHLB Boston is subject to the lower of the limitation on the pledge of collateral for a loan set forth in New York Insurance Law Section 1411(C) and by the Company's internal limit. The Company's unused capacity was \$703 million as of December 31, 2011. As a member of the FHLB Boston, the Company held common stock of the FHLB Boston at a statement value of \$52 million and \$25 million as of December 31, 2011 and 2010, respectively. All FHLB Boston funding agreement assets and liabilities are classified in the Company's general account. The Company accounts for these funds consistent with its other deposit-type contracts.

As of December 31, 2011, the Company's funding agreement balances by maturity year were as follows (in millions):

2012	\$ 308
2013	628
2014	753
2015	402
2016	653
Thereafter	<u>600</u>
Total	<u>\$ 3,344</u>

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 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 summarizes the disabled life and long-term care unpaid claims and claim expense reserves:

	December 31,	
	2011	2010
	(In Millions)	
Claim reserves, beginning of year	\$ 1,965	\$ 1,960
Less: Reinsurance recoverables	115	110
Net claim reserves, beginning of year	1,850	1,850
Claims paid related to:		
Current year	(16)	(14)
Prior years	(310)	(293)
Total claims paid	(326)	(307)
Incurred related to:		
Current year's incurred	239	217
Current year's interest	4	5
Prior years' incurred	19	4
Prior years' interest	80	81
Total incurred	342	307
Adjustments to surplus	12	-
Net claim reserves, end of year	1,878	1,850
Reinsurance recoverables	115	115
Claim reserves, end of year	\$ 1,993	\$ 1,965

The changes in reserves for incurred claims related to prior years are generally the result of recent loss development trends. The \$19 million increase in the prior years' incurred claims for 2011 was due to actual termination experience slightly worse than statutory termination tables. The \$4 million increase in the prior years' incurred claims for 2010 was due to unfavorable experience.

The following 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,	
	2011	2010
	(In Millions)	
Disabled life claim reserves	\$ 1,855	\$ 1,828
Accrued claim liabilities	23	22
Net claim reserves, end of year	\$ 1,878	\$ 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. Beginning in the first quarter of 2010 the Company began offering newly designed GMWBs on a variable product.

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

The following shows the liabilities for guaranteed minimum death, income, accumulation and withdrawal benefits (in millions):

Liability as of December 31, 2009	\$ 518
Incurred guarantee benefits in 2010	(4)
Paid guarantee benefits in 2010	<u>(5)</u>
Liability as of December 31, 2010	509
Incurred guarantee benefits in 2011	324
Paid guarantee benefits in 2011	<u>(6)</u>
Liability as of December 31, 2011	<u><u>\$ 827</u></u>

The Company held reserves in accordance with the stochastic scenarios as of December 31, 2011 and 2010. As of December 31, 2011 and 2010 the Company held additional reserves above those indicated based on the stochastic scenarios in order to maintain a prudent level of reserve adequacy.

The following 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,					
	2011			2010		
	Account Value	Net Amount at Risk	Weighted Average Attained Age	Account Value	Net Amount at Risk	Weighted Average Attained Age
	(\$ In Millions)					
Annuity:						
GMDB	\$ 10,684	\$ 336	62	\$ 11,013	\$ 283	61
GMIB	4,010	822	62	4,293	509	61
GMAB	1,555	53	57	1,416	29	57
GMWB	195	17	66	191	8	65

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

	December 31,							
	2011				2010			
	GMDB	GMIB	GMAB	GMWB	GMDB	GMIB	GMAB	GMWB
	(In Millions)							
Separate account	\$ 9,383	\$ 3,995	\$ 1,487	\$ 195	\$ 9,866	\$ 4,279	\$ 1,346	\$ 191
Company's general								
investments	1,301	15	68	-	1,147	14	70	-
Total	<u>\$ 10,684</u>	<u>\$ 4,010</u>	<u>\$ 1,555</u>	<u>\$ 195</u>	<u>\$ 11,013</u>	<u>\$ 4,293</u>	<u>\$ 1,416</u>	<u>\$ 191</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
NOTES TO CONDENSED CONSOLIDATED STATUTORY FINANCIAL STATEMENTS, continued

The net liability for guarantees on universal life and variable universal life type contracts was as follows:

	December 31,	
	2011	2010
	<u>(In Millions)</u>	
Beginning balance	\$ 1,857	\$ 1,664
Net liability increase	<u>288</u>	<u>193</u>
Ending balance	<u>\$ 2,145</u>	<u>\$ 1,857</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, 2011 and 2010. The commercial paper issued in 2011 had interest rates ranging from 0.12% to 0.27% with maturity dates ranging from 1 day to 42 days. Interest expense for the commercial paper was less than \$1 million for the years ended December 31, 2011 and 2010.

MassMutual has a \$1 billion three year credit facility with a syndicate of lenders that could be used for general corporate purposes and to support commercial paper borrowings. The 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, 2011 and 2010, the Company was in compliance with all covenants under the credit facilities. For the years ended December 31, 2011 and 2010, there were no draws on the credit facilities. Credit facility fees were \$1 million and less than \$1 million for the years ended December 31, 2011 and 2010, respectively.

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 2011 and 2010, the Company contributed \$137 million and \$116 million, respectively, to its qualified defined benefit plan.

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 \$1,423 million and \$1,384 million as of December 31, 2011 and 2010, 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 \$28 million and \$29 million for the years ended December 31, 2011 and 2010, 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 \$179 million and \$194 million as of December 31, 2011 and 2010, 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, but 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.

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 for these benefits was \$28 million and \$25 million as of December 31, 2011 and 2010, respectively.

The Company accrues postemployment benefits for agents' health benefits for those agents who qualify for long-term disability and are not retired. The net accumulated liability for these benefits was \$11 million and \$12 million as of December 31, 2011 and 2010, respectively.

d. Benefit obligations

The initial transition obligation for other postretirement benefits of \$138 million is amortized over 20 years through 2012. The remaining balance is \$4 million. The initial transition obligation represents the phased recognition on the Condensed Consolidated Statutory Statements of Income 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 levels.

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 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.

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

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

	December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Projected benefit obligation for:				
Vested employees	\$2,163	\$ 1,764	\$ 365	\$ 330
Non-vested employees	29	31	50	35
Total projected benefit obligation	<u>\$2,192</u>	<u>\$ 1,795</u>	<u>\$ 415</u>	<u>\$ 365</u>
Accumulated benefit obligation for:				
Vested employees	\$2,148	\$ 1,743	\$ 365	\$ 330
Non-vested employees	12	16	50	35
Total accumulated benefit obligation	<u>\$2,160</u>	<u>\$ 1,759</u>	<u>\$ 415</u>	<u>\$ 365</u>

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

	December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Projected benefit obligation, beginning of year	\$ 1,764	\$ 1,647	\$ 330	\$ 311
Service cost	42	44	4	8
Interest cost	95	96	16	17
Contributions by plan participants	-	-	10	9
Actuarial (gains) losses	59	(24)	(13)	(6)
Medicare prescription drug direct subsidy	-	-	2	2
Benefits paid	(95)	(90)	(27)	(26)
Change in discount rate	298	91	43	15
Projected benefit obligation, end of year	<u>\$2,163</u>	<u>\$ 1,764</u>	<u>\$ 365</u>	<u>\$ 330</u>

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

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

	December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Accumulated benefit obligation, beginning of year	\$ 1,743	\$ 1,626	\$ 330	\$ 311
Service cost	43	45	4	8
Interest cost	94	95	16	17
Contributions by plan participants	-	-	10	9
Actuarial (gains) losses	66	(24)	(13)	(6)
Medicare prescription drug direct subsidy	-	-	2	2
Benefits paid	(95)	(90)	(27)	(26)
Change in discount rate	297	91	43	15
Accumulated benefit obligation, end of year	<u>\$ 2,148</u>	<u>\$ 1,743</u>	<u>\$ 365</u>	<u>\$ 330</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, 2011. 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 \$65 million change in the projected pension benefit obligation. The methodology includes producing a cash flow of annual accrued benefits. For active participants, service is projected to the end of 2011 and pensionable earnings are projected to the date of probable termination. See Section *h.* of this Note, “*Assumptions*” for details on the discount rate.

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

e. Plan assets

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 and are 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 as of December 31, 2011 and 2010:

	December 31,	
	2011	2010
	(In Millions)	
Pension plan assets managed by the Company and affiliated asset managers:		
General Investment Account option	\$ 253	\$ 242
Babson Long Term Duration Bond Fund	141	121
Alternative Investment Separate Account	133	113
Oppenheimer Small Capitalization Core Fund	99	103
Oppenheimer International Growth Fund	72	-
Babson Enhanced Index Value Fund	65	59
Oppenheimer Large Core Fund	65	44
MM Premier Capital Appreciation Fund	48	49
MM Premier Core Bond Fund	42	-
Oppenheimer Large Capitalization Value Fund	39	63
MM Premier Strategic Emerging Markets Fund	35	38
Oppenheimer Real Estate Fund	21	19
MM Premier International Equity Fund	-	78
	1,013	929
Pension plan assets managed by unaffiliated asset managers:		
Goldman Sachs Asset Management Long Duration Bond Fund	144	120
Pacific Asset Management Company Long Duration Bond Fund	140	119
Harris International	68	80
MM Select Aggressive Growth Fund	38	36
MM Select Blue Chip Growth Fund	37	36
T. Rowe Price Emerging Markets Stock Fund	36	37
MM Select Small Cap Growth Fund	33	28
MM Select Small Cap Value Fund	33	28
Davis Large Value Fund	25	25
	554	509
Total qualified pension plan assets	\$ 1,567	\$ 1,438

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 \$61 million in 2012.

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

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 sets forth the change in plan assets:

	December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Fair value of plan assets, beginning of year	\$ 1,438	\$ 1,244	\$ 5	\$ 5
Actual return on plan assets	69	148	-	-
Employer contributions	155	136	16	17
Contributions by plan participants	-	-	10	9
Benefits paid	(95)	(90)	(27)	(26)
Other	-	-	1	-
Fair value of plan assets, end of year	<u>\$ 1,567</u>	<u>\$ 1,438</u>	<u>\$ 5</u>	<u>\$ 5</u>

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 that 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 16% and 17% 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, 2011 and 2010, respectively.

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.

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

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

	December 31,	
	2011	2010
Bonds	65 %	67 %
Mortgage loans	15	15
Partnerships and LLCs	7	7
Common stocks - subsidiaries and affiliate	5	4
Other investments	5	3
Cash and cash equivalents	2	2
Real estate	1	1
Short-term investments	-	1
	100 %	100 %

The qualified pension plan invests in the following pooled and nonpooled separate account options:

Babson Long Term Duration Bond Fund is a nonpooled separate account subadvised by Babson Capital with a long duration bond strategy that invests 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.

Alternative Investment Separate Account is a nonpooled separate account subadvised by Babson Capital. Babson Capital's strategy includes holdings of a private equity fund, an equity index exchange traded fund and a bond index exchange traded fund.

Oppenheimer Small Capitalization Core Fund is a nonpooled separate account subadvised by OFI Institutional Asset Management (OFI Institutional) that 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 securities.

Oppenheimer International Growth Fund is a pooled separate account subadvised by OFI Institutional that invests in international large-cap securities. This international equity strategy focuses on well-positioned, well-managed businesses that have strong revenue growth, sustainable profit margins, capital efficiency and/or business integrity.

Babson Enhanced Index Value Fund is a nonpooled separate account subadvised by Babson Capital that invests in domestic small-cap, mid-cap, large-cap and other fixed income securities. The strategy is a large cap value equity strategy that uses a systematic strategy that exploits market inefficiencies designed to outperform the fund's benchmark index while maintaining risk characteristics similar to the benchmark.

Oppenheimer Large Capitalization Value Fund is a nonpooled separate account subadvised by OFI Institutional that 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 strategy is a large-cap value equity strategy that uses fundamental analyses to select securities for the fund that it believes are undervalued.

MM Premier Capital Appreciation Fund is a pooled separate account subadvised by OFI Institutional that invests primarily in domestic large-cap common stocks of growth companies. The strategy is a large cap growth equity strategy that seeks companies in rapidly expanding industries that they believe may appreciate in value over the long term.

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

MM Premier Core Bond Fund is a pooled separate account subadvised by Babson Capital Management LLC. It primarily invests in high-quality, investment grade bonds with selective and prudent investments in high yield bonds, which are deemed to provide an attractive risk/reward trade off. Security selection is an in-depth, bottom-up credit research process seeking securities with attractive yields among the corporate, U.S. government (treasury and agency) and mortgage & asset backed sectors.

Oppenheimer Large Core Fund is a nonpooled separate account subadvised by OFI Institutional that invests in a diversified mix of larger company stocks for capital appreciation potential. The strategy is a large cap core equity strategy, where 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 Strategic Emerging Markets Fund is a pooled separate account subadvised by Baring Asset Management with an emerging markets equity strategy that invests in international emerging markets and seeks long-term capital growth. 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.

Oppenheimer Real Estate Fund is a pooled separate account that invests in an Oppenheimer mutual fund subadvised by Cornerstone Advisors. This real estate strategy seeks out exposure to the commercial real estate market and uses a fundamental research driven approach to search for what are believed to be high quality companies in the Real Estate Investment Trust (REIT) market among other investments. REIT's are publicly traded securities that sell like a stock on the major exchanges and which invest in real estate directly.

Goldman Sachs Asset Management Long Duration Bond Fund is a nonpooled separate account subadvised by Goldman Sachs Asset Management with a long duration bond strategy that invests 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.

Pacific Investment Management Company Long Duration Bond Fund is a nonpooled separate account subadvised by Pacific Investment Management Company with a long duration bond strategy that invests 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.

Harris International is a nonpooled separate account subadvised by Harris Associates that invests in international large-cap value securities and equity securities, which may include common stocks, preferred stocks, securities that are convertible into common stocks, depositary receipts, and rights and warrants to buy common stocks. This international equity strategy seeks out companies that it believes to be trading in the market at significant discounts to their underlying values.

MM Select Aggressive Growth Fund is a pooled separate account subadvised by Sands Capital Management, LLC (Sands Capital) and Delaware Management Company (DMC) with a large-cap growth equity strategy. Sands Capital uses bottom-up, fundamental research and focuses 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. DMC seeks to select large cap equities 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.

MM Select Blue Chip Growth Fund is a pooled separate account subadvised by T. Rowe Price Associates, Inc. (T. Rowe Price) that seeks growth of capital over the long term. The strategy is a large cap growth equity strategy that seeks well-established companies with 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 Emerging Markets Stock Fund is a nonpooled separate account subadvised by T. Rowe Price with an emerging markets equity strategy that seeks long-term growth of capital through investments primarily in the common stocks of companies located (or with primary operations) in Latin America, Asia, Europe, Africa and the Middle East.

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

MM Select Small Cap Growth Fund is a pooled separate account subadvised by Wadell & Reed and Wellington Management that invests in domestic small-cap equity securities and seeks long-term capital appreciation. 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.

MM Select Small Cap Value Fund is a pooled separate account subadvised by Wellington Management and Barrow Hanley that seeks to maximize total return through investing primarily in small-cap equity securities. Wellington 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. Barrow Hanley 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.

Davis Large Value Fund is a nonpooled separate account subadvised by Davis Advisors that invests in domestic and international small-cap, mid-cap, and large-cap securities. The strategy is a value equity strategy that employs a strong price discipline with a focus on growing companies selling at value prices.

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 the investments in the qualified pension plan.

Pooled separate accounts: Valued using the unit value calculated based on the net asset value (NAV) of the underlying pool of securities that 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 primarily 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 presents the fair value hierarchy of the Company's pension plan assets by asset class:

	Fair Value as of December 31, 2011			
	Level 1	Level 2	Level 3	Total
	(In Millions)			
Investments in the qualified pension plan:				
Pooled separate accounts:				
Common stocks:				
U.S. large capitalization	\$ -	\$ 123	\$ -	\$ 123
International large capitalization value	-	72	-	72
U.S. small capitalization value	-	66	-	66
International emerging markets	-	35	-	35
Real estate	-	21	-	21
Bonds:				
Diversified fixed income	-	42	-	42
Total pooled separate accounts	-	359	-	359
Nonpooled separate accounts:				
Common stocks				
U.S. large capitalization	143	-	-	143
U.S. mid capitalization	55	-	-	55
U.S. small capitalization	70	-	-	70
International large capitalization value	10	-	-	10
International small/mid capitalization	5	-	-	5
Corporate and other bonds	-	151	-	151
Long duration bonds	75	-	-	75
Short term bonds	3	-	-	3
Government securities	-	186	-	186
Mortgage backed securities	-	3	-	3
Registered investment companies				
U.S. large capitalization	49	-	-	49
Other fixed income	36	-	-	36
Multi-strategy hedge funds	-	30	-	30
Limited partnerships				
Diversified hedge fund	1	-	-	1
International large capitalization value	-	-	68	68
Multi-strategy hedge funds	-	19	-	19
Private equity/venture capital	-	4	-	4
Real estate	-	30	-	30
Short term cash equivalents	1	14	-	15
Cash	2	-	-	2
Total nonpooled separate accounts	450	437	68	955
Total General Investment Account option	-	-	253	253
Total	\$ 450	\$ 796	\$ 321	\$ 1,567

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

	Fair Value as of December 31, 2010			
	Level 1	Level 2	Level 3	Total
	(In Millions)			
Investments in the qualified pension plan:				
Pooled separate accounts:				
Common stocks				
U.S. large capitalization	\$ -	\$ 121	\$ -	\$ 121
International large capitalization value	-	78	-	78
U.S. small capitalization value	-	56	-	56
International emerging markets	-	38	-	38
Real estate	-	19	-	19
Total pooled separate accounts	-	312	-	312
Nonpooled separate accounts:				
Common stocks				
U.S. large capitalization	142	-	-	142
U.S. mid capitalization	81	-	-	81
U.S. small capitalization	52	-	-	52
International large capitalization value	8	-	-	8
International small/mid capitalization	5	-	-	5
Corporate and other bonds	-	102	-	102
Long duration bonds	65	-	-	65
Short term bonds	2	-	-	2
Government securities	-	157	-	157
Registered investment companies:				
U.S. large capitalization	76	-	-	76
International small/mid capitalization	38	-	-	38
Other fixed income	34	-	-	34
Limited Partnerships:				
International large capitalization value	-	-	80	80
Other fixed income	-	1	-	1
Short term cash equivalents	4	-	-	4
Cash	1	36	-	37
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

The following sets 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	Total
	(In Millions)		
Balance, January 1, 2011	\$ 80	\$ 242	\$ 322
Realized gains (losses)	-	13	13
Unrealized gains (losses)	(12)	-	(12)
Purchases	-	76	76
Sales	-	(78)	(78)
Balance, December 31, 2011	\$ 68	\$ 253	\$ 321

	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 (losses)	-	5	-	5
Unrealized gains (losses)	14	-	-	14
Purchases	-	33	-	33
Sales	-	(71)	(5)	(76)
Balance, December 31, 2010	\$ 80	\$ 242	\$ -	\$ 322

The Company evaluated the significance of transfers between levels based upon the nature of the financial instrument and size of the transfer relative to total net assets available for benefits. For the year ended December 31, 2011, there were no significant transfers in or out of Levels 1, 2 or 3.

Postretirement Investments

The fair value of the postretirement benefits investments of \$5 million for the years ended December 31, 2011 and 2010 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 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.

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

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

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 accrued benefit cost recognized is the funded status of the plan 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 sets forth the funded status of the plans and 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,			
	2011	2010	2011	2010
	Pension		Other Postretirement	
	Benefits		Benefits	
	(In Millions)			
Prepaid benefit cost	\$ 721	\$ 660	\$ -	\$ -
Intangible assets	2	3	-	-
Nonadmitted asset	(721)	(660)	-	-
Total other assets	<u>\$ 2</u>	<u>\$ 3</u>	<u>\$ -</u>	<u>\$ -</u>
Fair value of plan assets, end of year	\$ 1,567	\$ 1,438	\$ 5	\$ 5
Less: Projected benefit obligations, end of year	<u>2,163</u>	<u>1,764</u>	<u>365</u>	<u>330</u>
Funded status, projected benefit obligation	(596)	(326)	(360)	(325)
Unrecognized prior service cost	-	-	2	2
Unrecognized net actuarial (gains) losses	1,152	823	84	56
Unrecognized net transition obligation	2	3	4	9
Less: Assets nonadmitted	<u>721</u>	<u>660</u>	-	-
Accrued benefit cost recognized	(163)	(160)	(270)	(258)
Additional minimum liability	<u>(418)</u>	<u>(145)</u>	-	-
Total other liabilities	<u>\$ (581)</u>	<u>\$ (305)</u>	<u>\$ (270)</u>	<u>\$ (258)</u>
Fair value of plan assets, end of year	\$ 1,567	\$ 1,438	\$ 5	\$ 5
Less: Accumulated benefit obligations, end of year	<u>2,148</u>	<u>1,743</u>	<u>365</u>	<u>330</u>
Funded status, accumulated benefit obligation	<u>\$ (581)</u>	<u>\$ (305)</u>	<u>\$ (360)</u>	<u>\$ (325)</u>

The qualified pension plan was underfunded by \$319 million and \$93 million for the years ended December 31, 2011 and 2010, respectively. The nonqualified pension plans are not funded and have total projected benefit obligations of \$277 million and \$233 million for the years ended December 31, 2011 and 2010, respectively.

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

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

	December 31,	
	2011	2010
	Pension Benefits	
	<u>(In Millions)</u>	
Net amount recognized, including nonadmitted asset, beginning of year	\$ 500	\$ 453
Employer contributions	155	136
Net periodic cost	<u>(97)</u>	<u>(89)</u>
Subtotal net amount recognized, including nonadmitted asset	558	500
Nonadmitted asset	<u>(721)</u>	<u>(660)</u>
Accrued benefit cost recognized, end of year	<u><u>\$(163)</u></u>	<u><u>\$(160)</u></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 \$418 million and \$145 million for the years ended December 31, 2011 and 2010, respectively. Increases (decreases) in the additional minimum liability, less allowable intangible assets, are included in change in minimum liability included in surplus.

The following 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 market performance.

	December 31,	
	2011	2010
	Pension Benefits	
	<u>(In Millions)</u>	
Change in additional minimum liability:		
Accumulated benefit obligation, end of year	\$(2,148)	\$(1,743)
Fair value of plan assets, end of year	<u>1,567</u>	<u>1,438</u>
Funded status, accumulated benefit obligation	(581)	(305)
Accrued benefit cost recognized, end of year	<u>(163)</u>	<u>(160)</u>
Additional minimum liability	<u><u>\$ (418)</u></u>	<u><u>\$ (145)</u></u>

The Company intends to fund \$80 million to meet its expected obligations under its qualified and nonqualified pension plans and other postretirement benefit plans in 2012.

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

g. Net periodic cost

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

	Years Ended December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Service cost	\$ 42	\$ 44	\$ 4	\$ 8
Interest cost	95	96	16	17
Expected return on plan assets	(105)	(108)	-	-
Amortization of unrecognized transition obligation	1	1	5	5
Amortization of unrecognized net actuarial and other losses	<u>64</u>	<u>56</u>	<u>2</u>	<u>1</u>
Total net periodic cost	<u>\$ 97</u>	<u>\$ 89</u>	<u>\$ 27</u>	<u>\$ 31</u>

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

	Medicare Prescription Drug Government Subsidy		
	Pension Benefits	Other Postretirement Benefits	Government Subsidy
	(In Millions)		
2012	\$ 78	\$ 23	\$ (3)
2013	82	23	(3)
2014	86	24	(3)
2015	91	25	(3)
2016	96	26	(4)
2017-2021	563	139	(23)

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

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Pension	\$ 97	\$ 89
Health	59	64
Thrift	28	29
Postretirement	27	31
Life	3	3
Disability	2	2
Postemployment	1	1
Other benefits	<u>7</u>	<u>6</u>
Total	<u>\$ 224</u>	<u>\$ 225</u>

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

h. Assumptions

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

	December 31,			
	2011	2010	2011	2010
	Pension Benefits		Other Postretirement Benefits	
Weighted-average assumptions used to determine:				
Benefit obligations:				
Discount rate	4.35%	5.50%	4.25%	5.30%
Expected rate of compensation increase	4.00%	4.00%	4.00%	4.00%
Net periodic benefit cost:				
Discount rate	5.50%	5.95%	5.30%	5.75%
Expected long-term rate of return on plan assets	7.75%	7.75%	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 for 2011 and 2010.	-	-	5.00%	5.00%

The discount rate used to determine the benefit obligations as of year-end is 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 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 2011:

	One Percentage Point Increase	One Percentage Point Decrease
	(In Millions)	
Effect on total service and interest cost	\$ 2	\$ (2)
Effect on other postretirement benefit obligation	35	(29)

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 PSARs and PRS. These awards do not grant an equity or ownership interest in the Company.

A summary of share-based payment details representing the weighted average grant price of PSARs and PRS shares granted, the intrinsic value of PSARs 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,	
	2011	2010
Weighted average grant date fair value:		
PSARs granted during the year (whole \$)	\$ 62.77	\$ 50.31
PRS granted during the year (whole \$)	62.83	50.31
Intrinsic value:		
PSARs options exercised (in thousands)	27,831	784
PRS liabilities paid (in thousands)	3,181	59
Fair value of shares vested during the year (in thousands)	51,620	53,678

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

	PSARs			PRS		
	Number of Share Units <small>(In Thousands)</small>	Weighted Average Price <small>(Whole \$)</small>	Remaining Contract Terms <small>(In Years)</small>	Number of Share Units <small>(In Thousands)</small>	Weighted Average Price <small>(Whole \$)</small>	Remaining Contract Terms <small>(In Years)</small>
Outstanding as of						
January 1, 2010	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	(55)	43.06		(29)	43.57	
Outstanding as of						
December 31, 2010	4,148	46.02	1.5	1,104	42.39	3.6
Granted	883	62.77		313	62.83	
Exercised	(1,597)	53.23		(49)	58.16	
Forfeited	(79)	49.29		(45)	49.73	
Outstanding as of						
December 31, 2011	3,355	46.82	1.1	1,323	46.32	3.3
Exercisable as of						
December 31, 2011	225	\$ 59.58	-	-	\$ -	-

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

The PSARs compensation expense was \$29 million and \$36 million for the years ended December 31, 2011 and 2010, respectively. The PSARs accrued compensation liability was \$50 million and \$49 million as of December 31, 2011 and 2010, respectively. Unrecognized compensation expense related to nonvested PSARs awards was \$8 million and \$19 million for the years ended December 31, 2011 and 2010, respectively. The PSARs unrecognized compensation expense represents the total intrinsic value of all shares issued if 100% vested at current share price, minus current compensation liability. There was no nonadmitted related deferred tax benefit for the year ended December 31, 2011. The non-admitted deferred tax benefit for the year ended December 31, 2010 was \$8 million.

The PRS compensation expense was \$23 million and \$17 million for the years ended December 31, 2011 and 2010, respectively. The PRS accrued compensation liability was \$45 million and \$26 million as of December 31, 2011 and 2010, respectively. Unrecognized compensation expense related to nonvested PRS awards for the years ended December 31, 2011 and 2010 was \$39 million and \$44 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. The related nonadmitted deferred tax benefit for the years ended December 31, 2011 and 2010 was \$3 million and \$5 million, respectively.

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

15. Federal income taxes

The Company provides for deferred income taxes based on an admissibility limitation of 15% of surplus and a three year reversal/realization period.

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

	December 31, 2011		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 5,185	\$ 254	\$ 5,439
Statutory valuation allowance adjustment	-	-	-
Total adjusted gross DTAs	5,185	254	5,439
Total gross DTLs	(3,850)	(388)	(4,238)
Net DTA(L)	1,335	(134)	1,201
Total DTAs nonadmitted	(81)	(1)	(82)
Net admitted DTA(L)	\$ 1,254	\$ (135)	\$ 1,119

	December 31, 2010		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 3,388	\$ 504	\$ 3,892
Statutory valuation allowance adjustment	-	(1)	(1)
Total adjusted gross DTAs	3,388	503	3,891
Total gross DTLs	(2,101)	(166)	(2,267)
Net DTA(L)	1,287	337	1,624
Total DTAs nonadmitted	(42)	(36)	(78)
Net admitted DTA(L)	\$ 1,245	\$ 301	\$ 1,546

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Total gross DTAs	\$ 1,797	\$ (250)	\$ 1,547
Statutory valuation allowance adjustment	-	1	1
Total adjusted gross DTAs	1,797	(249)	1,548
Total gross DTLs	(1,749)	(222)	(1,971)
Net DTA(L)	48	(471)	(423)
Total DTAs nonadmitted	(39)	35	(4)
Net admitted DTA(L)	\$ 9	\$ (436)	\$ (427)

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

Pursuant to issued guidance, the Company has chosen to admit DTAs for the current reporting period in accordance with the NAIC approved revisions effective for 2010 and 2011. The amount of adjusted gross DTA admitted under each component and the resulting increased amount by tax character are as follows:

	December 31, 2011		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Federal income taxes that can be recovered	\$ 89	\$ -	\$ 89
Remaining adjusted gross DTAs expected to be realized within 1 year	727	205	932
Total gross DTLs	4,190	48	4,238
Total admitted DTA realized within 1 year	5,006	253	5,259
Admitted DTA 3 years:			
Federal income taxes that can be recovered	89	-	89
Remaining adjusted gross DTAs expected to be realized within 3 years	953	205	1,158
Total gross DTLs	4,062	48	4,110
Total admitted DTA realized within 3 years	5,104	253	5,357
Increase in net admitted DTA 1 year versus 3 years	\$ 98	\$ -	\$ 98
	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	2,110	157	2,267
Total admitted DTA realized within 1 year	2,947	467	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	2,018	157	2,175
Total admitted DTA realized within 3 years	3,346	467	3,813
Increase in net admitted DTA 1 year versus 3 years	\$ 399	\$ -	\$ 399

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

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Federal income taxes that can be recovered	\$ (33)	\$ (61)	\$ (94)
Remaining adjusted gross DTAs expected to be realized within 1 year	12	(44)	(32)
Total gross DTLs	<u>2,080</u>	<u>(109)</u>	<u>1,971</u>
Total admitted DTA realized within 1 year	<u>2,059</u>	<u>(214)</u>	<u>1,845</u>
Admitted DTA 3 years:			
Federal income taxes that can be recovered	(33)	(61)	(94)
Remaining adjusted gross DTAs expected to be realized within 3 years	(253)	(44)	(297)
Total gross DTLs	<u>2,044</u>	<u>(109)</u>	<u>1,935</u>
Total admitted DTA realized within 3 years	<u>1,758</u>	<u>(214)</u>	<u>1,544</u>
Change in net admitted DTA			
1 year versus 3 years	<u>\$ (301)</u>	<u>\$ -</u>	<u>\$ (301)</u>

The Company's total adjusted capital and authorized control level are as follows:

	December 31,		
	2011	2010	Change
	(In Millions)		
Total adjusted capital	<u>\$ 13,247</u>	<u>\$ 12,421</u>	<u>\$ 826</u>
Authorized control level	<u>\$ 1,267</u>	<u>\$ 1,225</u>	<u>\$ 42</u>

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

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 impact of tax-planning strategies is as follows:

	December 31, 2011		
	Ordinary	Capital	Total
	(Percent)		
Impact of tax planning strategies:			
Adjusted gross DTAs			
(% of total adjusted gross DTAs)	0 %	0 %	0 %
Net admitted adjusted gross DTAs			
(% of total net admitted adjusted gross DTAs)	7 %	0 %	7 %
	December 31, 2010		
	Ordinary	Capital	Total
	(Percent)		
Impact of tax planning strategies:			
Adjusted gross DTAs			
(% of total adjusted gross DTAs)	0 %	0 %	0 %
Net admitted adjusted gross DTAs			
(% of total net admitted adjusted gross DTAs)	35 %	0 %	35 %
	Change		
	Ordinary	Capital	Total
	(Percent)		
Impact of tax planning strategies:			
Adjusted gross DTAs			
(% of total adjusted gross DTAs)	0 %	0 %	0 %
Net admitted adjusted gross DTAs			
(% of total net admitted adjusted gross DTAs)	(28)%	0 %	(28)%

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

The Company's admitted assets, adjusted statutory surplus and total adjusted capital are as follows:

	December 31, 2011		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Admitted DTAs	\$ 5,006	\$ 253	\$ 5,259
Admitted assets			148,600
Adjusted statutory surplus			11,417
Total adjusted capital from DTAs			13,247
Increase due to admitted DTA 3 year:			
Admitted DTAs	98	-	98
Admitted assets	98	-	98
Statutory surplus	98	-	98
	December 31, 2010		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Admitted DTAs	\$ 2,947	\$ 467	\$ 3,414
Admitted assets			141,102
Adjusted statutory surplus			10,352
Total adjusted capital from DTAs			12,421
Increase due to admitted DTA 3 year:			
Admitted DTAs	399	-	399
Admitted assets	399	-	399
Statutory surplus	399	-	399
	Change		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 1 year:			
Admitted DTAs	\$ 2,059	\$ (214)	\$ 1,845
Admitted assets			7,498
Adjusted statutory surplus			1,065
Total adjusted capital from DTAs			826
Change in admitted DTA 3 year:			
Admitted DTAs	(301)	-	(301)
Admitted assets	(301)	-	(301)
Statutory surplus	(301)	-	(301)

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

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

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Federal income tax expense (benefit) on operating earnings	\$ (307)	\$ (230)
Foreign income tax expense (benefit) on operating earnings	17	13
Total federal and foreign income tax expense (benefit) on operating earnings	(290)	(217)
Federal income tax expense (benefit) on net realized capital gains (losses)	180	22
Total federal and foreign income tax expense (benefit)	\$ (110)	\$ (195)

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:

	2011	December 31, 2010	Change
	(In Millions)		
DTAs:			
Ordinary			
Unrealized investment losses	\$ 2,301	\$ 718	\$ 1,583
Reserve items	885	827	58
Policy acquisition costs	551	547	4
Nonadmitted assets	505	462	43
Pension and compensation related items	343	250	93
Policyholders' dividends	341	303	38
Investment items	127	109	18
Tax credits	78	39	39
Expense items	32	45	(13)
Other	22	88	(66)
Total ordinary DTAs	<u>5,185</u>	<u>3,388</u>	<u>1,797</u>
Nonadmitted DTAs	<u>(81)</u>	<u>(42)</u>	<u>(39)</u>
Admitted ordinary DTAs	<u>5,104</u>	<u>3,346</u>	<u>1,758</u>
Capital			
Unrealized investment losses	127	87	40
Investment items	127	416	(289)
Total capital DTAs	<u>254</u>	<u>503</u>	<u>(249)</u>
Nonadmitted DTAs	<u>(1)</u>	<u>(36)</u>	<u>35</u>
Admitted capital DTAs	<u>253</u>	<u>467</u>	<u>(214)</u>
Admitted DTAs	<u>5,357</u>	<u>3,813</u>	<u>1,544</u>
DTLs:			
Ordinary			
Unrealized investment gains	3,168	1,406	1,762
Pension items	252	231	21
Deferred and uncollected premium	229	214	15
Reserve for audits and settlements	-	79	(79)
Other	201	171	30
Total ordinary DTLs	<u>3,850</u>	<u>2,101</u>	<u>1,749</u>
Capital			
Unrealized investment gains	388	166	222
Total capital DTLs	<u>388</u>	<u>166</u>	<u>222</u>
Total DTLs	<u>4,238</u>	<u>2,267</u>	<u>1,971</u>
Net admitted DTA	<u>\$ 1,119</u>	<u>\$ 1,546</u>	<u>\$ (427)</u>

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

The change in net deferred income taxes is comprised of the following:

	Years Ended December 31,	
	2011	2010
	<u>(In Millions)</u>	
Net DTA(L)	\$ (423)	\$ (102)
Less: Items not recorded in the change in net deferred income taxes:		
Tax-effect of unrealized gains/losses	361	112
Change in net deferred income taxes	<u>\$ (62)</u>	<u>\$ 10</u>
Change in other net deferred income taxes	\$ 239	\$ (69)
Change in special surplus funds- net deferred tax assets	<u>(301)</u>	<u>79</u>
Change in net deferred income taxes	<u>\$ (62)</u>	<u>\$ 10</u>

As of December 31, 2011, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has total tax credit carryforwards of \$78 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 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,	
	2011	2010
	<u>(In Millions)</u>	
Provision computed at statutory rate	\$ 363	\$ 191
Foreign governmental income taxes	12	10
Expense items	10	(40)
Investment items	(342)	(203)
Nonadmitted assets	(43)	(129)
Tax credits	(40)	(42)
Change in reserve valuation basis	(6)	12
Other	(2)	(4)
Total statutory income tax expense (benefit)	<u>\$ (48)</u>	<u>\$ (205)</u>
Federal and foreign income tax expense (benefit)	\$ (110)	\$ (195)
Change in net deferred income taxes	<u>62</u>	<u>(10)</u>
Total statutory income tax expense (benefit)	<u>\$ (48)</u>	<u>\$ (205)</u>

During the years ended December 31, 2011, 2010 and 2009 the Company received refunds of federal income taxes in the amount of \$64 million, \$299 million and \$513 million, respectively. As a result of the aforementioned refunds, there are no federal income taxes available for recovery as of the year ended December 31, 2011.

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

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 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. The Company recognizes 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. The Company is currently in litigation with the federal government regarding the timing of the deduction for certain policyholder dividends for tax years 1995 to 1997. In January 2012, the Company prevailed in the U.S. Court of Federal Claims, subject to the government's right to appeal. The favorable effect of this decision has been reflected in the Company's financial statements as of December 31, 2011 by recording a federal income tax benefit of \$141 million in the Condensed Consolidated Statutory Statements of Income, with a net increase of \$58 million to Surplus. As of December 31, 2011 and 2010, the Company had no protective deposits recognized as admitted assets.

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 with the option of claiming 100% bonus depreciation for certain 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. Transferable state tax credits

The Company entered into transfer contracts in which certified Massachusetts state tax credits were purchased in December 2008. The total unused transferable state tax credits, gross of any related state tax liabilities, have a carrying value of less than \$1 million as of December 31, 2011 and are recorded in other than invested assets. The Company uses the benefit schedules provided with the transfer contracts to estimate the utilization of remaining transferable state tax credits or other projected recovery of the current carrying value. The Company will be using these credits in 2012. There were no impairments on these credits as of December 31, 2011.

17. 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.

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

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 paydowns 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 expects that it will be some time before higher yielding securities will be available in the market.

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.

During the past few years, 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, relaxed underwriting standards by residential mortgage loan originators and substantial growth in affordable 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 with unprecedented borrower defaults. Market pricing was affected both by the deterioration in fundamentals as well as by the reduced liquidity and higher risk premium demanded by investors. While housing fundamentals began stabilizing in late 2009 and in 2010, housing was under renewed pressure through most of 2011. As of now, housing prices are hovering around their April 2009 lows. The housing market also continues to be under pressure due to slow liquidation rates and above-average rates of unsold homes. These concerns, coupled with uncertain mortgage servicing behaviors, continue to affect security valuations and liquidity conditions in the securitized mortgage market where prices are off their post-crisis highs in recent months.

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 housing price trends since origination. These assumptions are reviewed quarterly and changes are made as market conditions warrant.

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 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 have diminished borrowers' ability to

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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 CMBS and leveraged loans. Further deterioration in economic fundamentals 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 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 collateralized loan obligations that 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 generally lagged the overall recovery in the underlying assets. Management believes its scenario analysis approach, based primarily 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 the Company's assumptions.

The fourth quarter of 2011 saw a continued focus on the sovereign debt problems of parts of the Eurozone and the related issues of bank funding and market liquidity. Combined with an increasingly uncertain macroeconomic outlook, this has raised the risks related to the Company's investments in European leveraged loans relative to the first half of 2011. The average secondary price of leveraged loans in Europe fell during the year, but default rates continued to remain below long-term historical averages. However, the degree of refinancing required over the next three years and uncertainty over the sources of this refinancing may lead to an increase in default rates going forward.

As of December 31, 2011, the Company's general account held securities issued by entities domiciled within Italy, Ireland, Portugal and Spain which collectively accounted for less than 1% of invested assets. These holdings are highly diversified and over 80% is comprised of investment grade-rated (NAIC) debt securities issued predominantly by domestic utilities and corporations with large global operations. Within these countries, the Company's sovereign debt exposure totaled less than \$500 thousand and it did not hold any domestic bank-issued securities. The Company did not hold any Greek corporate or government-issued securities in its general account.

Current market conditions continue to be a factor in the Company's mortgage loan portfolio. Economic indicators that showed improvement earlier in 2011 and stumbled mid-year, turned decidedly positive in the fourth quarter. Commercial real estate fundamentals continue to improve with regional market performance still clearly driven by underlying economic drivers. Investors interest remains focused on stabilized core assets in 'gateway' markets. Overall, the supply pipeline is at historical lows, aiding the drop in vacancy rates across all property types during 2011. Borrowers have also benefited from the current low interest rate environment when refinancing and selling properties in order to satisfy their maturing debt. Risks to the portfolio continue to be the macro domestic and global economic environment and their impact on the recent positive trends for real estate fundamentals. The Company continues to monitor employment and housing statistics and their possible influence on a U.S. recession as well as global economic indicators and sovereign debt concerns.

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 that 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 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.

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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 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 \$81 million and \$82 million for the years ended December 31, 2011 and 2010, respectively. Net operating leases are net of \$22 million and \$28 million of sublease receipts for the years ended December 31, 2011 and 2010, respectively.

Future minimum commitments for all net operating lease contractual obligations as of December 31, 2011 were as follows:

	Gross Operating Leases	Affiliated Subleases	Nonaffiliated Subleases	Net Operating Leases
	(In Millions)			
2012	\$ 94	\$ 18	\$ 1	\$ 75
2013	88	16	-	72
2014	76	9	-	67
2015	33	9	-	24
2016	29	9	-	20
Thereafter	55	27	-	28
Total	\$ 375	\$ 88	\$ 1	\$ 286

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.

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, and certain of its subsidiaries, 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. Certain of the lawsuits have been consolidated into three groups of suits pending in the U.S. District Court for the Southern District of New York. In February 2011, the parties in the consolidated federal litigation submitted to the court a proposed settlement agreement. In August 2011, the court entered an order and final judgment approving the settlement. Appeals have been filed and remain pending. The settlement, if affirmed on appeal, will not have a significant financial impact on MassMutual.

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Additionally, a number of other lawsuits were filed in state courts in California, Colorado, Florida, Massachusetts, New Mexico, New York and Washington 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. MassMutual believes it has substantial defenses and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from these claims.

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 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. Certain of these Tremont funds, in turn, have notified the Trustee of substantial claims by them against BLMIS. In September 2011, the court approved the proposed settlement with the Trustee that had been filed with the court in July. Certain parties have filed notices of appeal. The settlement, if affirmed on appeal, will not have a significant financial impact on MassMutual.

On October 19, 2011, Golden Star, Inc. (Golden Star), plan administrator of the Golden Star Administrative Associates 401(k) Plan and Golden Star Bargaining Associates 401(k) Plan, filed a putative class action lawsuit in the United States District Court for the District of Massachusetts against MassMutual. Golden Star alleges, among other things, that MassMutual breached its alleged fiduciary duties while performing services to 401(k) plans and that certain of its actions constituted "Prohibited Transactions" under the Employee Retirement Income Security Act of 1974. MassMutual believes that it has numerous substantial defenses to the claims and will defend itself vigorously. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this action.

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. MassMutual believes it has substantial defenses and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

In 2009, numerous lawsuits (the Rochester Suits) 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, OppenheimerFunds Distributor, Inc. The Rochester Suits raise claims under federal securities laws alleging that, among other things, the disclosure documents of the funds contained misrepresentations and omissions, that the investment policies of the funds were not followed and that the 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, in the U.S. district court in Colorado. Amended complaints and motions to dismiss were filed. In October 2011, the court issued an order granting and denying in part defendants' motions to dismiss in five of the seven suits. In November 2011, defendants filed a joint motion for reconsideration of the court's ruling which the court, in part, granted and denied in January 2012. OFI believes it has substantial defenses and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

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 and will continue to vigorously defend itself in these actions. No reasonable estimate can be made at this time regarding the potential liability, if any, or the amount or range of any loss that may result from this claim.

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

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Securities and Exchange Commission, the U.S. Department of Labor and various state insurance departments and state attorneys general. The Company has cooperated fully with these regulatory agencies with regard to their inquiries, examinations and investigations and has responded to information requests and comments.

Market volatility in the financial services industry over the last several years has contributed to increased scrutiny of the entire financial services industry. Therefore, the Company believes that it is reasonable to expect that proceedings, regulatory inquiries, examinations and investigations into the insurance and financial services industries will continue for the foreseeable future. Additionally, new industry-wide legislation, rules and regulations could significantly affect the insurance and financial services industries as a whole. It is the opinion of management that the ultimate resolution of these regulatory inquiries, examinations, investigations, legislative and regulatory changes of which we are aware will not materially impact the Company's financial position or liquidity. However, the outcome of a particular matter may be material to the Company's operating results for a particular period depending upon, among other factors, the financial impact of the matter and the level of the Company's 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, 2011 and 2010, 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, 2011 and 2010, 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, 2011 and 2010, the Company had approximately \$94 million and \$102 million of outstanding letter of credit arrangements, respectively. As of December 31, 2011 and 2010, the Company did not have a funding request attributable to these letter of credit arrangements.

As of December 31, 2011 and 2010, MassMutual approved financing of \$2,275 million and \$1,475 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, 2011 and 2010 were \$1,357 million and \$1,374 million, respectively, with interest of \$38 million and \$21 million for the years ended December 31, 2011 and 2010, respectively. The unfunded amount of the facility, totaling \$918 million as of December 31, 2011, 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.

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, 2011, the Company had the following commitments:

	2012	2013	2014	2015	There- after	Total
(In Millions)						
Private placements	\$ 661	\$ 1,158	\$ 478	\$ 980	\$ 104	\$ 3,381
Mortgage loans	1,271	31	11	17	-	1,330
Partnerships and LLCs	526	153	1,083	261	247	2,270
LIHTC investments (including equity contributions)	17	5	61	-	139	222
Total	\$ 2,475	\$ 1,347	\$ 1,633	\$ 1,258	\$ 490	\$ 7,203

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, 2011 and 2010, the Company had no outstanding obligations attributable to these commitments.

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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, 2011 and 2010, the Company had no outstanding obligations attributable to these commitments and guarantees.

g. Guarantees

In the normal course of business the Company enters into guarantees related to employee and retirement benefits, the maintenance of subsidiary regulatory capital, surplus levels and liquidity sufficient to meet certain obligations, and other property lease arrangements. If the Company were to recognize a liability, the financial statement impact would be to recognize either an expense or an investment in a subsidiary, controlled, or affiliated (SCA) entity. The Company has no expectations for recoveries from third parties should these guarantees be triggered. There is no current obligation to make payments under these guarantees. As of December 31, 2011 and 2010, the Company had no outstanding obligations attributable to these guarantees.

The following details contingent guarantees that are made on behalf of the Company's subsidiaries and affiliates as of December 31, 2011.

Type of guarantee	Nature of guarantee (including term) and events and circumstances that would require the guarantor to perform under guarantee	Carrying amount of liability	Maximum potential amount of future payments (undiscounted) required under the guarantee
(In Millions)			
Employee and Retirement Benefits	The Company guarantees the payment of certain employee and retirement benefits for specific wholly-owned subsidiaries (Comerstone Real Estate Advisors LLC, Babson Capital Management LLC), if the subsidiary is unable to pay.	-	The liabilities for these plans have been recorded on the subsidiaries' books and these liabilities represent the Company's maximum obligation. The liabilities recorded on the subsidiaries books is \$122 million.
Capital and Surplus Support of Subsidiaries	Certain guarantees of the Company provide for the maintenance of a subsidiary's regulatory capital, surplus levels and liquidity sufficient to meet certain obligations. These unlimited guarantees are made on behalf of certain wholly-owned subsidiaries. (C.M Life Insurance Company, MML Bay State Life Insurance Company, MassMutual Europe S.A. and MassMutual Japan).	-	These guarantees are not limited and cannot be estimated.
Other Property Lease Arrangements	The Company guarantees the payment of various lease obligations on behalf of its subsidiaries and affiliates originating in 2004 and 2007 and some are in effect until 2023.	-	The future maximum potential obligations are immaterial to the Company.

18. 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, 2011 are illustrated below.

	Separate		Separate		% of Total
	General Account	Account w/ Guarantees	Account Nonguarante	Amount	
(\$ In Millions)					
Subject to discretionary withdrawal:					
With fair value adjustment	\$ 6,636	\$ -	\$ -	\$ 6,636	11 %
At book value less current surrender charge of 5% or more	2,066	-	-	\$ 2,066	4
At fair value	-	5,083	33,558	\$ 38,641	61
Subtotal	8,702	5,083	33,558	\$ 47,343	76
Subject to discretionary withdrawal:					
At book value without fair value adjustment	6,251	418	-	6,669	10
Not subject to discretionary withdrawal	9,031	250	-	9,281	14
Total	\$ 23,984	\$ 5,751	\$ 33,558	\$ 63,293	100%

The following is the reconciliation of total annuity actuarial reserves and liabilities for deposit-type contracts as of December 31, 2011 (in millions):

Consolidated Statutory Statements of Financial Position:

Policyholders' reserves - group annuities	\$ 9,481
Policyholders' reserves - individual annuities	9,881
Policyholders' reserves - guaranteed investment contracts	-
Liabilities for deposit-type contracts	4,622
Subtotal	<u>23,984</u>

Separate Account Annual Statement:

Annuities	39,059
Other annuity contract deposit-funds and guaranteed interest contracts	250
Subtotal	<u>39,309</u>
Total	<u>\$ 63,293</u>

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 that 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, 2011 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, 2011	\$ -	\$ -	\$ 6,557	\$ 6,557
Reserves at December 31, 2011:				
For accounts with assets at:				
Fair value	\$ 250	\$ 5,502	\$ 39,811	\$ 45,563
Amortized cost/book value	-	983	-	983
Subtotal	250	6,485	39,811	46,546
Nonpolicy liabilities	-	5	686	691
Total	\$ 250	\$ 6,490	\$ 40,497	\$ 47,237
Reserves by withdrawal characteristics:				
Subject to discretionary withdrawal:				
At fair value	\$ -	\$ 5,083	\$ 39,811	\$ 44,894
At book value without market value adjustment and current surrender charge of less than 5%	-	1,402	-	1,402
Subtotal	-	6,485	39,811	46,296
Not subject to discretionary withdrawal	250	-	-	250
Nonpolicy liabilities	-	5	686	691
Total	\$ 250	\$ 6,490	\$ 40,497	\$ 47,237

The Company does not have any reserves in separate accounts 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:

	Years Ended December 31,	
	2011	2010
(In Millions)		
From the Separate Account Annual Statement:		
Transfers to separate accounts	\$ 6,178	\$ 4,494
Transfers from separate accounts	(5,795)	(5,323)
Subtotal	383	(829)
Reconciling adjustments:		
Net deposits on deposit-type liabilities	377	547
Net transfers to (from) separate accounts	\$ 760	\$ (282)

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

19. Presentation of the Condensed Consolidated Statutory Statements of Cash Flows

As required by SSAP No. 69 “Statement of Cash Flows,” the Company has included in the Condensed Consolidated Statutory Statements of Cash Flows non-cash transactions primarily related to the following:

	Years Ended December 31,	
	2011	2010
	(In Millions)	
Bank loan rollovers	\$ 1,869	\$ 1,262
Bond conversions and refinancing	768	726
Mortgages converted to other invested assets	198	200
Stock conversion	107	534
Dividend reinvestment	4	8
Interest capitalization for long-term debt	4	9
Other invested assets stock distribution	4	9
Net investment income payment-in-kind bonds	2	4
Other invested assets converted to real estate	-	49
Other invested assets converted to mortgages	-	4

The bank loan rollovers represent transactions processed as the result of rate resets on existing bank loans and are included in the proceeds from investments sold, matured or repaid on bonds and cost of investments acquired for bonds on the Condensed Consolidated Statutory Statements of Cash Flows.

20. Subsequent events

MassMutual has evaluated subsequent events through February 22, 2012, the date the financial statements were available to be issued.

On January 17, 2012, MassMutual issued a \$400 million surplus note with a 30-year maturity and a 5.375% coupon rate.

No additional events have occurred subsequent to the balance sheet date and before the date of evaluation that would require disclosure.