MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY AND SUBSIDIARIES

CONSOLIDATED STATUTORY FINANCIAL STATEMENTS

As of and for the years ended December 31, 2012 and 2011

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

	December 31, 2012	December 31, 2011
	(In Millions)	
Assets:		
Bonds	$ 61,650	$ 58,391
Preferred stocks	359	343
Common stocks - subsidiaries and affiliates	4,814	4,052
Common stocks - unaffiliated	840	583
Mortgage loans	14,734	13,283
Policy loans	10,296	9,768
Real estate	1,162	1,217
Partnerships and limited liability companies	6,762	5,871
Derivatives and other invested assets	3,145	3,560
Cash, cash equivalents and short-term investments	3,410	1,788
Total invested assets	107,172	98,856
Investment income due and accrued	422	547
Federal income taxes	279	-
Deferred income taxes	658	1,119
Other than invested assets	855	833
Total assets excluding separate accounts	109,386	101,355
Separate account assets	58,124	47,245
Total assets	$ 167,510	$ 148,600
Liabilities and Surplus:		
Policyholders' reserves	$ 78,971	$ 73,751
Liabilities for deposit-type contracts	5,388	4,622
Contract claims and other benefits	345	343
Policyholders' dividends	1,400	1,335
General expenses due or accrued	981	901
Federal income taxes	-	102
Asset valuation reserve	1,997	1,731
Securities sold under agreements to repurchase	4,020	3,770
Commercial paper	250	250
Derivative collateral	1,477	1,776
Other liabilities	1,879	1,365
Total liabilities excluding separate accounts	96,708	89,946
Separate account liabilities	58,115	47,237
Total liabilities	154,823	137,183
Surplus	12,687	11,417
Total liabilities and surplus	$ 167,510	$ 148,600

See notes to consolidated statutory financial statements

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

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Revenue:		
Premium income	$ 20,734	$ 13,893
Net investment income	5,296	5,127
Fees and other income	680	667
Total revenue	26,710	19,687
Benefits and expenses:		
Policyholders' benefits	11,809	10,960
Change in policyholders' reserves	10,567	5,001
General insurance expenses	1,477	1,317
Commissions	610	548
State taxes, licenses and fees	170	152
Total benefits and expenses	24,633	17,978
Net gain from operations before dividends and federal income taxes	2,077	1,709
Dividends to policyholders	1,379	1,313
Net gain from operations before federal income taxes	698	396
Federal income tax benefit	(59)	(290)
Net gain from operations	757	686
Net realized capital gains (losses) after tax and transfers to interest maintenance reserve	115	(227)
Net income	$ 872	$ 459

See notes to consolidated statutory financial statements

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

	Years Ended December 31, 2012	2011
	(In Millions)	
Surplus, beginning of year	$ 11,417	$ 10,352
Increase (decrease) due to:		
Net income	872	459
Change in net unrealized capital gains, net of tax	672	1,353
Change in net unrealized foreign exchange capital losses, net of tax	(10)	(55)
Change in other net deferred income taxes	(574)	(62)
Change in nonadmitted assets	148	(73)
Change in asset valuation reserve	(266)	(272)
Change in surplus notes	399	-
Prior period adjustments	(25)	(11)
Change in minimum pension liability	52	(273)
Other	2	(1)
Net increase	1,270	1,065
Surplus, end of year	$ 12,687	$ 11,417

See notes to consolidated statutory financial statements

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

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Cash from operations:		
Premium and other income collected	$ 21,403	$ 14,538
Net investment income	5,143	4,822
Benefit payments	(11,565)	(10,799)
Net transfers to separate accounts	(5,466)	(786)
Commissions and other expenses	(2,119)	(2,264)
Dividends paid to policyholders	(1,313)	(1,208)
Federal and foreign income taxes (paid) recovered	(39)	64
Net cash from operations	6,044	4,367
Cash from investments:		
Proceeds from investments sold, matured or repaid:		
Bonds	18,661	20,173
Common stocks - unaffiliated	125	105
Mortgage loans	2,264	2,163
Real estate	103	119
Partnerships	1,046	1,111
Preferred and affiliated common stocks	662	207
Other	(74)	893
Total investment proceeds	22,787	24,771
Cost of investments acquired:		
Bonds	(21,325)	(23,258)
Common stocks - unaffiliated	(331)	(444)
Mortgage loans	(3,679)	(3,266)
Real estate	(126)	(255)
Partnerships	(1,555)	(1,411)
Preferred and affiliated common stocks	(482)	(742)
Other	(90)	33
Total investments acquired	(27,588)	(29,343)
Net increase in policy loans	(527)	(523)
Net cash used in investing activities	(5,328)	(5,095)
Cash from financing and other sources:		
Net deposits on deposit-type contracts	617	909
Cash provided from surplus notes	399	-
Change in securities sold under agreements to repurchase	250	(393)
Change in derivative collateral	(298)	343
Other cash (applied) provided	(62)	67
Net cash from financing and other sources	906	926
Net change in cash, cash equivalents and short-term investments	1,622	198
Cash, cash equivalents and short-term investments, beginning of year	1,788	1,590
Cash, cash equivalents and short-term investments, end of year	$ 3,410	$ 1,788

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

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

Statutory accounting practices are different in some respects from financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP). The more significant differences between statutory accounting principles and U.S. GAAP are as follows: (a) 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) interest rate swap replications are carried at amortized cost, whereas U.S. GAAP would carry these at fair value; (d) 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; (e) income recognition on partnerships and limited liability companies (LLCs), which are accounted for under the equity method, is limited to the amount of cash distribution, whereas U.S. GAAP does not have this limitation; (f) majority-owned noninsurance subsidiaries, 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; (g) changes in the balances of deferred income taxes, which provide for book versus tax temporary differences, are subject to limitation and are recorded in surplus, whereas U.S. GAAP would generally include the change in deferred taxes in net income; (h) 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 as general investments of the Company; (i) 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; (j) 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; (k) 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; (l) 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 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; (m) after-tax realized capital gains (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; (n) changes to the mortgage loan valuation allowance are recognized in net unrealized capital gains (losses), net of tax, in the Consolidated Statutory Statements of Changes in Surplus, whereas U.S. GAAP reports these changes in net realized capital gains (losses); (o) a prepaid pension asset and/or a liability is recorded for the difference between the fair value of the pension and other postretirement plan assets and the accumulated benefit obligation (which excludes nonvested employees) with the change recorded in surplus, whereas for U.S. GAAP purposes, the over/underfunded status of a plan, which is the difference between the fair value of the plan assets and the projected benefit obligation, is recorded as an asset or liability with the change recorded through accumulated other comprehensive income; (p) surplus notes are reported in surplus, whereas U.S. GAAP would report these notes as liabilities; (q) 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; (r) 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 (s) comprehensive income is not presented, whereas U.S. GAAP presents changes in unrealized capital gains (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 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 policyholders' reserves, the determination of admissible 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 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:

	Year Ended December 31, 2012		
	Increase (Decrease) to:		Correction of Asset or Liability Balances
	Prior Year Income	Current Year Surplus	
	(In Millions)		
Policyholders' reserves	$ (22)	$ (22)	$ 22
General insurance expenses	(11)	(11)	11
Reinsurance	5	5	(5)
Partnership income	4	4	(4)
Other	(1)	(1)	1
Total	$ (25)	$ (25)	$ 25

	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	$ (11)	$ -	$ (11)	$ 11

Certain prior year amounts 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, which are obligations that are in or near default, and certain residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS), which are rated by outside modelers, which are carried at the lower of amortized cost or fair value. NAIC ratings are applied to bonds and other securities. Categories 1 and 2 are considered investment grade, while Categories 3 through 6 are considered below investment grade. Bond transactions are recorded on a trade date basis, except for private placement bonds that 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.

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 (losses) including other-than-temporary impairments and unrealized capital gains (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) of the NAIC, 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 (losses) including other-than-temporary impairments and unrealized capital gains (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 its subsidiary, 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. The Division has affirmed the statutory recognition of the Company's application of the NCI guidelines in MMHLLC's statutory carrying value. However, the Company has limited this recognition to $2,165 million and $2,015 million as of December 31, 2012 and 2011, respectively. Operating results, less dividend distributions, for MMHLLC are reflected as net unrealized capital gains (losses) in the 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.

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 (losses) including other-than-temporary impairments and unrealized capital gains (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 loans. 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 loans are seasoned 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 (losses) including other-than-temporary impairments and unrealized capital gains (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 less than $1 million as of December 31, 2012 and approximately $1 million as of December 31, 2011. 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.

Real estate, held for sale, is initially carried at the lower of depreciated cost or fair value less estimated selling costs at the time the property is deemed held for sale and is no longer depreciated. Adjustments to carrying value, including for further declines in fair value, are recorded in a valuation reserve which is included in realized capital losses.

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 (losses) including other-than-temporary impairments and unrealized capital gains (losses)"* for information on the Company's policy for determining OTTI.

j. Partnerships and limited liability companies

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

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

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 (losses) including other-than-temporary impairments and unrealized capital gains (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.

Interest rate swaps associated with replicated assets are valued at amortized cost and all other 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 available or are considered not reliable, the internally derived value is recorded. Changes in the fair value of these instruments other than interest rate swaps associated with replicated assets are recorded as unrealized capital gains (losses) in surplus. Gains and losses realized on the termination, closing or assignment of contracts are recorded as realized capital gains (losses). Amounts receivable and payable are accrued as net investment income.

l. Cash, cash equivalents and short-term investments

The Company considers all highly liquid investments purchased with original 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 short-term bonds and money market mutual funds are classified as short-term investments.

The carrying value reported in the Consolidated Statutory Statements of Financial Position for cash, cash equivalents and short-term investment instruments approximates the fair value.

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 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.

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 nonadmitted 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 more than 90 days past due and included in the unpaid balance of the policy loan 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, fixed assets and other receivable items.

Fixed assets are carried at cost less accumulated depreciation and amortization. Depreciation and amortization are 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 primarily include pension plan assets, certain electronic data processing (EDP) equipment, certain investments in partnerships for which audits are not performed, advances and prepayments, the amount of DTAs (subject to certain limitations) that will not be realized by the end of the third calendar year following the current year end, certain other receivables, furniture and equipment, uncollected premiums and certain intangible assets. These assets are designated as nonadmitted and are excluded from the Consolidated Statutory Statements of Financial Position through a charge against surplus.

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 the Company’s 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 the separate accounts. When assets are transferred to separate accounts, they 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 Consolidated Statutory Statements of Financial Position with the corresponding change in the liability recorded as change in policyholders' reserves or policyholders' benefits in the Consolidated Statutory Statements of Income.

Premium income, benefits and expenses of the separate accounts are included in the Consolidated Statutory Statements of Income with the offset recorded in policyholders’ reserves. Investment income and realized capital gains (losses) on the assets of separate accounts, other than seed money, accrue to contract/policyholders and are not recorded in the Consolidated Statutory Statements of Income. Unrealized capital gains (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 for the present value of 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.

In order to maintain a prudent level of reserve adequacy, the Company elected to hold additional life insurance reserves over and above the amounts calculated by the methods described above.

Certain variable universal life and universal life contracts include features such as guaranteed minimum death benefits (GMDB) 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 have offered a variety of additional guarantees such as GMDBs and variable annuity guaranteed living benefits (VAGLB). The primary types of VAGLBs offered by MassMutual are guaranteed minimum accumulation benefits (GMAB), guaranteed minimum income benefits (GMIB) including Basic and Plus and guaranteed minimum withdrawal benefits (GMWB). 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 GMDBs in excess of the contract value.

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

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.

GMIBs provide the annuity contract holder with a guaranteed minimum payment when the contract is annuitized. The GMIBs 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. GMIBs generally anticipate payout between ages 60 and 90. The Company first issued GMIB Basic in 2002 and suspended issuing these contracts in August 2007. These GMIB Basic contracts cannot be annuitized within seven years of issuance and do not have access to the guarantee value other than through annuitization.

In September 2007, GMIB Plus replaced GMIB Basic and continued through March 2009. GMIB Plus includes a product version which provides a minimum floor amount that can be applied to an annuity option. The GMIB Plus value is equal to the initial purchase amount increased by a compound annual interest rate. The GMIB Plus also provides the annuity contract holder with a withdrawal feature. This withdrawal feature allows a dollar for dollar withdrawal, which lowers the GMIB Plus value for each dollar withdrawn up to the amount of interest credited to the GMIB Plus value for the year. GMIB Plus cannot be annuitized within ten years of contract issuance as the rider can only be exercised after a ten year waiting period has elapsed. This was only available upon contract issuance.

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.

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. 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, whole life 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 62% and 65% of the Company's policyholders' reserves and liabilities for deposit-type contracts as of December 31, 2012 and 2011, 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, net of tax, 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 (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 repurchase 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). 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 consist of IMR, derivative payables, amounts held for agents, remittances and items not allocated, pending security settlements and other liabilities including unearned income.

z. Reinsurance

The Company enters into reinsurance agreements with affiliated and unaffiliated insurers in the normal course of business to limit its insurance risk.

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. However, premium for flexible products, primarily universal life and variable universal life contracts, is recognized as revenue when received. Annuity premium is recognized as revenue when received. Disability income and long-term care 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 (losses) including other-than-temporary impairments and unrealized capital gains (losses)

Realized capital gains (losses), net of taxes, exclude gains (losses) deferred into the IMR and gains (losses) of the separate accounts. Realized capital gains (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 a noninterest 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.

For corporate securities, if it is determined that a decline in the fair value of a bond is other than temporary, an OTTI is recognized in earnings as a realized loss equal to the difference between the investment's amortized cost basis and, generally, its fair value at the balance sheet date. For loan-backed and structured securities, 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. The expected cash flows are discounted at the security's effective interest rate. Internal inputs used in determining the amount of the OTTI on structured securities include 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. In addition, if the Company has the intent to sell, or the inability, or lack of intent to retain the investment 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.

When a bond is other-than-temporarily impaired, a new cost basis is established. For loan-backed and structured securities, 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.

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

Bonds - structured and loan-backed securities

ABS and MBS are evaluated for OTTI on a quarterly 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.

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, and recorded in net unrealized capital losses, 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, which is done on an individual loan basis, 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. If there is a change in the fair value of the underlying collateral or the expected loss on the loan, the valuation allowance will be adjusted. An OTTI occurs upon the realization of a credit loss, typically through foreclosure or after a decision is made to accept a discounted payoff, and is recognized in realized capital losses. The previously recorded valuation allowance is reversed from unrealized 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.

Adjustments to the carrying value of real estate held for sale are recorded in a valuation reserve as realized capital losses when the fair value less estimated selling costs is less than the carrying value. A new cost basis is recorded with an adjustment to 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 0.3% for future benefits of two years to 1.7% for future benefits of ten or more years and compares the results to its current book values. Impairments are recognized as realized capital losses.

Unrealized capital gains (losses)

Unrealized capital gains (losses) are recorded as a change in surplus net of tax.

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 with the opportunity to share in the value created in the total enterprise. The PSAR value is the appreciation in the phantom stock price between the grant price and the share price at the time of exercise. Awards can only be settled in cash. 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 provide the participant with the opportunity to share in the value created in the total enterprise. Participants receive the full phantom share value (grant price plus/minus any change in share price) over the award period. Awards can only be settled in cash. 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 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 in the Consolidated Statutory Statements of Income 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 Consolidated Statutory Statements of Income that differ from the federal statutory tax rate.

3. New accounting standards

a. Adoption of new accounting standards

In March 2011, the NAIC issued revisions to Statement of Statutory Accounting Principles (SSAP) No. 100, "Fair Value Measurements," which requires additional fair value disclosures. These additional disclosures include a disclosure of 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, for financial instruments carried at fair value, companies are required to disclose purchases, sales, issuances and settlements on a gross basis for fair value measurements categorized in Level 3 of the fair value hierarchy. These new requirements were effective January 1, 2012.

In November 2011, the NAIC issued SSAP No. 101, "Income Taxes, A Replacement of SSAP No. 10R and SSAP No. 10." This statement establishes statutory accounting principles for current and deferred federal and foreign income taxes and current state income taxes. This statement supersedes SSAP No. 10, "Income Taxes" and SSAP No. 10R, "Income Taxes, A Temporary Replacement of SSAP No. 10," which expired on December 31, 2011. SSAP No. 101, which was effective on January 1, 2012, has: 1) restricted the ability to use the 3 years/15 percent of surplus admission rule to those reporting entities that meet the modified Risk Based Capital (RBC) ratio (Ex-DTA RBC ratio) threshold, 2) changed the recognition threshold for recording tax contingency reserves from a probable liability standard to a more-likely-than-not liability standard, 3) required the disclosure of tax planning strategies that relate to reinsurance and, 4) required 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. There was no cumulative effect of adopting this standard.

In August 2012, the NAIC issued new guidance pertaining to share-based payments. This new standard provides statutory accounting guidance on transactions in which an entity awards employees in share-based payments. It requires entities to measure share-based payments in the financial statements using a fair value-based measurement objective and recognize the compensation costs as employee services are consumed. It substantially adopts the stock compensation guidance in U.S. GAAP under Accounting Standards Codification (ASC) Topic 718, Stock Compensation, which the Company has applied to its accounting for the phantom stock appreciation rights and phantom restricted stock since 2008. This guidance was issued as SSAP No. 104, "Share-Based Payments – Revised," which supersedes SSAP No. 13, "Stock Options and Stock Purchase Plans," and it is effective prospectively for years beginning on January 1, 2013, although early adoption is permitted for December 31, 2012 financial statements. The Company early adopted this standard in 2012 and the adoption had no impact on the financial statements.

b. Future adoption of new accounting standards

In March 2012, the NAIC issued SSAP No. 102 "Accounting for Pensions, Replacement of SSAP No. 89". Under this SSAP, the statutory accounting standards will be similar to U.S. GAAP accounting standards. This SSAP will require the Pension liability to include the unfunded projected benefit obligation, including non-vested participants if any. The adoption of this SSAP is expected to create an additional pension liability of approximately $43 million. This new requirement is effective January 1, 2013. Upon adoption, the Company will immediately record an additional liability of $8 million and the remaining $35 million (transition) liability will be deferred and recognized over a period up to 10 years.

In March 2012, the NAIC issued SSAP No. 92, "Accounting for Postretirement Benefits Other Than Pensions, A Replacement of SSAP No. 14." Under this SSAP, participants not yet eligible to retire will also be included in the accumulated postretirement benefit obligation. The accumulated postretirement benefit obligation is already recorded on a U.S. GAAP basis on the books of MMHLLC, a subsidiary of the Company. The U.S. GAAP equity of this subsidiary is included in admitted assets of MassMutual for statutory purposes. Therefore, there will be no impact from the adoption of this SSAP besides disclosure. This new requirement is effective January 1, 2013.

In March 2012, the NAIC issued SSAP No. 103, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." This SSAP will supersede SSAP No. 91R, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities". The change to SSAP No. 91R incorporates the U.S. GAAP guidance of the Financial Accounting Standards Board (FASB) Statement No. 166, "Accounting for Transfers and Servicing of Financial Assets, an amendment of FASB Statement No. 140," and Accounting Standards Update (ASU) No. 2011-03, "Transfers and Servicing (Topic 860), Reconsideration of Effective Control for Repurchase Agreements," with modifications to conform the guidance to statutory accounting concepts. These modifications are primarily related to concepts that are not applicable or consistent with statutory accounting (e.g., rejection of U.S. GAAP consideration for consolidated affiliates, references to U.S. GAAP standards, methods, references and guidance not adopted for/applicable to statutory accounting). The Company is required to adopt the guidance prospectively as of January 1, 2013. Early adoption is not permitted. Adoption of this guidance is not expected to have a significant impact on the Company's financial statements.

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, 2012			
	Carrying Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(In Millions)			
U.S. government and agencies	$ 7,995	$ 1,199	$ 6	$ 9,188
All other governments	126	38	-	164
States, territories and possessions	1,541	204	-	1,745
Special revenue	4,111	987	2	5,096
Industrial and miscellaneous	42,266	4,371	243	46,394
Parent, subsidiaries and affiliates	5,611	344	123	5,832
Total	$ 61,650	$ 7,143	$ 374	$ 68,419

Note: The unrealized losses exclude $17 million of losses embedded in the carrying value, which include $12 million from NAIC Category 6 bonds and $5 million from RMBS and CMBS whose ratings were obtained from outside modelers.

	December 31, 2011			
	Carrying Value	Gross Unrealized Gains	Gross Unrealized Losses	Fair 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	$ 58,391	$ 5,946	$ 1,247	$ 63,090

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 from RMBS and CMBS whose ratings were obtained from outside modelers.

The quality of the bond portfolio is determined by the use of SVO ratings and the equivalent rating agency designations, except for RMBS and CMBS that use outside modelers. The following sets forth the NAIC class ratings for the bond portfolio including RMBS and CMBS as of December 31, 2012 and 2011:

		December 31, 2012		December 31, 2011	
NAIC Class	Equivalent Rating Agency Designation	Carrying Value	% of Total	Carrying Value	% of Total
		($ In Millions)			
1	Aaa/ Aa/ A	$ 36,855	60 %	$ 36,563	63 %
2	Baa	20,790	34	18,150	31
3	Ba	1,888	3	1,754	3
4	B	1,259	2	1,008	2
5	Caa and lower	722	1	778	1
6	In or near default	136	-	138	-
	Total	$ 61,650	100 %	$ 58,391	100 %

The following sets forth RMBS and CMBS subject to modeling as of December 31, 2012 and 2011 after reflection of the mandated adjustment to NAIC designation from future loss modeling performed by outside modelers:

	December 31, 2012				December 31, 2011			
	RMBS		CMBS		RMBS		CMBS	
NAIC Class	Carrying Value	% of Total	Carrying Value	% of Total	Carrying Value	% of Total	Carrying Value	% of Total
	($ In Millions)							
1	$ 1,998	97 %	$ 3,058	100 %	$ 2,294	84 %	$ 3,219	100 %
2	23	1	-	-	131	5	6	-
3	23	1	9	-	129	5	9	-
4	16	1	9	-	148	5	9	-
5	6	-	-	-	16	1	4	-
6	-	-	-	-	2	-	-	-
	$ 2,066	100 %	$ 3,076	100 %	$ 2,720	100 %	$ 3,247	100 %

The following summarizes the carrying value and fair value of bonds as of December 31, 2012 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	$ 2,254	$ 2,237
Due after one year through five years	15,307	16,437
Due after five years through ten years	20,493	22,906
Due after 10 years	23,596	26,839
Total	$ 61,650	$ 68,419

Sales proceeds and related gross realized capital gains (losses) from bonds were as follows:

	Years Ended December 31,	
	2012	2011
	(In Millions)	
Proceeds from sales	$ 5,736	$ 9,555
Gross realized capital gains from sales	354	448
Gross realized capital losses from sales	(40)	(159)

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, 2012 and 2011:

	December 31, 2012					
	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	$ 1,287	$ 6	2	$ -	$ -	-
States, territories and possessions	60	1	7	-	-	-
Special revenue	52	1	65	10	2	69
Industrial and miscellaneous	2,475	63	257	2,943	188	545
Parent, subsidiaries and affiliates	15	5	4	849	125	18
Total	$ 3,889	$ 76	335	$ 3,802	$ 315	632

Note: The unrealized losses include $17 million of losses embedded in the carrying value, which include $12 million from NAIC Category 6 bonds and $5 million from RMBS and CMBS whose ratings were obtained from outside modelers.

	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	$ 7,396	$ 303	769	$ 4,422	$ 978	804

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 from RMBS and CMBS whose ratings were obtained from outside modelers.

Based on the Company's policies, as of December 31, 2012 and 2011, the Company has not deemed these unrealized losses to be other than temporary 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.

As of December 31, 2012, investments in structured and loan-backed securities that had unrealized losses, which were not recognized in earnings, had a fair value of $2,494 million. Securities in an unrealized loss position for less than 12 months had a fair value of $265 million and unrealized losses of $6 million. Securities in an unrealized loss position for greater than 12 months had a fair value of $2,229 million and unrealized losses of $180 million. These securities were primarily categorized as industrial and miscellaneous and parent, subsidiaries and affiliates.

In the course of the Company's investment management activities, securities may be sold and reacquired within 30 days of the sale date to enhance the Company's yield on its investment portfolio. The Company did not sell any securities with the NAIC Designation 3 or below for the years ended December 31, 2012 or 2011 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 $77 million as of December 31, 2012 and $78 million as of December 31, 2011.

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.

As of December 31, 2012 and 2011, RMBS had a total carrying value of $3,198 million and $4,149 million and a fair value of $3,449 million and $3,890 million, of which approximately 38% and 40%, based on carrying value, was classified as Alt-A, respectively. As of December 31, 2012 and 2011, Alt-A and subprime RMBS had a total carrying value of $1,788 million and $2,420 million and a fair value of $1,840 million and $1,938 million, respectively.

During the year ended December 31, 2012, there were no significant credit downgrades for the securities held by the Company that were backed by residential mortgage pools.

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.

As of December 31, 2012 and 2011, total leveraged loans and leveraged loan CDOs had a carrying value of $6,124 million and $6,076 million and a fair value of $6,270 million and $5,937 million, of which approximately 85% and 90%, based on carrying value, were domestic leveraged loans and CDOs, respectively.

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 a carrying value of $3,176 million and fair value of $3,467 million as of December 31, 2012 and carrying value of $3,395 million and fair value of $3,576 million as of December 31, 2011.

b. Preferred stocks

The Company held preferred stocks with carrying values of $359 million and fair values of $385 million as of December 31, 2012 and carrying values of $343 million and fair values of $334 million as of December 31, 2011.

The Company held preferred stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of $279 million as of December 31, 2012 and $265 million as of December 31, 2011.

c. Common stocks - unaffiliated

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

	December 31,	
	2012	2011
	(In Millions)	
Adjusted cost basis	$ 773	$ 545
Gross unrealized gains	106	77
Gross unrealized losses	(39)	(39)
Carrying value	$ 840	$ 583

As of December 31, 2012, investments in unaffiliated common stocks in an unrealized loss position included holdings with a fair value of $443 million in 238 issuers. These holdings were in an unrealized loss position of $39 million, $31 million of which were in an unrealized loss position more than 12 months. 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. Based upon the Company's impairment review process discussed in *Note 2bb. "Realized capital gains (losses) including other-than-temporary impairments and unrealized capital gains (losses)"* the decline in value of these securities was not considered to be other than temporary as of December 31, 2012 or 2011.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of $237 million as of December 31, 2012 and $227 million as of December 31, 2011.

d. Common stocks - subsidiaries and affiliates

MMHLLC is the parent of subsidiaries that include 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; these subsidiaries deal in markets 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 Years Ended December 31,	
	2012	2011
	(In Billions)	
Total revenue	$ 6.2	$ 4.9
Net income	0.2	0.3
Assets	53.5	50.7
Liabilities	43.6	42.4
Equity	9.9	8.3

The U.S. GAAP equity values in the preceding table consist of MMHLLC statutory carrying values of $4,271 million and $3,413 million as of December 31, 2012 and 2011, respectively, plus the carrying value of MMHLLC that is nonadmitted under statutory accounting principles. The current fair value of MMHLLC remains significantly greater than its statutory carrying amount.

On April 16, 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 has 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 plaintiffs' motion for partial summary judgment. In April 2012, plaintiffs filed a motion for leave to file a third amended complaint, which would add a fraud claim and additional allegations in support of plaintiffs' contract claims. In August 2012, plaintiffs and defendants separately filed motions for partial summary judgment which were argued in October 2012. 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.

Beyond these matters, MMHLLC's subsidiaries are involved in litigation and investigations arising in the ordinary course of the subsidiaries' businesses. Although the Company is not aware of any actions or allegations that reasonably should give rise to a material adverse impact to the Company's financial position or liquidity, 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.

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

MassMutual received $25 million and $250 million of cash dividends, recorded in net investment income, from MMHLLC in 2012 and 2011, respectively.

In 2012, MassMutual contributed capital of $75 million to MSC Holding Company, LLC, a wholly owned subsidiary of MassMutual. In 2011, MassMutual contributed capital of $250 million to MMHLLC.

The Company held debt issued by MMHLLC that amounted to $1,993 million as of December 31, 2012 and 2011. The Company recorded interest income on MMHLLC debt of $117 million and $118 million in 2012 and 2011, respectively.

The Company held common stocks for which the transfer of ownership was restricted by contractual requirements with carrying values of $23 million as of December 31, 2012 and $8 million as of December 31, 2011.

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 $961 million as of December 31, 2012 was subject to dividend restrictions imposed by various state regulations.

e. Mortgage loans

Mortgage loans are comprised of commercial mortgage loans and residential mortgage loans. 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 for commercial properties 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.

Residential mortgage loans are seasoned pools of homogeneous residential mortgage loans substantially backed by FHA and VA guarantees. The Company does not originate any residential mortgages but invests in seasoned residential mortgage loan pools that may contain mortgages of subprime credit quality. As of December 31, 2012 and 2011, the Company did not have any direct subprime exposure through the purchases of unsecuritized whole-loan pools.

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, 2012 and 2011.

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

	December 31,			
	2012		2011	
	Carrying Value	Fair Value	Carrying Value	Fair Value
	(In Millions)			
Commercial mortgage loans:				
Primary lender	$ 12,298	$ 12,642	$ 10,832	$ 11,102
Mezzanine loans	36	36	42	46
Total commercial mortgage loans	12,334	12,678	10,874	11,148
Residential mortgage loans:				
FHA insured and VA guaranteed	2,382	2,401	2,386	2,372
Other residential loans	18	19	23	23
Total residential mortgage loans	2,400	2,420	2,409	2,395
Total mortgage loans	$ 14,734	$ 15,098	$ 13,283	$ 13,543

As of December 31, 2012, scheduled mortgage loan maturities, net of valuation allowances, for commercial and residential loans were as follows (in millions):

2013	$ 1,071
2014	830
2015	1,033
2016	2,203
2017	1,706
Thereafter	5,491
Commercial mortgage loans	12,334
Residential mortgage loans	2,400
Total	$ 14,734

The Company uses an internal rating system as its primary method of monitoring credit quality. The following illustrates the Company's mortgage loan portfolio categorized by what it believes is the equivalent rating agency designation (classification of prior year amounts has been adjusted to conform with the Company's current year translation method):

	December 31, 2012					
	AAA/AA/A	BBB	BB	B	CCC and Lower	Total
	(In Millions)					
Commercial mortgage loans:						
Primary lender	$ 4,789	$ 5,211	$ 1,144	$ 882	$ 272	$ 12,298
Mezzanine loans	-	-	22	-	14	36
Total commercial mortgage loans	4,789	5,211	1,166	882	286	12,334
Residential mortgage loans:						
FHA insured and VA guaranteed	2,382	-	-	-	-	2,382
Other residential loans	18	-	-	-	-	18
Total residential mortgage loans	2,400	-	-	-	-	2,400
Total mortgage loans	$ 7,189	$ 5,211	$ 1,166	$ 882	$ 286	$ 14,734

	December 31, 2011					
	AAA/AA/A	BBB	BB	B	CCC and Lower	Total
	(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	2,386	-	-	-	-	2,386
Other residential loans	23	-	-	-	-	23
Total residential mortgage loans	2,409	-	-	-	-	2,409
Total mortgage loans	$ 5,946	$ 4,593	$ 1,607	$ 1,099	$ 38	$ 13,283

The loan-to-value ratios by property type of the Company's commercial mortgage loans were as follows:

	December 31, 2012				
	Less than 80%	81% to 95%	Above 95%	Total	% of Total
	($ In Millions)				
Office	$ 4,410	$ 250	$ 132	$ 4,792	39 %
Apartments	2,500	82	106	2,688	22
Industrial and other	1,788	740	5	2,533	20
Retail	1,151	32	267	1,450	12
Hotels	837	11	23	871	7
Total	$ 10,686	$ 1,115	$ 533	$ 12,334	100 %

	December 31, 2011				
	Less than 80%	81% to 95%	Above 95%	Total	% of Total
	($ In Millions)				
Office	$ 3,541	$ 466	$ 88	$ 4,095	38 %
Apartments	2,455	252	129	2,836	26
Industrial and other	1,211	752	139	2,102	19
Retail	914	32	267	1,213	11
Hotels	604	-	24	628	6
Total	$ 8,725	$ 1,502	$ 647	$ 10,874	100 %

The geographic distribution of commercial mortgage loans was as follows:

	December 31, 2012	
	Carrying Value	Average Loan-to-Value Ratio
	($ In Millions)	
California	$ 2,907	64%
Texas	1,437	64%
Illinois	987	68%
Massachusetts	982	60%
New York	939	54%
District of Columbia	716	49%
All other states	3,857	61%
Canada	374	60%
United Kingdom	135	48%
Total commercial mortgage loans	$ 12,334	61%

Note: All other states consists of 34 states, with no individual state exposure exceeding $466 million.

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

Note: All other states consists of 32 states, with no individual state exposure exceeding $407 million.

Mortgage loan interest rates, including fixed and variable, on the Company's portfolio of mortgage loans were:

	December 31, 2012			December 31, 2011		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	1.2 %	10.5 %	5.0 %	0.9 %	9.8 %	5.4 %
Residential mortgage loans	2.6 %	12.8 %	5.8 %	3.0 %	12.9 %	6.0 %
Mezzanine mortgage loans	8.5 %	17.0 %	10.1 %	8.5 %	18.0 %	11.9 %

Mortgage loan interest rates, including fixed and variable, on new issues were:

	Years Ended December 31, 2012			Years Ended December 31, 2011		
	Low	High	Weighted Average	Low	High	Weighted Average
Commercial mortgage loans	3.3 %	7.2 %	4.2 %	3.5 %	7.5 %	4.8 %
Residential mortgage loans	5.1 %	5.7 %	5.1 %	5.1 %	6.2 %	5.3 %
Mezzanine mortgage loans	- %	- %	- %	8.5 %	8.5 %	8.5 %

The maximum percentage of any one commercial mortgage loan to the estimated value of secured collateral at the time the loan was originated, exclusive of mezzanine, insured, guaranteed or purchase money mortgages, was 93.0% as of December 31, 2012 and 2011. The maximum percentage of any one mezzanine loan to the estimated value of secured collateral at the time the loan was originated was 93.0% as of December 31, 2012 and 97.0% as of December 31, 2011.

The following presents a summary of the Company's impaired mortgage loans:

	December 31, 2012				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Valuation Allowance	Interest Income
	(In Millions)				
With allowance recorded:					
Commercial mortgage loans:					
Primary lender	$ 53	$ 53	$ 68	$ (5)	$ 5
Mezzanine loans	2	1	12	(10)	-
Total	55	54	80	(15)	5
With no allowance recorded:					
Commercial mortgage loans:					
Mezzanine loans	-	-	14	-	-
Total impaired commercial mortgage loans	$ 55	$ 54	$ 94	$ (15)	$ 5

	December 31, 2011				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Valuation Allowance	Interest Income
	(In Millions)				
With allowance recorded:					
Commercial mortgage loans:					
Primary lender	$ 85	$ 93	$ 103	$ (19)	$ 7
Mezzanine loans	1	4	31	(29)	-
Total	86	97	134	(48)	7
With no allowance recorded:					
Commercial mortgage loans:					
Mezzanine loans	5	14	40	-	1
Total impaired commercial mortgage loans	$ 91	$ 111	$ 174	$ (48)	$ 8

The following presents changes in the valuation allowance recorded for the Company's mortgage loans:

	Years Ended December 31,					
	2012			2011		
	Commercial					
	Primary Lender	Mezzanine	Total	Primary Lender	Mezzanine	Total
	(In Millions)					
Beginning balance	$ (19)	$ (29)	$ (48)	$ (79)	$ (61)	$ (140)
Additions	-	-	-	(19)	(11)	(30)
Decreases	3	6	9	55	2	57
Write-downs	11	13	24	24	41	65
Ending balance	$ (5)	$ (10)	$ (15)	$ (19)	$ (29)	$ (48)

As of December 31, 2012, the Company did not hold any past due commercial or residential mortgage loans. The carrying value of commercial mezzanine loans for which the Company has suspended interest accruals was $14 million as of December 31, 2012 and $33 million as of December 31, 2011. The Company did not have any mortgage loans with interest more than 180 days past due as of December 31, 2012 or 2011. The Company had one restructured commercial mortgage loan with a total carrying value of less than $1 million as of December 31, 2012 and 2011. There were no restructured residential mortgage loans as of December 31, 2012 or 2011.

f. Real estate

The carrying value of real estate was as follows:

	December 31, 2012	December 31, 2011
	(In Millions)	
Held for the production of income	$ 2,257	$ 2,262
Accumulated depreciation	(974)	(891)
Encumbrances	(221)	(268)
Held for the production of income, net	1,062	1,103
Held for sale	-	9
Occupied by the Company	233	227
Accumulated depreciation	(133)	(122)
Occupied by the Company, net	100	105
Total real estate	$ 1,162	$ 1,217

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.

As of December 31, 2012 and 2011, the carrying value of nonincome producing real estate was less than $1 million and was comprised of two land parcels.

Depreciation expense on real estate was $99 million for the year ended December 31, 2012 and $98 million for the year ended December 31, 2011.

g. Partnerships and limited liability companies

Partnership and LLC holdings, at carrying value, by annual statement category are:

	December 31, 2012	December 31, 2011
	(In Millions)	
Common stocks	$ 2,990	$ 2,750
Real estate	1,679	1,398
Fixed maturities/preferred stock	1,528	1,158
Mortgage loans	281	304
LIHTC	225	195
Other	59	66
Total	$ 6,762	$ 5,871

There were no write-downs or reclassifications of LIHTC partnerships made during the years ended December 31, 2012 or 2011 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, 2012	2011
	(In Millions)	
Bonds	$ 3,098	$ 3,006
Preferred stocks	15	12
Common stocks - subsidiaries and affiliates	29	254
Common stocks - unaffiliated	33	14
Mortgage loans	764	718
Policy loans	685	672
Real estate	193	181
Partnerships and LLCs	580	432
Derivatives	236	150
Cash, cash equivalents and short-term investments	14	8
Other	3	7
Subtotal investment income	5,650	5,454
Amortization of the IMR	144	124
Investment expenses	(498)	(451)
Net investment income	$ 5,296	$ 5,127

i. Net realized capital gains (losses)

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

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Bonds	$ 154	$ 113
Preferred stocks	12	1
Common stocks - subsidiaries and affiliates	63	18
Common stocks - unaffiliated	14	22
Mortgage loans	28	(65)
Real estate	21	30
Partnerships and LLCs	(46)	(31)
Derivatives and other	(24)	555
Net realized capital gains before federal and state taxes and deferral to the IMR	222	643
Net federal and state tax benefit (expense)	282	(180)
Net realized capital gains before deferral to the IMR	504	463
Net after tax gains deferred to the IMR	(389)	(690)
Net realized capital gains (losses)	$ 115	$ (227)

Portions of realized capital gains (losses), deemed to be interest related, were deferred into the IMR. The IMR liability balance was $793 million as of December 31, 2012 and $582 million as of December 31, 2011 and was included in other liabilities on the Statutory Statements of Financial Position.

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

OTTI, which are included in the net realized capital gains (losses) above, consisted of the following:

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Bonds	$ (159)	$ (176)
Common stocks	(4)	(3)
Mortgage loans	(24)	(68)
Partnerships and LLCs	(102)	(59)
Total OTTI	$ (289)	$ (306)

For the years ended December 31, 2012 and 2011, the Company recognized $106 million and $150 million, respectively, of OTTI on structured and loan backed securities primarily due to the present value of expected cash flows being less than the amortized cost.

For the year ended December 31, 2012, 64% of the $159 million of bond OTTI were determined using internally developed models. For the year ended December 31, 2011, 85% of the $176 million of bond OTTI were determined using internally developed models.

The remaining OTTI amounts were determined using external inputs such as publicly observable fair values and credit ratings. Refer to *Note 2bb. "Realized capital gains (losses) including other-than-temporary impairments and unrealized capital gains (losses)"* for more information on assumptions and inputs used in the Company's OTTI models.

j. Securities sold under agreements to repurchase

The Company had securities sold under agreements to repurchase with carrying values of $4,020 million as of December 31, 2012 and $3,770 million as of December 31, 2011. As of December 31, 2012, the maturities of these agreements ranged from January 2, 2013 through January 4, 2013 and the interest rates ranged from 0.2% to 0.3%. The outstanding amounts were collateralized by bonds with a fair value of $4,067 million as of December 31, 2012 and $3,914 million as of December 31, 2011.

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 either to hedge and reduce the Company's credit exposure or to create an investment in a particular asset. The Company held synthetic assets with a net notional amount of $2,861 million as of December 31, 2012 and $2,393 million as of December 31, 2011. Of this amount, $1,482 million as of December 31, 2012 and $214 million as of December 31, 2011, 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 generally designated in hedging relationships; therefore, as allowed by accounting rules, the Company intentionally has not applied 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 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 uses 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. A credit default swap 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 sell credit default swaps as a participant in the credit insurance market. The Company does, however, use credit default swaps as part of its investment management process. The Company buys credit default swaps as an efficient means to reduce credit exposure to particular issuers or sectors in the Company's investment portfolio. The Company sells credit default swaps in order to create synthetic investment positions that enhance the return on its investment portfolio by providing comparable exposure to fixed income securities that might not be available in the primary market.

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 as interest rates rise. 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 adopted a clearly defined hedging strategy (CDHS) to enable the Company to incorporate currently held hedges in 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 GMDB and VAGLB.

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" forward contracts (TBAs) 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 $2,300 million as of December 31, 2012 and $2,883 million as of December 31, 2011. In the event of default the full market value exposure at risk in a net gain position, net of offsets and collateral, was $34 million as of December 31, 2012 and $100 million as of December 31, 2011. The amount at risk using NAIC prescribed rules was $115 million as of December 31, 2012 and $132 million as of December 31, 2011. 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 the counterparty's right to offset carrying value positions in the other derivative categories.

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

	December 31, 2012			
	Assets		Liabilities	
	Carrying Value	Notional Amount	Carrying Value	Notional Amount
	(In Millions)			
Interest rate swaps	$ 2,594	$ 111,849	$ 349	$ 15,019
Options	350	11,567	(22)	143
Currency swaps	119	1,365	50	656
Forward contracts	16	3,303	1	327
Credit default swaps	12	1,216	(1)	58
Financial futures - long positions	-	2,872	-	-
Financial futures - short positions	-	352	-	-
Total	$ 3,091	$ 132,524	$ 377	$ 16,203

	December 31, 2011			
	Assets		Liabilities	
	Carrying Value	Notional Amount	Carrying Value	Notional 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

In most cases, the 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 fully exposed to the notional amounts of $2,861 million as of December 31, 2012 and $2,393 million as of December 31, 2011. 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 weighted average fair value of outstanding derivative financial instrument assets was $3,258 million for the year ended December 31, 2012 and was $2,891 million for the year ended December 31, 2011. The weighted average fair value of outstanding derivative financial instrument liabilities was $333 million for the year ended December 31, 2012 and was $246 million for the year ended December 31, 2011.

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

	December 31, 2012	December 31, 2011
	(In Millions)	
Open interest rate swaps in a fixed pay position	$ 68,882	$ 65,550
Open interest rate swaps in a fixed receive position	55,986	49,473
Other interest related swaps	2,000	2,538
Total interest rate swaps	$ 126,868	$ 117,561

The following summarizes the Company's net realized gains (losses) on closed contracts and change in net unrealized gains (losses) related to market fluctuations on open contracts by derivative type:

	December 31, 2012		December 31, 2011	
	Net Realized Gains (Losses) Closed Contracts	Change In Net Unrealized Gains (Losses) Open Contracts	Net Realized Gains (Losses) Closed Contracts	Change In Net Unrealized Gains (Losses) Open Contracts
	(In Millions)			
Interest rate swaps	$ (68)	$ (186)	$ -	$ 460
Currency swaps	(47)	15	(4)	38
Options	39	(395)	(114)	405
Credit default swaps	4	(29)	4	10
Forward contracts	140	(36)	126	31
Financial futures - long positions	142	-	827	-
Financial futures - short positions	(229)	-	(287)	-
Total	$ (19)	$ (631)	$ 552	$ 944

5. *Fair value of financial instruments*

The following presents a summary of the carrying values and fair values of the Company's financial instruments:

	December 31, 2012					December 31, 2011	
	Carrying Value	Fair Value	Level 1	Level 2	Level 3	Carrying Value	Fair Value
	(In Millions)					(In Millions)	
Financial assets:							
Bonds:							
U. S. government and agencies	$ 7,995	$ 9,188	$ -	$ 9,174	$ 14	$ 9,813	$ 11,742
All other governments	126	164	-	133	31	112	148
States, territories and possessions	1,541	1,745	-	1,745	-	1,362	1,497
Special revenue	4,111	5,096	-	5,096	-	2,467	2,834
Industrial and miscellaneous	42,266	46,394	-	29,760	16,634	39,328	41,535
Parent, subsidiaries and affiliates	5,611	5,832	-	1,588	4,244	5,309	5,334
Preferred stocks	359	385	12	74	299	343	334
Common stock - unaffiliated	840	840	623	60	157	583	583
Common stock - affiliated(1)	543	543	-	363	180	639	639
Mortgage loans - commercial	12,334	12,678	-	-	12,678	10,874	11,148
Mortgage loans - residential	2,400	2,420	-	-	2,420	2,409	2,395
Cash, cash equivalents and short-term investments	3,410	3,410	753	2,657	-	1,788	1,788
Separate account assets	58,124	58,174	37,772	19,864	538	47,245	47,284
Derivatives:							
Interest rate swaps	2,594	2,573	-	2,573	-	2,729	2,729
Options	350	350	-	350	-	603	603
Currency swaps	119	119	-	119	-	135	135
Forward contracts	16	16	-	16	-	53	53
Credit default swaps	12	12	-	12	-	37	37
Financial liabilities:							
Commercial paper	250	250	-	250	-	250	250
Securities sold under agreements to repurchase	4,020	4,020	-	4,020	-	3,770	3,770
Funding agreements	4,054	4,154	-	-	4,154	3,344	3,457
Investment-type insurance contracts:							
Group annuity investment contracts	7,606	8,783	-	-	8,783	7,315	7,915
Individual annuity investment contracts	8,562	9,890	-	-	9,890	8,212	8,853
Supplementary investment contracts	1,077	1,079	-	-	1,079	1,017	1,018
Derivatives:							
Interest rate swaps	349	350	-	350	-	298	298
Options	(22)	(22)	-	(22)	-	(73)	(73)
Currency swaps	50	50	-	50	-	81	81
Forward contracts	1	1	-	1	-	(1)	(1)
Credit default swaps	(1)	(1)	-	(1)	-	(2)	(2)

(1)Common stock - affiliated does not include MMHLLC which had a statutory carrying value of $4,271 million as of December 31, 2012 and $3,413 million as of December 31, 2011.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The authoritative guidance around fair value establishes a measurement framework that includes a hierarchy used to classify the inputs used in measuring fair value. The hierarchy prioritizes the inputs to valuation techniques into three levels. Each level reflects a unique description of the inputs that are significant to the fair value measurements. The levels of the fair value hierarchy are as follows:

Level 1 – Observable inputs in the form of quoted prices for identical instruments in active markets.

Level 2 – Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active or other inputs that are observable or can be derived from observable market data for substantially the full term of the assets or liabilities.

Level 3 – One or more unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities. Level 3 assets and liabilities include financial instruments whose value is determined using internal models, as well as instruments for which the determination of fair value requires significant management judgment or estimation.

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

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

Annually, the Company reviews the primary pricing vendors to validate that the inputs used in that vendors' pricing process are deemed to be market observable as defined above. 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. In addition, the Company and its pricing vendors have an established challenge process in place for all security valuations, which facilitates identification and resolution of prices that fall outside expected ranges. The Company believes that the prices received from the pricing vendors are representative of prices that would be received to sell the assets at the applicable measurement date (exit prices) and are classified appropriately in the hierarchy.

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

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.

Fair value hierarchy

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

	December 31, 2012				
	Level 1	Level 2	Level 3	Netting[(1)]	Total
	(In Millions)				
Financial assets:					
Bonds:					
Industrial and miscellaneous	$ -	$ 14	$ 16	$ -	$ 30
Parent, subsidiaries and affiliates	-	3	-	-	3
Common stock - unaffiliated	623	60	157	-	840
Common stock - affiliated[(2)]	-	363	180	-	543
Cash equivalents and short-term investments[(3)]	-	2,657	-	-	2,657
Separate account assets[(4)]	37,771	18,817	510	-	57,098
Derivatives:					
Interest rate swaps	-	8,991	-	(6,397)	2,594
Options	-	405	-	(55)	350
Currency swaps	-	167	-	(48)	119
Forward contracts	-	45	-	(29)	16
Credit default swaps	-	22	-	(10)	12
Total financial assets carried at fair value	$ 38,394	$ 31,544	$ 863	$ (6,539)	$ 64,262
Financial liabilities:					
Securities sold under agreement to repurchase	$ -	$ 4,020	$ -	$ -	$ 4,020
Derivatives:					
Interest rate swaps	-	6,746	-	(6,397)	349
Options	-	33	-	(55)	(22)
Currency swaps	-	98	-	(48)	50
Forward contracts	-	30	-	(29)	1
Credit default swaps	-	9	-	(10)	(1)
Total financial liabilities carried at fair value	$ -	$ 10,936	$ -	$ (6,539)	$ 4,397

(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 $4,271 million.

(3) Does not include cash of $753 million.

(4) $1,026 million of book value separate account assets are not carried at fair value and, therefore, are not included in this table.

For the year ended December 31, 2012, there were no significant transfers between Level 1 and Level 2.

	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	11,442	396	-	45,995
Derivatives:					
Interest rate swaps	-	8,816	-	(6,087)	2,729
Options	-	712	-	(109)	603
Currency swaps	-	174	-	(39)	135
Forward contracts	-	75	-	(22)	53
Credit default swaps	-	48	-	(11)	37
Total financial assets carried at fair value	$ 34,511	$ 23,167	$ 890	$ (6,268)	$ 52,300
Financial liabilities:					
Derivatives:					
Interest rate swaps	$ -	$ 6,385	$ -	$ (6,087)	$ 298
Options	-	36	-	(109)	(73)
Currency swaps	-	120	-	(39)	81
Forward contracts	-	21	-	(22)	(1)
Credit default swaps	-	9	-	(11)	(2)
Total financial liabilities carried at fair value	$ -	$ 6,571	$ -	$ (6,268)	$ 303

(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, are not included in this table.

Valuation Techniques and Inputs

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

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

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

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

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

Cash equivalents and short−term investments - Cash equivalents and short−term investments consist of highly liquid investments and include money market instruments, commercial paper and other highly liquid debt instruments. Money market instruments are generally valued using unadjusted quoted prices in active markets that are accessible for identical assets and are primarily classified as Level 1. The remaining instruments in the cash equivalents and short−term investments category are typically not traded in active markets; however, their fair values are based on market observable inputs and, accordingly, these investments have been classified within Level 2 in the fair value hierarchy.

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

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

	Year Ended December 31, 2012				
	Bonds Industrial and Miscellaneous	Common Stock Unaffiliated	Common Stock Affiliated	Separate Account Assets	Total Level 3 Financial Assets Carried at Fair Value
	(In Millions)				
Balance as of 12/31/2011	$ 20	$ 169	$ 305	$ 396	$ 890
Gains (losses) in net income	(18)	9	26	37	54
Gains (losses) in surplus	4	(11)	10	-	3
Purchases	8	-	144	69	221
Issuances	22	-	-	-	22
Sales	(3)	(7)	(305)	(175)	(490)
Settlements[(1)]	(34)	(3)	-	92	55
Transfers in [(2)]	1	-	-	91	92
Other transfers [(3)]	16	-	-	-	16
Balance as of 12/31/2012	$ 16	$ 157	$ 180	$ 510	$ 863

[(1)]*Real estate fair value is carried net of encumbrances on the Consolidated Statement of Financial Position and the change in encumbrances is included in the settlements within separate account assets.*

[(2)]*This row identifies assets 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 are moved to Level 2. The separate account assets transferred into Level 3 were transferred from Level 2 due to a change in the pricing source.*

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

	Year Ended December 31, 2011					
	Bonds					
	Industrial and Miscellaneous	Parent, Subsidiaries and Affiliates	Common Stock Unaffiliated	Common Stock Affiliated	Separate Account Assets	Total Level 3 Financial Assets Carried at Fair Value
	(In Millions)					
Balance as of 12/31/2010	$ 46	$ 20	$ 158	$ 69	$ 405	$ 698
Gains (losses) in net income	(10)	-	10	11	5	16
Gains (losses) in surplus	(3)	-	(12)	(18)	-	(33)
Purchases	-	-	52	295	31	378
Issuances	33	-	147	1	-	181
Sales	-	-	(6)	(48)	(137)	(191)
Settlements[(1)]	(47)	-	(155)	-	92	(110)
Transfers out [(2)]	-	-	(25)	(5)	-	(30)
Other transfers [(3)]	1	(20)	-	-	-	(19)
Balance as of 12/31/2011	$ 20	$ -	$ 169	$ 305	$ 396	$ 890

[(1)]*Real estate fair value is carried net of encumbrances on the Consolidated Statement of Financial Position and the change in encumbrances is included in the settlements within separate account assets.*

[(2)]*This row identifies assets 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 are moved to Level 2.*

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

6. *Fixed assets*

The Company's admitted fixed assets, comprised of EDP equipment, were $25 million and $27 million, net of accumulated depreciation of $180 million and $164 million, as of December 31, 2012 and 2011, respectively. The depreciation expense on all fixed assets was $44 million and $30 million for the years ended December 31, 2012 and 2011, 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 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,			
	2012		2011	
	Gross	Net	Gross	Net
	(In Millions)			
Ordinary new business	$ 78	$ 27	$ 70	$ 25
Ordinary renewal	509	564	489	540
Group life	12	12	10	10
Total	$ 599	$ 603	$ 569	$ 575

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 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, 2012:

Issue Date	Face Amount	Carrying Value	Interest Rate	Maturity Date
	($ In Millions)			
11/15/1993	$ 250	$ 250	7.625%	11/15/2023
03/01/1994	100	100	7.500%	03/01/2024
05/15/2003	250	249	5.625%	05/15/2033
06/01/2009	750	741	8.875%	06/01/2039
01/17/2012	400	399	5.375%	12/01/2041
Total	$ 1,750	$ 1,739		

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 Consolidated Statutory Statements of Financial Position.

All payments of interest and principal are subject to the prior approval of the Division. Anticipated sinking fund payments are due for the notes issued in 1993 and 1994 as follows: $62 million in 2021, $88 million in 2022, $150 million in 2023 and $50 million in 2024. There are no sinking fund requirements for the notes issued in 2003, 2009 or 2012. Scheduled interest on the notes issued in 1993 and 2003 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 notes issued in 2009 and 2012 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, 2012, the unapproved interest was $14 million. As of December 31, 2012, the Company has paid cumulative interest of $886 million on surplus notes. Interest of $126 million and $107 million was approved and paid during the years ended December 31, 2012 and 2011, respectively.

9. *Related party transactions*

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, Cornerstone Real Estate Advisers, LLC (CREA), and OFI which provide investment advisory services to MassMutual.

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

	Years Ended December 31,	
	2012	2011
	(In Millions)	
Fee income:		
Management and service contracts and cost-sharing arrangements	$ 86	$ 96
Recordkeeping and other services	52	56
Investment advisory income	27	26
Fee expense:		
Investment advisory services	198	178

The Company reported $35 million and $41 million as amounts due from subsidiaries and affiliates as of December 31, 2012 and 2011, respectively. The Company reported $51 million and $53 million as amounts due to subsidiaries and affiliates as of December 31, 2012 and 2011, respectively. Terms generally require settlement of these amounts within 30 to 90 days.

The Company's subsidiaries, Babson Capital and CREA, invest a portion of its nonqualified compensation plan in interest guarantee contracts with the Company. For the year ended December 31, 2012, the Company credited interest on deposits of $4 million and $1 million to the Babson Capital and CREA contracts, respectively. For the year ended December 31, 2011, the Company credited interest on deposits of $4 million and less than $1 million to the Babson Capital and CREA contracts, respectively.

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 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. As of December 31, 2012 and 2011, the net amounts due from the Japanese subsidiary were $2 million and $1 million, respectively. 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,	
	2012	2011
	(In Millions)	
Premium assumed	$ 20	$ 23
Modified coinsurance adjustments, included in fees and other income	18	15
Expense allowances on reinsurance assumed, included in fees and other expense	(2)	(2)
Policyholders' benefits	(25)	(32)

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 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 (YRT), coinsurance or modified coinsurance basis. The Company's retention limit per individual life insured is generally $15 million.

Refer to *Note 9. "Related party transactions"* for information about the Company's affiliated assumed 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, 2012, the resulting reduction in surplus due to loss of reinsurance reserve credits, net of unearned premium, would be approximately $2,755 million assuming no return of the assets backing these reserves from the reinsurer to the Company.

Reinsurance amounts included in premium income in the Consolidated Statutory Statements of Income were as follows:

	Years Ended December 31, 2012	2011
	(In Millions)	
Direct premium	$ 21,521	$ 14,678
Premium assumed	20	25
Premium ceded	(807)	(810)
Total net premium	$ 20,734	$ 13,893
Reinsurance recoveries		
Assumed	$ (4)	$ (6)
Ceded	570	573

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

	December 31, 2012	2011
	(In Millions)	
Reinsurance reserves		
Assumed	$ 2	$ 3
Ceded	(3,080)	(2,829)
Amounts recoverable from reinsurers		
Assumed	(1)	(1)
Ceded	149	138

Reinsurance reserves ceded to unaffiliated reinsurers as of December 31, 2012 include $2,161 million associated with life insurance policies, $842 million for long-term care, $59 million for disability and $18 million for group life and health. Reinsurance reserves ceded to unaffiliated reinsurers as of December 31, 2011 include $2,029 million associated with life insurance policies, $714 million for long-term care, $66 million for disability and $20 million for group life and health.

As of December 31, 2012, one reinsurer accounted for 25% of the outstanding reinsurance recoverable and the next largest reinsurer had 17% 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.

In 2012, the Company recaptured YRT life reinsurance treaties from several different reinsurers, and two new agreements were executed which include policies or contracts that were in force and had existing reserves established by the Company. The recaptures and new agreements reduced premiums paid to reinsurers by $13 million and reinsurance reserves ceded by $53 million.

11. Policyholders' liabilities

a. Policyholders' reserves

The Company had total life insurance in force of $475,155 million and $458,593 million as of December 31, 2012 and 2011, respectively. Of this total, the Company had $22,584 million and $17,729 million of life insurance in force as of December 31, 2012 and 2011, 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.

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

	December 31,				
	2012		2011		
	Amount	Interest Rates	Amount	Interest Rates	
	($ In Millions)				
Individual life	$ 37,307	2.5% - 6.0%	$ 35,511	2.5% - 6.0%	
Group life	11,327	2.5% - 4.5%	10,080	2.5% - 4.5%	
Individual annuities	11,569	2.3% - 11.3%	10,708	2.3% - 11.3%	
Group annuities	10,170	2.3% - 11.3%	9,486	2.3% - 11.3%	
Individual universal and variable life	5,896	3.5% - 6.0%	5,316	3.5% - 6.0%	
Disabled life claim reserves	1,868	3.5% - 6.0%	1,855	3.5% - 6.0%	
Disability active life reserves	623	3.5% - 6.0%	595	3.5% - 6.0%	
Other	211	2.5% - 6.0%	200	2.5% - 6.0%	
Total	$ 78,971		$ 73,751		

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,			
	2012		2011	
	Amount	Interest Rates	Amount	Interest Rates
	($ In Millions)			
Funding agreements:				
Note programs	$ 3,447	0.7% - 6.2%	$ 2,731	0.3% - 6.2%
Federal Home Loan Bank of Boston	601	1.1% - 3.0%	601	1.1% - 3.0%
Various others	6	4.1% - 10.2%	12	4.1% - 10.2%
Supplementary contracts	718	0.3% - 8.0%	642	0.3% - 8.0%
Dividend accumulations	566	3.4% - 3.7%	571	3.4% - 3.5%
Other	50	4.0% - 8.0%	65	4.0% - 8.0%
Total	$ 5,388		$ 4,622	

Funding agreements are investment contracts sold to domestic and international institutional investors. The terms of the funding agreements do not give the holder the right to terminate the contract prior to the contractually stated maturity date. No funding agreements have been issued with put provisions or ratings-sensitive triggers. Currency swaps are employed to eliminate foreign exchange risk from all funding agreements issued to back non-U.S. dollar denominated notes. Assets received for funding agreements may be invested in the general account of the Company.

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 $467 million remaining in run-off. Notes are currently issued from its $12 billion Global Medium-Term Note Program.

During 2011, the Company entered into funding agreements with the Federal Home Loan Bank of Boston (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 $656 million as of December 31, 2012. 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 $855 million as of December 31, 2012. As a member of the FHLB Boston, the Company holds common stock of the FHLB Boston at a statement value of $52 million as of December 31, 2012 and 2011. 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, 2012, the Company's funding agreement balances by maturity year were as follows (in millions):

2013	$	641
2014		753
2015		402
2016		653
2017		552
Thereafter		1,053
Total	$	4,054

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.

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

	December 31,	
	2012	2011
	(In Millions)	
Claim reserves, beginning of year	$ 1,993	$ 1,965
Less: Reinsurance recoverables	115	115
Net claim reserves, beginning of year	1,878	1,850
Claims paid related to:		
Current year	(14)	(16)
Prior years	(312)	(310)
Total claims paid	(326)	(326)
Incurred related to:		
Current year's incurred	230	239
Current year's interest	5	4
Prior year's incurred	21	19
Prior year's interest	81	80
Total incurred	337	342
Adjustments through surplus	-	12
Net claim reserves, end of year	1,889	1,878
Reinsurance recoverables	128	115
Claim reserves, end of year	$ 2,017	$ 1,993

The changes in reserves for incurred claims related to prior years are generally the result of recent loss development trends. The $21 million increase in the prior years' incurred claims for 2012 and the $19 million increase in the prior years' incurred claims for 2011 were generally the result of differences between actual termination experience and statutory termination tables.

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, 2012	December 31, 2011
	(In Millions)	
Disabled life claim reserves	$ 1,868	$ 1,855
Accrued claim liabilities	21	23
Net claim reserves, end of year	$ 1,889	$ 1,878

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.

The following shows the liabilities for GMDBs, GMIBs, GMABs and GMWBs (in millions):

Liability as of January 1, 2011	$ 509
Incurred guarantee benefits	324
Paid guarantee benefits	(6)
Liability as of December 31, 2011	827
Incurred guarantee benefits	(253)
Paid guarantee benefits	(7)
Liability as of December 31, 2012	$ 567

The Company held reserves in accordance with the stochastic scenarios as of December 31, 2012 and 2011. As of December 31, 2012 and 2011, 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 GMDBs, GMIBs, GMABs and GMWBs 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, 2012			2011		
	Account Value	Net Amount at Risk	Weighted Average Attained Age	Account Value	Net Amount at Risk	Weighted Average Attained Age
	($ In Millions)					
Annuity:						
GMDB	$ 11,648	$ 139	62	$ 10,684	$ 336	62
GMIB	4,260	609	63	4,010	822	62
GMAB	1,925	10	57	1,555	53	57
GMWB	211	10	66	195	17	66

Account balances of variable annuity contracts with GMDBs, GMIBs, GMABs and GMWBs are summarized below:

	December 31, 2012				2011			
	GMDB	GMIB	GMAB	GMWB	GMDB	GMIB	GMAB	GMWB
	(In Millions)							
Separate account	$ 10,225	$ 4,244	$ 1,859	$ 211	$ 9,383	$ 3,995	$ 1,487	$ 195
General account	1,423	16	66	-	1,301	15	68	-
Total	$ 11,648	$ 4,260	$ 1,925	$ 211	$ 10,684	$ 4,010	$ 1,555	$ 195

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.

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

	December 31, 2012	2011
	(In Millions)	
Beginning balance	$ 2,105	$ 1,819
Net liability increase	334	286
Ending balance	$ 2,439	$ 2,105

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, 2012 and 2011. The commercial paper issued in 2012 had interest rates ranging from 0.15% to 0.23% with maturity dates ranging from 1 day to 38 days. Interest expense for the commercial paper was less than $1 million for the years ended December 31, 2012 and 2011.

On September 27, 2012, MassMutual signed a $1 billion, five year credit facility, with a syndicate of lenders that can be used for general corporate purposes and to support commercial paper borrowings. The new credit facility replaces an existing $1 billion credit facility, which was due to expire April 2013. The new facility has an upsize option for an additional $500 million. The terms of the credit facility provide for, among other provisions, covenants pertaining to liens, fundamental changes, transactions with affiliates and adjusted statutory surplus. As of and for the years ended December 31, 2012 and 2011, the Company was in compliance with all covenants under the credit facilities. For the years ended December 31, 2012 and 2011, there were no draws on the credit facilities. Credit facility fees were $3 million and $1 million for the years ended December 31, 2012 and 2011, 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 2012 and 2011, the Company contributed $113 million and $137 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 $1,608 million and $1,423 million as of December 31, 2012 and 2011, respectively. The Company match for the qualified 401(k) thrift savings plan is limited to 5% of eligible W-2 compensation. The Company's total matching thrift savings contributions were $28 million for the years ended December 31, 2012 and 2011, 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 $182 million and $179 million as of December 31, 2012 and 2011, 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. The transfer of this obligation to MMHLLC does not relieve the Company of its primary liability. MMHLLC is allocated other postretirement expenses related to interest cost, amortization of actuarial gains (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 $29 million and $28 million as of December 31, 2012 and 2011, 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 as of December 31, 2012 and 2011.

d. Benefit obligations

The initial transition obligation for other postretirement benefits of $138 million was amortized over 20 years and fully amortized by the end of 2012. The initial transition obligation represents the phased recognition on the Consolidated Statutory Statements of Income of the differences between the plan's funded status and the accrued cost on the Company's 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 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 trends, mortality and expected retirement age.

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

	December 31, 2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Projected benefit obligation for:				
Vested employees	$ 2,355	$ 2,163	$ 363	$ 365
Non-vested employees	27	29	53	50
Total projected benefit obligation	$ 2,382	$ 2,192	$ 416	$ 415
Accumulated benefit obligation for:				
Vested employees	$ 2,340	$ 2,148	$ 363	$ 365
Non-vested employees	8	12	53	50
Total accumulated benefit obligation	$ 2,348	$ 2,160	$ 416	$ 415

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

	December 31, 2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Projected benefit obligation, beginning of year	$ 2,163	$ 1,764	$ 365	$ 330
Service cost	59	42	4	4
Interest cost	92	95	14	16
Contributions by plan participants	-	-	11	10
Actuarial (gains) losses	26	59	(23)	(13)
Medicare prescription drug direct subsidy	-	-	2	2
Benefits paid	(93)	(95)	(29)	(27)
Change in discount rate	108	298	19	43
Projected benefit obligation, end of year	$ 2,355	$ 2,163	$ 363	$ 365

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

	December 31,			
	2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Accumulated benefit obligation, beginning of year	$ 2,148	$ 1,743	$ 365	$ 330
Service cost	60	43	4	4
Interest cost	92	94	14	16
Contributions by plan participants	-	-	11	10
Actuarial (gains) losses	25	66	(23)	(13)
Medicare prescription drug direct subsidy	-	-	2	2
Benefits paid	(93)	(95)	(29)	(27)
Change in discount rate	108	297	19	43
Accumulated benefit obligation, end of year	$ 2,340	$ 2,148	$ 363	$ 365

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, 2012. A spot yield curve is developed from this data which is 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 utilized to ensure 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 $77 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 2012 and pensionable earnings are projected to the date of probable termination. See Section *h.* of this Note, *"Assumptions"* for details on the discount rate.

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 (GIA) 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 are as follows:

	December 31, 2012	December 31, 2011
	(In Millions)	
Pension plan assets managed by the Company and affiliated asset managers:		
General Investment Account Option	$ 222	$ 253
Babson Long Term Duration Bond Fund	155	141
Alternative Investment Separate Account	147	133
Oppenheimer Small Capitalization Core Fund	110	99
MM Premier Core Bond Fund	98	42
Oppenheimer International Growth Fund	96	72
Babson Enhanced Index Value Fund	76	65
Oppenheimer Large Core Fund	71	65
MM Premier Capital Appreciation Fund	55	48
MM Premier Strategic Emerging Markets Fund	49	35
Oppenheimer Large Capitalization Value Fund	36	39
Oppenheimer Real Estate Fund	24	21
	1,139	1,013
Pension plan assets managed by unaffiliated asset managers:		
Goldman Sachs Asset Management Long Duration Bond Fund	158	144
Pacific Asset Management Company Long Duration Bond Fund	157	140
Harris International	96	68
T. Rowe Price Emerging Markets Stock Fund	49	36
MM Select Growth Opportunities Fund	46	38
MM Select Blue Chip Growth Fund	44	37
MM Select Small Cap Value Fund	39	33
MM Select Small Cap Growth Fund	37	33
MM Select Large Cap Value Fund	36	25
	662	554
Total qualified pension plan assets	$ 1,801	$ 1,567

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 $63 million in 2013.

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% GIA 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 GIA option earns fixed interest, primarily comprised of an investment in an unallocated insurance contract, held by the Company. Approximately 13% and 16% of the assets of the Company's pension plan were invested in the Company's GIA option through the unallocated group annuity insurance contract as of December 31, 2012 and 2011, respectively.

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 presents the change in plan assets:

	December 31,			
	2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Fair value of plan assets, beginning of year	$ 1,567	$ 1,438	$ 5	$ 5
Actual return on plan assets	197	69	-	-
Employer contributions	130	155	18	16
Contributions by plan participants	-	-	11	10
Benefits paid	(93)	(95)	(29)	(27)
Other	-	-	-	1
Fair value of plan assets, end of year	$ 1,801	$ 1,567	$ 5	$ 5

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

The following presents the GIA option allocation by type of investment:

	December 31, 2012	December 31, 2011
Bonds	64 %	65 %
Mortgage loans	15	15
Partnerships and LLCs	7	7
Common stocks - subsidiaries and affiliates	5	5
Other investments	5	5
Cash and cash equivalents	3	2
Real estate	1	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 private equity funds, hedge funds, a private real estate fund and an equity index exchange traded fund.

Oppenheimer Small Capitalization Core Fund is a pooled 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.

MM Premier Core Bond Fund is a pooled separate account subadvised by Babson Capital. 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 and asset backed sectors.

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 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 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.

MM Premier Strategic Emerging Markets Fund is a pooled separate account subadvised by Baring 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 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.

Oppenheimer Real Estate Fund is a pooled separate account that invests in an Oppenheimer mutual fund subadvised by CREA. 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.

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.

T. Rowe Price Emerging Markets Stock Fund is a nonpooled separate account subadvised by T. Rowe Price Associates, Inc. (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.

MM Select Growth Opportunities 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 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.

MM Select Small Cap Growth Fund is a pooled separate account subadvised by Wadell & Reed, Wellington Management (Wellington) and Timberline Asset 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 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.

MM Select Large Cap Value Fund is a pooled separate account subadvised by Columbia Management (Columbia) and Huber Capital (Huber). Columbia manages a dividend-focused strategy seeking a combination of high dividend payers, steady growing dividend payers and emerging dividend payers. Huber employs a more concentrated, deeper value strategy using a dividend discount model (DDM) as the basis for determining intrinsic value opportunities.

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 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.

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

	December 31, 2012			
	Level 1	Level 2	Level 3	Total
	(In Millions)			
Investments in the qualified pension plan:				
Pooled separate accounts:				
Common stocks:				
U.S. large capitalization	$ -	$ 181	$ -	$ 181
International large capitalization	-	96	-	96
U.S. small capitalization value	-	76	-	76
International emerging markets	-	49	-	49
Real estate	-	24	-	24
Bonds:				
Diversified fixed-income	-	98	-	98
Total pooled separate accounts	-	524	-	524
Nonpooled separate accounts:				
Common stocks:				
U.S. large capitalization	134	-	-	134
U.S. mid capitalization	85	-	-	85
U.S. small capitalization	61	-	-	61
International large capitalization value	6	-	-	6
International small/mid capitalization	2	-	-	2
Corporate and other bonds	-	183	-	183
Long duration bonds	89	-	-	89
Short-term bonds	2	-	-	2
Government securities	-	174	-	174
Mortgage backed securities	-	5	-	5
Registered investment companies:				
U.S. large capitalization	52	-	-	52
Emerging markets	49	-	-	49
Multi-strategy hedge funds	-	-	31	31
Limited partnerships:				
International large capitalization value	-	-	96	96
Multi-strategy hedge funds	-	-	21	21
Private equity/venture capital	-	-	11	11
Asset backed securities	-	8	-	8
Real estate	-	-	32	32
Short-term cash equivalents	2	10	-	12
Cash	2	-	-	2
Total nonpooled separate accounts	484	380	191	1,055
Total general investment account option	-	-	222	222
Total	$ 484	$ 904	$ 413	$ 1,801

	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

The following sets forth a summary of changes in the fair value of the Plan's Level 3 investment assets:

	Limited Partnerships						
	International Large-Cap Value	Multi-Strategy Hedge Fund	Private Equity/ Venture Capital	Multi-Strategy Hedge Fund	Real Estate	General Investment Account Option	Total
	(In Millions)						
Balance, January 1, 2012	$ 68	$ -	$ -	$ -	$ -	$ 253	$ 321
Realized gains	-	-	-	-	-	7	7
Unrealized gains	15	1	-	1	2	-	19
Purchases	13	-	7	-	-	38	58
Sales	-	-	-	-	-	(76)	(76)
Transfers to level 3	-	20	4	30	30	-	84
Balance, December 31, 2012	$ 96	$ 21	$ 11	$ 31	$ 32	$ 222	$ 413

	Limited Partnership		
	International Large-Cap Value	General Investment Account Option	Total
	(In Millions)		
Balance, January 1, 2011	$ 80	$ 242	$ 322
Realized gains	-	13	13
Unrealized losses	(12)	-	(12)
Purchases	-	76	76
Sales	-	(78)	(78)
Balance, December 31, 2011	$ 68	$ 253	$ 321

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. Based on this criteria, there were no significant transfers in or out of Level 1, 2, or 3 for the year ended December 31, 2012.

Postretirement Investments

The fair value of the postretirement benefits investments of $5 million as of December 31, 2012 and 2011 is categorized as Level 1 type investments and is 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 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 (losses) are variances between assumptions used and actual experience. These assumptions include return on assets, demographics and mortality. The unrecognized net actuarial gains (losses) are amortized if they exceed 10% of the projected benefit obligation and are amortized starting in the period after they occur. These are amortized into net periodic benefit cost over the remaining service-years of active employees and over the average remaining lifetime of eligible employees and retirees for other postretirement benefits.

The unrecognized net transition obligation represents the difference between the plan’s funded status and the accrued cost on the Company’s 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 2015 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 Consolidated Statutory Statements of Financial Position:

	December 31,			
	2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Prepaid benefit cost	$ 739	$ 721	$ -	$ -
Intangible assets	2	2	-	-
Nonadmitted asset	(739)	(721)	-	-
Total other assets	$ 2	$ 2	$ -	$ -
Fair value of plan assets, end of year	$ 1,801	$ 1,567	$ 5	$ 5
Less: Projected benefit obligations, end of year	2,355	2,163	363	365
Funded status, projected benefit obligation	(554)	(596)	(358)	(360)
Unrecognized prior service cost	-	-	2	2
Unrecognized net actuarial losses	1,118	1,152	78	84
Unrecognized net transition obligation	2	2	-	4
Less: Assets nonadmitted	739	721	-	-
Accrued benefit cost recognized	(173)	(163)	(278)	(270)
Additional minimum liability	(366)	(418)	-	-
Total other liabilities	$ (539)	$ (581)	$ (278)	$ (270)
Fair value of plan assets, end of year	$ 1,801	$ 1,567	$ 5	$ 5
Less: Accumulated benefit obligations, end of year	2,340	2,148	363	365
Funded status, accumulated benefit obligation	$ (539)	$ (581)	$ (358)	$ (360)

The qualified pension plan was underfunded by $262 million and $319 million as of December 31, 2012 and 2011, respectively. The nonqualified pension plans are not funded and have total projected benefit obligations of $292 million and $277 million as of December 31, 2012 and 2011, respectively.

The change in the net amount recognized is as follows:

	December 31,	
	2012	2011
	Pension Benefits	
	(In Millions)	
Net amount recognized, including nonadmitted asset, beginning of year	$ 558	$ 500
Employer contributions	131	155
Net periodic cost	(123)	(97)
Subtotal net amount recognized, including nonadmitted asset	566	558
Nonadmitted asset	(739)	(721)
Accrued benefit cost recognized, end of year	$ (173)	$ (163)

An additional minimum liability is required if the plan's accumulated benefit obligation exceeds plan assets and the net amount recognized. Increases and decreases in the additional minimum liability, less allowable intangible assets, are included in change in minimum liability included in surplus.

The following presents the additional minimum liability and shows the changes from prior year. 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, 2012	December 31, 2011
	Pension Benefits	
	(In Millions)	
Change in additional minimum liability:		
Accumulated benefit obligation, end of year	$ (2,340)	$ (2,148)
Fair value of plan assets, end of year	1,801	1,567
Funded status, accumulated benefit obligation	(539)	(581)
Less: Accrued benefit cost recognized, end of year	(173)	(163)
Additional minimum liability	$ (366)	$ (418)

The Company intends to fund $154 million to meet its expected obligations under its qualified and nonqualified pension plans and other postretirement benefit plans in 2013.

g. Net periodic cost

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

	Years Ended December 31, 2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
	(In Millions)			
Service cost	$ 59	$ 42	$ 4	$ 4
Interest cost	92	95	14	16
Expected return on plan assets	(122)	(105)	-	-
Amortization of unrecognized transition obligation	1	1	4	5
Amortization of unrecognized net actuarial and other losses	93	64	2	2
Total net periodic cost	$ 123	$ 97	$ 24	$ 27

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

	Pension Benefits	Other Postretirement Benefits	Medicare Prescription Drug Government Subsidy
	(In Millions)		
2013	$ 80	$ 22	$ (3)
2014	84	23	(3)
2015	89	23	(3)
2016	94	24	(3)
2017	98	25	(4)
2018-2022	566	134	(22)

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

	Years Ended December 31, 2012	2011
	(In Millions)	
Pension	$ 123	$ 97
Health	61	59
Thrift	28	28
Postretirement	24	27
Life	3	3
Disability	3	2
Postemployment	1	1
Other benefits	7	7
Total	$ 250	$ 224

h. Assumptions

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

	December 31,			
	2012	2011	2012	2011
	Pension Benefits		Other Postretirement Benefits	
Weighted-average assumptions used to determine:				
Benefit obligations:				
Discount rate	4.00 %	4.35 %	3.80 %	4.25 %
Expected rate of compensation increase	4.00 %	4.00 %	4.00 %	4.00 %
Net periodic benefit cost:				
Discount rate	4.35 %	5.50 %	4.25 %	5.30 %
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 2020 and 2018 for 2012 and 2011, respectively.	-	-	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 2012:

	One Percentage Point Increase	One Percentage Point Decrease
	(In Millions)	
Effect on total service and interest cost	$ 2	$ (2)
Effect on other postretirement benefit obligations	36	(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:

	For the Years Ended December 31, 2012	For the Years Ended December 31, 2011
Weighted average grant date fair value (whole $):		
PSAR granted during the year	$ 64.27	$ 62.77
PRS granted during the year	64.34	62.83
Intrinsic value (in thousands):		
PSAR options exercised	55,146	27,831
PRS liabilities paid	15,461	3,181
Fair value of shares vested during the year	76,536	51,620

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

	PSARs			PRS		
		Weighted Average			Weighted Average	
	Number of Share Units (In Thousands)	Price (Whole $)	Remaining Contract Terms (In Years)	Number of Share Units (In Thousands)	Price (Whole $)	Remaining Contract Terms (In Years)
Outstanding as of January 1, 2011	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
Granted	887	64.27		312	64.34	
Exercised	(1,562)	36.70		(241)	38.25	
Forfeited	(28)	62.03		(34)	55.19	
Outstanding as of December 31, 2012	2,652	58.56	1.6	1,360	51.67	3.2
Exercisable as of December 31, 2012	65	$ 42.07	-	-	$ -	-

The PSARs compensation expense was $44 million and $29 million for the years ended December 31, 2012 and 2011, respectively. The PSARs accrued compensation liability was $38 million and $50 million as of December 31, 2012 and 2011, respectively. Unrecognized compensation expense related to nonvested PSARs awards was $15 million and $8 million as of December 31, 2012 and 2011, 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. The nonadmitted deferred tax benefit for the year ended December 31, 2012 as $1 million. There was no nonadmitted deferred tax benefit for the year ended December 31, 2011.

The PRS compensation expense was $33 million and $23 million for the years ended December 31, 2012 and 2011. The PRS accrued compensation liability was $63 million and $45 million as of December 31, 2012 and 2011, respectively. Unrecognized compensation expense related to nonvested PRS awards as of December 31, 2012 and 2011 was $44 million and $39 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, 2012 and 2011 was $4 million and $3 million, respectively.

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, 2012		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	$ 2,726	$ 132	$ 2,858
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	2,726	132	2,858
DTAs nonadmitted	(92)	-	(92)
Subtotal net admitted DTA	2,634	132	2,766
Total gross DTLs	(1,433)	(675)	(2,108)
Net admitted DTA(L)	$ 1,201	$ (543)	$ 658

	December 31, 2011		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	$ 5,185	$ 254	$ 5,439
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	5,185	254	5,439
DTAs nonadmitted	(81)	(1)	(82)
Subtotal net admitted DTA	5,104	253	5,357
Total gross DTLs	(3,850)	(388)	(4,238)
Net admitted DTA(L)	$ 1,254	$ (135)	$ 1,119

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Gross DTAs	$ (2,459)	$ (122)	$ (2,581)
Statutory valuation allowance adjustment	-	-	-
Adjusted gross DTAs	(2,459)	(122)	(2,581)
DTAs nonadmitted	(11)	1	(10)
Subtotal net admitted DTA	(2,470)	(121)	(2,591)
Total gross DTLs	2,417	(287)	2,130
Net admitted DTA(L)	$ (53)	$ (408)	$ (461)

Pursuant to issued guidance, the Company is admitting DTAs for the current reporting period in accordance with the NAIC approved revisions effective for 2011 and 2012. The amount of adjusted gross DTA admitted under each component and the resulting increased amount by tax character are as follows:

	December 31, 2012		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 3 years:			
Federal income taxes that can be recovered	$ 24	$ -	$ 24
Remaining adjusted gross DTAs expected to be realized within 3 years (lesser of 1 or 2):			
1. Adjusted gross DTA to be realized	1,046	82	1,128
2. Adjusted gross DTA allowed per limitation threshold	1,870	82	1,952
Lesser of lines 1 or 2	1,046	82	1,128
Total gross DTLs allowed per limitation threshold	1,564	50	1,614
Total admitted DTA realized within 3 years	$ 2,634	$ 132	$ 2,766

	December 31, 2011		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 3 years:			
Federal income taxes that can be recovered	$ 89	$ -	$ 89
Remaining adjusted gross DTAs expected to be realized within 3 years			
1. Adjusted gross DTA to be realized	953	205	1,158
2. Adjusted gross DTA allowed per limitation threshold	1,392	286	1,678
Lesser of lines 1 or 2	953	205	1,158
Total gross DTLs allowed per limitation threshold	4,062	48	4,110
Total admitted DTA realized within 3 years	$ 5,104	$ 253	$ 5,357

	Change		
	Ordinary	Capital	Total
	(In Millions)		
Admitted DTA 3 years:			
Federal income taxes that can be recovered	$ (65)	$ -	$ (65)
Remaining adjusted gross DTAs expected to be realized within 3 years			
1. Adjusted gross DTA to be realized	93	(123)	(30)
2. Adjusted gross DTA allowed per limitation threshold	478	(204)	274
Lesser of lines 1 or 2	93	(123)	(30)
Total gross DTLs allowed per limitation threshold	(2,498)	2	(2,496)
Total admitted DTA realized within 3 years	$ (2,470)	$ (121)	$ (2,591)

All of the Companies included in the filing of the Consolidated Statutory footnote have met the required threshold to utilize the 3 year reversal period, and 15% of surplus limitation.

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, 2012		
	Ordinary	Capital	Total
	(Percent)		
Impact of tax planning strategies:			
Adjusted gross DTAs (% of total adjusted gross DTAs)	- %	- %	- %
Net admitted adjusted gross DTAs (% of total net admitted adjusted gross DTAs)	1 %	- %	1 %

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

	Change		
	Ordinary	Capital	Total
	(Percent)		
Impact of tax planning strategies:			
Adjusted gross DTAs (% of total adjusted gross DTAs)	- %	- %	- %
Net admitted adjusted gross DTAs (% of total net admitted adjusted gross DTAs)	(6) %	- %	(6) %

There are no reinsurance strategies included in the Company's tax-planning.

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

	Years Ended December 31, 2012	2011
	(In Millions)	
Federal income tax benefit on operating earnings	$ (75)	$ (307)
Foreign income tax expense on operating earnings	16	17
Total federal and foreign income tax benefit on operating earnings	(59)	(290)
Federal income tax expense (benefit) on net realized capital gains (losses)	(282)	180
Total federal and foreign income tax benefit	$ (341)	$ (110)

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

	December 31, 2012	December 31, 2011	Change
	(In Millions)		
DTAs:			
Ordinary			
Reserve items	$ 862	$ 885	$ (23)
Policy acquisition costs	574	551	23
Nonadmitted assets	450	505	(55)
Pension and compensation related items	332	343	(11)
Policyholders' dividends	312	341	(29)
Tax credits	105	78	27
Expense items	55	32	23
Unrealized investment losses	29	2,301	(2,272)
Investment items	-	127	(127)
Other	7	22	(15)
Total ordinary DTAs	2,726	5,185	(2,459)
Nonadmitted DTAs	(92)	(81)	(11)
Admitted ordinary DTAs	2,634	5,104	(2,470)
Capital			
Unrealized investment losses	132	127	5
Investment items	-	127	(127)
Total capital DTAs	132	254	(122)
Nonadmitted DTAs	-	(1)	1
Admitted capital DTAs	132	253	(121)
Admitted DTAs	2,766	5,357	(2,591)
DTLs:			
Ordinary			
Unrealized investment gains	700	3,168	(2,468)
Pension items	258	252	6
Deferred and uncollected premium	242	229	13
Reserve for audits and settlements	4	-	4
Other	229	201	28
Total ordinary DTLs	1,433	3,850	(2,417)
Capital			
Unrealized investment gains	466	388	78
Investment items	209	-	209
Total capital DTLs	675	388	287
Total DTLs	2,108	4,238	(2,130)
Net admitted DTA	$ 658	$ 1,119	$ (461)

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

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Net DTA(L)	$ (451)	$ (423)
Less: Items not recorded in the change in net deferred income taxes:		
Tax-effect of unrealized gains/(losses)	(123)	361
Change in net deferred income taxes	$ (574)	$ (62)

As of December 31, 2012, the Company had no net operating or capital loss carryforwards to include in deferred income taxes. The Company has total tax credit carryforwards of $105 million in deferred taxes.

The components of federal and foreign income tax on operating items is recorded on the Consolidated Statutory Statements of Income and 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, 2012	Years Ended December 31, 2011
	(In Millions)	
Provision computed at statutory rate	$ 322	$ 363
Nonadmitted assets	55	(43)
Foreign governmental income taxes	12	12
Expense items	3	10
Investment items	(96)	(342)
Tax credits	(43)	(40)
Change in reserve valuation basis	(9)	(6)
Other	(11)	(2)
Total statutory income tax expense (benefit)	$ 233	$ (48)
Federal and foreign income tax benefit	$ (341)	$ (110)
Change in net deferred income taxes	574	62
Total statutory income tax expense (benefit)	$ 233	$ (48)

During the year ended December 31, 2012, the Company paid federal income taxes in the amount of $39 million, and received refunds in the amount of $64 million and $299 million during the years ended December 31, 2011, and 2010, respectively. As a result of the aforementioned refunds, there are no federal income taxes available for recovery as of the year ended December 31, 2012.

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 following is a reconciliation of the beginning and ending liability for unrecognized tax benefits (in millions):

Balance, January 1, 2012	$	340
Gross change related to positions taken in prior years		(96)
Gross change related to positions taken in current year		(9)
Gross change related to settlements		-
Gross change related to lapse of statutes of limitations		-
Balance, December 31, 2012	$	235

Included in the liability for unrecognized tax benefits as of December 31, 2012, are $222 million of tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. The liability for the unrecognized tax benefit balance as of December 31, 2012, includes $10 million of unrecognized tax benefits net of indirect tax benefits of $3 million that, if recognized, would impact the Company's effective tax rate.

The Company recognizes accrued interest and penalties related to the liability for unrecognized tax benefits as a component of the provision for income taxes. The amount of net interest recognized in the Company's financial statements as of December 31, 2012 and 2011 was $20 million and $22 million, respectively. The Company has accrued no penalties related to the liability for unrecognized tax benefits.

The Internal Revenue Service (IRS) has completed its examination of the years 2007 and prior. The IRS is currently auditing the years 2008 through 2010. 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 through 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 Consolidated Statutory Statements of Income, with a net increase of $58 million to Surplus. The Company recorded additional federal income tax impacts as of December 31, 2012, for tax years ended after 1997 by recording a net federal income tax benefit of $97 million in the Consolidated Statutory Statements of Income, with a net increase of $16 million to Surplus. As of December 31, 2012 and 2011 the Company had no protective deposits recognized as admitted assets.

In July 2012, the Internal Revenue Service issued an industry directive that addressed the proper timing of partial worthlessness tax deductions claimed by insurance companies for certain securities, including regular interests in mortgage backed securities. In the fourth quarter of 2012, the Company recorded a net federal income tax benefit of $421 million in net realized capital gains, with a net decrease of $416 million in deferred tax assets recorded through surplus.

During 2012 the Company refined its method of allocating taxes to the AVR to better match its deferred tax assets. The impact of this refinement is included in the change in AVR, decreasing surplus by $57 million.

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. The American Taxpayer Relief Act of 2012, signed into law on January 2, 2013, extended the 50% first year bonus depreciation to qualified property acquired and placed in service before January 1, 2014. These new tax provisions will not have a material effect on the Company's financial position or liquidity.

16. Transferable state tax credits

All transferable state tax credits have been used as of December 31, 2012.

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.

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 contract as interest rates approach minimum guarantees, leading to an increased liability to the Company.

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

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.

Since late 2006, 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. As measured by Case-Shiller's home price index, house prices were flat to negative from mid-2011 to mid-2012; the index has turned positive more recently. Liquidation rates and foreclosure resolutions remain low but are above their post-crisis bottoms. Liquidity for securities was weak for most of 2011 but 2012 has seen increased liquidity and trading activity as market participants focus on relative value, improving fundamentals and the scarcity of RMBS due to a lack of new issuance. This has led to the highest post-crisis prices for all RMBS asset classes.

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 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. It can also be affected by the market liquidity, a lack of which can make it difficult to obtain accurate market prices for RMBS and other investments, including CMBS and leveraged loans. Further deterioration in economic fundamentals could affect management's judgment 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.

As of December 31, 2012, the securities with exposure to entities domiciled within Greece, Italy, Ireland, Portugal and Spain collectively accounted for less than 1% of invested assets held in the Company's general account. These holdings are highly diversified and over 84% are comprised of investment grade-rated (NAIC) debt securities issued predominantly by domestic utilities and corporations with large global operations. Within these countries, the Company did not have any sovereign debt exposure and it did not hold any domestic bank-issued securities.

The Company has investments in European leveraged loans that have higher interest rates than investment grade debt instruments, reflecting additional risk of default. With a further slight improvement in the fourth quarter of 2012, the average secondary price of leveraged loans in Europe was up around 5% over the year as a whole, primarily driven by underlying corporate performance. Underlying concerns over the macroeconomic outlook and debt burden of certain parts of the Eurozone remain significant, but the Company's direct exposure on loans to companies in these countries is limited. While progress has been made, the extent of refinancing required in the European loan market over the next three years remains relatively significant and uncertainty over the sources of this refinancing may lead to an increase in default rates going forward.

Current economic leading indicators remain sluggish and the uncertainty of the U.S. debt ceiling continues to be a factor for the Company's commercial mortgage loan portfolio. The impact of this uncertainty on job growth and business sentiment indicates a slow, uneven economic growth outlook for 2013. Notwithstanding slowing GDP growth, commercial real estate is benefiting from slowly improving leasing fundamentals and limited new supply. The pace of recovery in office, industrial and retail sectors will slow in reaction to slower job growth while apartment and hotel market fundamentals appear sound. Investor appetite for steady cash flow has kept core pricing competitive and broadened the price recovery beyond coastal markets. Real estate markets are not uniform and there are clear leaders and laggards emerging. The Company continues to monitor global, national and local market fundamentals in both its new origination and the portfolio management functions.

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.

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 $79 million and $81 million for the years ended December 31, 2012 and 2011, respectively. Net operating leases are net of $17 million and $22 million of sublease receipts for the years ended December 31, 2012 and 2011, respectively.

Future minimum commitments for all net operating lease contractual obligations as of December 31, 2012 were as follows:

	Gross Operating Leases	Affiliated Subleases	Net Operating Leases
	(In Millions)		
2013	$ 91	$ 15	$ 76
2014	80	9	71
2015	37	9	28
2016	32	9	23
2017	22	6	16
Thereafter	49	21	28
Total	$ 311	$ 69	$ 242

As of December 31, 2012, nonaffiliated subleases were less than $1 million.

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. Although the Company is not aware of any actions or allegations that reasonably should give rise to a material adverse impact to the Company's financial position or liquidity, the outcome of litigation cannot be foreseen with certainty. It is the opinion of management that the ultimate resolution of these matters will not materially impact the Company's financial position or liquidity. However, the outcome of a particular proceeding may be material to the Company's 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.

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, Oppenheimer Acquisition Corp., 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. In June 2012, the U.S. District Court for the Southern District of New York granted defendants' motion to dismiss the appeals. The settlement, which has now been affirmed, did 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 U.S. 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 vigorously defend itself. 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 not paying dividends on those policies. The parties are engaged in active discovery. 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 January 2012, the court granted a stipulated scheduling and discovery order in these actions. In September 2012, defendants opposed plaintiffs' July 2012 motion for class certification and filed motions for partial summary judgment in several of the Rochester Suits. 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) policy issued by MassMutual. The plaintiff alleges, among other things, fraud, breach of contract and breach of fiduciary duty claims against MassMutual, and it seeks to recover losses arising from investments pursuant to the BOLI policy. MassMutual believes it has substantial defenses and will continue to vigorously defend itself in this action. 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 July 2012, Karen Bacchi filed a putative class action complaint against the Company in federal court alleging that MassMutual breached its contracts by allegedly failing to distribute surplus in excess of the statutorily prescribed limit. The matter is in the initial pleading stages. MassMutual believes that it has substantial defenses and will vigorously defend itself. 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 July 2012, members of the Keros family filed a putative class action complaint against the Company and its directors in federal court alleging breach of fiduciary duty related to an alleged violation of Massachusetts law concerning domestic mutual insurance company voting practices. The Company and directors' motions to dismiss are pending. MassMutual believes that it has substantial defenses and will vigorously defend itself. 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 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, 2012 and 2011, 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, 2012 and 2011, 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, 2012 and 2011, the Company had approximately $82 million and $94 million, respectively, of outstanding letter of credit arrangements. As of December 31, 2012 and 2011, the Company did not have a funding request attributable to these letter of credit arrangements.

As of December 31, 2012 and 2011, MassMutual approved financing of $2,275 million 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, 2012 and 2011 were $1,665 million and $1,357 million, respectively, with interest of $35 million and $38 million for the years ended December 31, 2012 and 2011, respectively. The unfunded amount of the facility, totaling $610 million as of December 31, 2012, is included in private placements in the table below. The interest of this facility adjusts monthly based on the 30-day LIBOR.

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, 2012, the Company had the following commitments:

	2013	2014	2015	2016	There-after	Total
	(In Millions)					
Private placements	$ 1,542	$ 498	$ 616	$ 4	$ 24	$ 2,684
Mortgage loans	408	13	89	150	-	660
Partnerships and LLCs	394	774	229	221	1,098	2,716
LIHTC investments (including equity contributions)	2	43	50	14	91	200
Total	$ 2,346	$ 1,328	$ 984	$ 389	$ 1,213	$ 6,260

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, 2012 and 2011, the Company had no outstanding obligations attributable to these commitments.

Certain commitments and guarantees of the Company provide for the maintenance of subsidiary regulatory capital and surplus levels and liquidity sufficient to meet certain obligations. These commitments and guarantees are not limited. As of December 31, 2012 and 2011, 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 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, 2012 and 2011, 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, 2012.

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 (CREA and Babson Capital), if the subsidiary is unable to pay.	-	The liabilities for these plans of $137 million have been recorded on the subsidiaries' books and represent the Company's maximum obligation.
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, 2007 and 2012 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, 2012 are illustrated below:

	General Account	Separate Account w/ Guarantees	Separate Account Nonguaranteed	Amount	% of Total
	($ In Millions)				
Subject to discretionary withdrawal:					
With fair value adjustment	$ 6,954	$ -	$ -	$ 6,954	9 %
At book value less current surrender charge of 5% or more	1,908	-	-	1,908	3
At fair value	-	12,105	37,093	49,198	64
Subtotal	8,862	12,105	37,093	58,060	76
Subject to discretionary withdrawal:					
At book value without fair value adjustment	7,086	479	-	7,565	10
Not subject to discretionary withdrawal	10,607	250	-	10,857	14
Total	$ 26,555	$ 12,834	$ 37,093	$ 76,482	100 %

The following is a summary of total annuity actuarial reserves and liabilities for deposit-type contracts as of December 31, 2012 (in millions):

Consolidated Statutory Statements of Financial Position:	
Policyholders' reserves - group annuities	$ 10,165
Policyholders' reserves - individual annuities	11,002
Liabilities for deposit-type contracts	5,388
Subtotal	26,555
Separate Account Annual Statement:	
Annuities	49,677
Other annuity contract deposit-funds and guaranteed interest contracts	250
Subtotal	49,927
Total	$ 76,482

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 fund a long-term interest guarantee in excess of a year that does not exceed 4%. The Company has nonguaranteed separate accounts which are variable accounts where the benefit is determined by the performance and/or market value of the investments held in the separate account with incidental risk, notional expense and minimum death benefit guarantees.

Information regarding the separate accounts of the Company as of and for the year ended December 31, 2012 is as follows:

	Guaranteed			
	Indexed	Nonindexed Less Than/ Equal to 4%	Non Guaranteed	Total
	(In Millions)			
Net premium, considerations or deposits for the year ended December 31, 2012	$ -	$ -	$ 11,774	$ 11,774
Reserves at December 31, 2012:				
For accounts with assets at:				
Fair value	$ 250	$ 12,584	$ 43,096	$ 55,930
Amortized cost/book value	-	1,013	-	1,013
Subtotal	250	13,597	43,096	56,943
Nonpolicy liabilities	-	4	1,168	1,172
Total	$ 250	$ 13,601	$ 44,264	$ 58,115
Reserves by withdrawal characteristics:				
Subject to discretionary withdrawal:				
At fair value	$ -	$ 12,105	$ 43,096	$ 55,201
At book value without market value adjustment and current surrender charge of less than 5%	-	1,492	-	1,492
Subtotal	-	13,597	43,096	56,693
Not subject to discretionary withdrawal	250	-	-	250
Nonpolicy liabilities	-	4	1,168	1,172
Total	$ 250	$ 13,601	$ 44,264	$ 58,115

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

The following is a summary 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 Consolidated Statutory Statements of Income:

	Years Ended December 31,	
	2012	2011
	(In Millions)	
From the Separate Account Annual Statement:		
Transfers to separate accounts	$ 11,865	$ 6,178
Transfers from separate accounts	(6,495)	(5,795)
Subtotal	5,370	383
Reconciling adjustments:		
Net deposits on deposit-type liabilities	1	377
Net transfers to (from) separate accounts	$ 5,371	$ 760

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

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

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

	Years Ended December 31, 2012	Years Ended December 31, 2011
	(In Millions)	
Bank loan rollovers	$ 2,536	$ 1,869
Bond conversions and refinancing	585	768
Mortgages converted to other invested assets	56	198
Other invested assets stock distributions	25	4
Interest capitalization for long-term debt	3	4
Net investment income payment-in-kind bonds	3	2
Stock conversions	1	107
Dividend reinvestment	-	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 Consolidated Statutory Statements of Cash Flows.

20. *Subsequent events*

MassMutual has evaluated subsequent events through February 22, 2013, the date the financial statements were available to be issued.

On January 1, 2013, MassMutual completed its acquisition of The Hartford's Retirement Plans business. The transaction was primarily structured as a reinsurance agreement, under which MassMutual paid $355 million as a ceding commission.

Under the reinsurance agreement, which is structured on an indemnity reinsurance basis, MassMutual will assume 100% of the liabilities and obligations for the insurance contracts relating to The Hartford's Retirement Plans business. In addition, MassMutual will reinsure contracts written on The Hartford's policy form by MassMutual's Retirement Services Division during a post-closing transition period which is expected to be 12 months. The obligations include two parts to the reinsurance agreement. First, a coinsurance agreement related to the GIA contracts under which the contract liabilities and the assets to support those liabilities were transferred to, and held by MassMutual. The assets and associated reserves and liabilities will be reported in the financial statements of MassMutual. Second, a modified coinsurance agreement related to the separate investment account (SIA) contracts. The individual investments and reserves were not transferred to or held by MassMutual and therefore the assets and liabilities will not be reported in the financial statements of MassMutual. However, MassMutual will recognize a receivable or payable representing its rights and obligations under the modified coinsurance agreement.

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