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MASSMUTUAL PARTICIPATION INVESTORS

Form N-CSR

March 06, 2007

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM N-CSR

CERTIFIED SHAREHOLDER REPORT OF REGISTERED MANAGEMENT
INVESTMENT COMPANIES

Investment Company Act file number 811-5531

MassMutual Participation Investors

(Exact name of registrant as specified in charter)

1500 Main Street, Suite 600, P.O. Box 15189, Springfield, MA 01115-5189

(Address of principal executive offices) (Zip code)

Rodney J. Dillman, Vice President and Secretary
1500 Main Street, Suite 2800, P.O. Box 15189, Springfield, MA 01115-5189

(Name and address of agent for service)

Registrant's telephone number, including area code: 413-226-1000

Date of fiscal year end: 12/31

Date of reporting period: 12/31/06

Form N-CSR is to be used by management investment companies to file reports with the Commission not later than 10 days after the transmission to stockholders of any report that is required to be transmitted to stockholders under Rule 30e-1 under the Investment Company Act of 1940 (17 CFR 270.30e-1). The Commission may use the information provided on Form N-CSR in its regulatory, disclosure review, inspection and policymaking roles.

A registrant is required to disclose the information specified by Form N-CSR, and the Commission will make this information public. A registrant is not required to respond to the collection of information contained in Form N-CSR unless the Form displays a currently valid Office of Management and Budget ("OMB") control number. Please direct comments concerning the accuracy of the information collection burden estimate and any suggestions for reducing the burden to Secretary, Securities and Exchange Commission, 450 Fifth Street, NW, Washington, DC 20549-0609. The OMB has reviewed this collection of information under the clearance requirements of 44 U.S.C. ss. 3507.

ITEM 1. REPORT TO STOCKHOLDERS.

Attached hereto is the annual shareholder report transmitted to shareholders pursuant to Rule 30e-1 of the Investment Company Act of 1940, as amended.

[PHOTO]

[LOGO] MASSMUTUAL PARTICIPATION INVESTORS
2006 ANNUAL REPORT

MassMutual Participation Investors

MASSMUTUAL
PARTICIPATION INVESTORS
c/o Babson Capital Management LLC
1500 Main Street, Suite 600
Springfield, Massachusetts 01115
(413) 226-1516
<http://www.babsoncapital.com/mpv>

ADVISER
Babson Capital Management LLC
1500 Main Street
Springfield, Massachusetts 01115

INDEPENDENT REGISTERED
PUBLIC ACCOUNTING FIRM
KPMG LLP
Boston, Massachusetts 02110

COUNSEL TO THE TRUST
Ropes & Gray LLP
Boston, Massachusetts 02110

CUSTODIAN

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Citibank, N.A.
New York, New York 10043

TRANSFER AGENT & REGISTRAR
Shareholder Financial Services, Inc.
P.O. Box 173673
Denver, Colorado 80217-3673
1-800-647-7374

MPV
LISTED
NYSE

[BACKGROUND PHOTO]

PROXY VOTING POLICIES & PROCEDURES;
PROXY VOTING RECORD

The Trustees of MassMutual Participation Investors have delegated proxy voting responsibilities relating to the voting of securities held by the Trust to Babson Capital Management LLC. A description of Babson Capital's proxy voting policies and procedures is available (1) without charge, upon request, by calling, toll-free 866-399-1516; (2) on MassMutual Participation Investors' website: <http://www.babsoncapital.com/mpv>; and (3) on the U.S. Securities and Exchange Commission ("SEC") website at <http://www.sec.gov>. Information regarding how the Trust voted proxies relating to portfolio securities during the most recent 12-month period ended June 30 is available (1) on MassMutual Participation Investors' website: <http://www.babsoncapital.com/mpv>; and (2) on the SEC's website at <http://www.sec.gov>.

FORM N-Q

MassMutual Participation Investors files its complete schedule of portfolio holdings with the SEC for the first and third quarters of each fiscal year on Form N-Q. This information is available (i) on the SEC's website at <http://www.sec.gov>; and (ii) at the SEC's Public Reference Room in Washington, DC (which information on their operation may be obtained by calling 1-800-SEC-0330). A complete schedule of portfolio holdings as of each quarter-end is available upon request by calling, toll-free, 866-399-1516. Or visiting www.babsoncapital.com/mpv.

MASSMUTUAL PARTICIPATION INVESTORS

MassMutual Participation Investors is a closed-end investment company, first offered to the public in 1988, whose shares are traded on the New York Stock Exchange.

MassMutual Participation Investors

INVESTMENT OBJECTIVE & POLICY

MassMutual Participation Investors (the "Trust") is a closed-end investment company, first offered to the public in 1988, whose shares are traded on the New York Stock Exchange under the trading symbol "MPV". The Trust's share price can be found in the financial section of most newspapers as "MassPrt" or "MassMuPrt" under either the New York Stock Exchange listings or Closed-End Fund listings.

The Trust's investment objective is to maximize total return by providing a high level of current income, the potential for growth of income, and capital appreciation. The Trust's principal investments are privately placed, below-investment grade, long-term corporate debt obligations purchased directly from their issuers, which tend to be smaller companies. At least half of these

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investments normally include equity features such as warrants, conversion rights, or other equity features that provide the Trust with the opportunity to realize capital gains. The Trust will also invest in publicly traded debt securities (including high yield securities), again with an emphasis on those with equity features, and in convertible preferred stocks and, subject to certain limitations, readily marketable equity securities. In addition, the Trust may temporarily invest in high quality, readily marketable securities.

Babson Capital Management LLC ("Babson Capital") manages the Trust on a total return basis. The Trust distributes substantially all of its net income to shareholders each year. Accordingly, the Trust pays dividends to shareholders quarterly in January, May, August, and November. All registered shareholders are automatically enrolled in the Dividend Reinvestment and Cash Purchase Plan unless cash distributions are requested.

In this report you will find a complete listing of the Trust's holdings. We encourage you to read this section carefully for a better understanding of the Trust. We cordially invite all shareholders to attend the Trust's Annual Meeting of Shareholders, which will be held on April 27, 2007 at 1:00 P.M. in Springfield, Massachusetts.

[BACKGROUND PHOTO]

PORTFOLIO COMPOSITION AS OF 12/31/06*

[PIE CHART APPEARS HERE]

Private High
Yield Debt 47.2%

Private/Restricted
Equity 16.0%

Cash & Short Term
Investments 6.6%

Public High
Yield Debt 23.9%

Public Equity 0.5%

Private Investment
Grade Debt 5.8%

*BASED ON VALUE OF TOTAL INVESTMENTS (INCLUDING CASH)

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MassMutual Participation Investors

[BACKGROUND PHOTO]

TO OUR SHAREHOLDERS

I am pleased to share with you the Trust's Annual Report for the year ended December 31, 2006.

THE TRUST'S 2006 PORTFOLIO PERFORMANCE

The Trust's net total portfolio rate of return for 2006 was 18.64%, as measured

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by the change in net asset value, assuming the reinvestment of all dividends and distributions. The Trust's total net assets were \$126,515,013, or \$12.90 per share, as of December 31, 2006 compared to \$119,018,966, or \$12.21 per share, as of December 31, 2005. The Trust paid a quarterly dividend of 24 cents per share each quarter in 2006, with the fourth quarter dividend paid in January 2007. In addition, the Trust declared a special year-end dividend of 23 cents per share, paid in January 2007 to shareholders of record on December 29, 2006, bringing total dividends for the year to \$1.19. All in all, we are very pleased with the Trust's 2006 portfolio performance.

[PHOTO OF OFFICERS]

LEFT TO RIGHT:

Clifford M. Noreen
PRESIDENT

Roger W. Crandall
CHAIRMAN

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MassMutual Participation Investors

TOTAL ANNUAL PORTFOLIO RETURN (AS OF 12/31 EACH YEAR) *

[BAR CHART APPEARS HERE]

24.10	10.91	4.77	8.11	3.41	5.70	23.72	25.14	22.51	18.64	MASSMUTUAL PARTICIPATION INVESTORS (THE "TRUST")
31.04	33.77	25.89	-16.26	-11.67	-23.51	28.34	10.20	3.98	14.79	STANDARD & POOR 500 INDEX
8.36	8.29	0.16	9.46	9.77	10.14	6.91	4.08	1.42	4.49	LEHMAN BROTHERS INTERMEDIATE U.S. CREDIT FUND (FORMERLY LEHMAN BROTHERS CORPORATE CREDIT FUND)
1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	

*DATA FOR MASSMUTUAL PARTICIPATION INVESTORS (THE "TRUST") REPRESENTS PORTFOLIO RETURNS BASED ON CHANGE IN THE TRUST'S NET ASSET VALUE ASSUMING THE REINVESTMENT OF ALL DIVIDENDS AND DISTRIBUTIONS WHICH DIFFERS FROM THE TOTAL INVESTMENT RETURN BASED ON MARKET VALUE DUE TO THE DIFFERENCE BETWEEN THE TRUST'S NET ASSET VALUE AND THE MARKET VALUE OF ITS SHARES OUTSTANDING (SEE PAGE 12 FOR TOTAL INVESTMENT RETURN BASED ON MARKET VALUE); PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

[PHOTO OF OFFICERS]

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LEFT TO RIGHT:

James M. Roy
VICE PRESIDENT &
CHIEF FINANCIAL OFFICER

Rodney J. Dillman
VICE PRESIDENT, SECRETARY &
CHIEF LEGAL OFFICER

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MassMutual Participation Investors

The table shown below lists the average annual returns of the Trust's portfolio, based on the change in net assets, assuming the reinvestment of all dividends and distributions, compared to the average annual returns of selected equity and fixed income market indices for the 1, 3, 5 and 10 years ended December 31, 2006.

The U.S. economy and investment markets started the year slowly amid lukewarm expectations due to concerns over inflation and the housing market, yet 2006 concluded with some very strong performance, especially in the equity markets. A key date was June 29th, when the Federal Reserve Board completed its fourth and final quarter-point interest rate increase for the year (and 17th since mid-2004).

	THE TRUST	LEHMAN BROTHERS U.S. CORPORATE HIGH YIELD INDEX	LEHMAN BROTHERS INTERMEDIATE U.S. CREDIT INDEX*	STANDARD & POOR'S INDUSTRIALS COMPOSITE**	RUSSELL 2000 INDEX
1 Year	18.64%	11.85%	4.49%	14.79%	18.37%
3 Year	22.07%	8.49%	3.32%	9.57%	13.56%
5 Year	18.92%	10.18%	5.37%	5.25%	11.39%
10 Year	14.39%	6.59%	6.25%	7.72%	9.44%

PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

*FORMERLY CALLED THE LEHMAN BROTHERS INTERMEDIATE CORPORATE BOND INDEX.

**FORMERLY CALLED THE STANDARD & POOR'S INDUSTRIAL PRICE INDEX.

LEFT TO RIGHT:

Jill A. Fields
VICE PRESIDENT

Michael P. Hermsen
VICE PRESIDENT

Michael L. Klofas
VICE PRESIDENT

Richard E. Spencer, II
VICE PRESIDENT

[PHOTO OF OFFICERS]

Eventually, commodity prices tumbled, relieving some inflation fears, and economic growth was sustained even as the housing market declined. The market focused on continued solid earnings growth, reasonable inflation and stable interest rates.

Overall, the US economy remains in good shape, but not without question marks. The unemployment rate in 2006 dropped to 4.5 percent from 5 percent the previous year, according to the US Department of Labor. However, core inflation was up to 2.6 percent from 2.2 percent in both 2005 and 2004, and the value of the dollar versus several other currencies dropped in 2006 and is expected to continue to drop in 2007.

Investors continued to witness an ever stronger corporate-credit market in 2006. Corporate credit defaults around the globe continued their downward trend for the fifth consecutive year, as reported by Moody's Investors Service. Moody's global issuerweighted speculative-grade default rate finished the year at 1.7 percent, down from 1.9 percent in 2005 and its lowest level since 1996. Moody's expects the default rate to climb in 2007 but remain well below its historical average of 5 percent.

Overall, the Trust closed 24 new private placement transactions during 2006 - a record number - and added to eight existing private placement investments. Total direct placement volume of \$31,176,825 is also a record for the Trust.

New private placement transactions invested in during the year were: Momentum Holding Co.; NABCO, Inc.; Duncan Systems, Inc.; Flutes Inc.; OakRiver Technology, Inc.; Overton's Holding Company.; Magnatech International Inc.; Wellborn Forest Holding Co.; Bravo Sports Holding Corporation; Davis- Standard LLC; F H S Holdings LLC; Fowler Holding, Inc.; Fuel Systems Holding Corporation; H M Holding Company; K N B Holdings Corporation; Monessen Holding Corporation; Morton Industrial Group, Inc.; Ontario Drive & Gear Ltd.; PAS Holdco LLC; P I I Holding Corporation; Postle Aluminum Company LLC; R A J Manufacturing Holdings LLC; Radiac Abrasives, Inc.; and Stanton Carpet Holding Co.

In addition, the Trust added to existing private placement investments in Augusta Sportswear Holding Co.; A T I Acquisition Company; American Hospice Management Holding LLC; River Ranch Fresh Foods LLC; Consolidated Foundries Holdings; Eagle Pack Pet Foods, Inc.; MicroGroup, Inc.; and Terra Renewal Services, Inc.

THE OUTLOOK FOR 2007

Optimism abounds at the beginning of 2007 based on events in the fourth quarter of 2006, but history reminds us that there are no assurances a year will finish as it starts. Consumer confidence remains strong, and there are indications that the housing market may be through the worst of the downturn that started in 2006. Oil prices fell precipitously at the end of 2006 after significant increases in 2004 and 2005. The Fed indicates that it is on hold with interest rates for the time being, and the corporate debt market appears in good shape.

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However, Treasury bond activity is sending mixed signals, the dollar continues to drop, and instability and conflict in the Middle East could create new problems at any time. As always, no one can predict the future with any degree of certainty.

Regarding mergers and acquisitions (M&A), there are strong indications that the record M&A activity of 2006 around the globe could continue into 2007. Last year was the world's most active M&A environment ever, with \$3.79 trillion in announced deals worldwide, up 38 percent from 2005, according to Thomson Financial. Private equity firms had a larger than ever role last year, taking part in 20 percent of these deals, and it is estimated that these firms still have some \$750 billion in capital ready to go to work. Buyout firms also appear more willing than most corporations to use debt financing, and the current good health of credit markets may allow buyout firms to push the M&A boom further.

Regardless of the economic environment, however, the Trust continues to repeatedly employ the investment philosophy that has served it well since its inception: investing in companies which we believe have a strong business proposition, solid cash flow and experienced, ethical management. This philosophy, combined with Babson Capital's seasoned investment management team and the Trust's financial position, contribute to the Trust being well positioned for future investment opportunities that meet its investment objectives and policies. As always, I would like to thank you for your continued interest in and support of MassMutual Participation Investors.

Sincerely,

/s/ Clifford M. Noreen

Clifford M. Noreen,
PRESIDENT

CAUTIONARY NOTICE: CERTAIN STATEMENTS CONTAINED IN THIS REPORT TO SHAREHOLDERS MAY BE "FORWARD LOOKING" STATEMENTS WITHIN THE MEANING OF THE PRIVATE SECURITIES LITIGATION ACT OF 1995. THESE STATEMENTS ARE NOT GUARANTEES OF FUTURE PERFORMANCE AND ACTUAL RESULTS MAY DIFFER MATERIALLY FROM THOSE FORECASTED.

2006 Dividends	Record Date	Net Investment Income	Short-Term Gains	Tax Effect
Regular	05/02/06	\$0.2400	--	
	07/28/06	0.2400	--	
	10/30/06	0.2400	--	
	12/29/06	0.2400	--	
Special	12/29/06	0.2200	0.0100	
		\$1.1800	\$0.0100	\$1.1900

The following table summarizes the tax effects of the retention of capital gains for 2006:

	Amount Per Share	Form 2439
2006 Gains Retained	0.9928	Line 1a
Long-Term Gains Retained	0.9928	
Taxes Paid	0.3475	Line 2*
Basis Adjustment	0.6453	**

* IF YOU ARE NOT SUBJECT TO FEDERAL CAPITAL GAINS TAX (E.G., CHARITABLE

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ORGANIZATIONS, IRAS AND KEOGH PLANS), YOU MAY BE ABLE TO CLAIM A REFUND BY FILING FORM 990-T.

**FOR FEDERAL INCOME TAX PURPOSES, YOU MAY INCREASE THE ADJUSTED COST BASIS OF YOUR SHARES BY THIS AMOUNT (THE EXCESS OF LINE 1A OVER LINE 2).

Annual Dividend Amount Per Share	Qualified for Dividend Received Deduction***		Qualified Dividends****		Interest U.S. Gov't. Percent
	Percent	Amount Per Share	Percent	Amount Per Share	
\$1.19	14.4857%	0.1713	14.4871%	0.1714	0.0000%

*** NOT AVAILABLE TO INDIVIDUAL SHAREHOLDERS

****QUALIFIED DIVIDENDS ARE REPORTED IN BOX 1B ON IRS FORM 1099-DIV FOR 2006

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MassMutual Participation Investors

FINANCIAL REPORT

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MassMutual Participation Investors

CONSOLIDATED STATEMENT OF ASSETS AND LIABILITIES
DECEMBER 31, 2006

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ASSETS:

Investments

(See Consolidated Schedule of Investments)

Corporate restricted securities at fair value (Cost - \$97,784,691)	\$ 99,625,434
Corporate public securities at market value (Cost - \$34,528,692)	35,218,236
Short-term securities at amortized cost	6,854,407

141,698,077

Cash	2,643,735
Interest and dividends receivable	3,000,826
Receivable for investments sold	256,492

TOTAL ASSETS 147,599,130

LIABILITIES:

Dividend payable	4,608,487
Investment advisory fee payable	284,659
Note payable	12,000,000
Interest payable	88,933
Accrued expenses	142,737
Accrued taxes payable	3,959,301

TOTAL LIABILITIES 21,084,117

TOTAL NET ASSETS \$ 126,515,013
=====

NET ASSETS:

Common shares, par value \$.01 per share; an unlimited number authorized	\$ 98,053
Additional paid-in capital	90,947,008
Retained net realized gain on investments, prior years	25,860,275
Undistributed net investment income	1,028,648
Accumulated net realized gain on investments	6,434,968
Net unrealized appreciation of investments	2,146,061

TOTAL NET ASSETS \$ 126,515,013

COMMON SHARES ISSUED AND OUTSTANDING 9,805,282

NET ASSET VALUE PER SHARE \$ 12.90
=====

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

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MassMutual Participation Investors

CONSOLIDATED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2006

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INVESTMENT INCOME:	
Interest	\$ 11,954,924
Dividends	787,336
Other	205,254

TOTAL INVESTMENT INCOME	12,947,514

EXPENSES:	
Investment advisory fees	1,159,175
Interest	733,292
Trustees' fees and expenses	128,000
Professional fees	83,604
Reports to shareholders	65,000
Custodian fees	27,500
Transfer agent/registrar's expenses	14,400
Other	54,890

TOTAL EXPENSES	2,265,861

Fees paid indirectly (see Footnote 2.F)	(47,009)

NET EXPENSES	2,218,852

INVESTMENT INCOME - NET	10,728,662

NET REALIZED AND UNREALIZED GAIN ON INVESTMENTS:	
Net realized gain on investments before taxes	10,368,862
Income tax expense	(3,635,746)

Net realized gain on investments	6,733,116

Net change in unrealized appreciation of investments before taxes	1,023,375
Net change in deferred income tax expense	(208,811)

Net change in unrealized appreciation of investments	814,564

NET GAIN ON INVESTMENTS	7,547,680

NET INCREASE IN NET ASSETS RESULTING FROM OPERATIONS	\$ 18,276,342
	=====

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

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MassMutual Participation Investors

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED DECEMBER 31, 2006

NET DECREASE IN CASH:	
Cash flows from operating activities:	
Interest, dividends and other received	\$ 11,530,240
Interest expense paid	(733,292)
Operating expenses paid	(1,526,054)

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Income taxes paid	(3,599,198)

NET CASH PROVIDED BY OPERATING ACTIVITIES	5,671,696

Cash flows from investing activities:	
Purchases/Proceeds/Maturities from short-term portfolio securities, net	8,044,134
Purchases of portfolio securities	(48,350,275)
Proceeds from disposition of portfolio securities	43,509,939

NET CASH PROVIDED BY INVESTING ACTIVITIES	3,203,798

NET CASH PROVIDED BY OPERATING AND INVESTING ACTIVITIES	8,875,494
	=====
Cash flows from financing activities:	
Cash dividends paid from net investment income	(9,865,614)
Receipts for shares issued on reinvestment of dividends	867,979

NET CASH USED FOR FINANCING ACTIVITIES	(8,997,635)

NET DECREASE IN CASH	(122,141)
Cash - beginning of year	2,765,876

CASH - END OF YEAR	\$ 2,643,735
	=====
RECONCILIATION OF NET INCREASE IN NET ASSETS TO NET CASH PROVIDED BY OPERATING AND INVESTING ACTIVITIES:	
NET INCREASE IN NET ASSETS RESULTING FROM OPERATIONS	\$ 18,276,342

Increase in investments	(9,278,181)
Increase in interest and dividends receivable	(556,307)
Decrease in receivable for investments sold	228,775
Decrease in other assets	12,780
Increase in investment advisory fee payable	16,866
Decrease in accrued expenses	(70,140)
Increase in accrued taxes payable	245,359

TOTAL ADJUSTMENTS TO NET ASSETS FROM OPERATIONS	(9,400,848)

NET CASH PROVIDED BY OPERATING AND INVESTING ACTIVITIES	\$ 8,875,494
	=====
SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.	

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MassMutual Participation Investors

CONSOLIDATED STATEMENTS OF CHANGES IN NET ASSETS
FOR THE YEARS ENDED DECEMBER 31, 2006 AND 2005

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	2006	2005

INCREASE IN NET ASSETS:		
Operations:		
Investment income - net	\$ 10,728,662	\$ 9,643,282
Net realized gain on investments	6,733,116	8,306,079
Net change in unrealized appreciation (depreciation) of investments	814,564	2,350,516
	-----	-----
Net increase in net assets resulting from operations	18,276,342	20,299,877
	-----	-----
Increase from common shares issued on reinvestment of dividends Common shares issued (2006 - 61,052; 2005 - 71,671)	867,979	927,722
Dividends to shareholders from:		
Net investment income (2006 - \$1.18 per share; 2005 - \$1.01 per share)	(11,551,712)	(9,818,640)
Net realized gains on investments (2006 - \$.01 per share)	(96,562)	--
	-----	-----
TOTAL INCREASE IN NET ASSETS	7,496,047	11,408,959
	-----	-----
NET ASSETS, BEGINNING OF YEAR	119,018,966	107,610,007
	-----	-----
NET ASSETS, END OF YEAR (INCLUDING UNDISTRIBUTED NET INVESTMENT INCOME OF \$1,028,648 AND \$923,836, RESPECTIVELY)	\$126,515,013	\$119,018,966
	=====	=====

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS.

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MassMutual Participation Investors

CONSOLIDATED SELECTED FINANCIAL HIGHLIGHTS

Selected data for each share of beneficial interest outstanding:

For the years ended December 31,	2006	2005	2004	2003	2002
NET ASSET VALUE: BEGINNING OF YEAR	\$ 12.21	\$ 11.13	\$ 9.84	\$ 8.78	\$
Net investment income (a)	1.10	0.99	1.00	0.80	
Net realized and unrealized gain (loss) on investments	0.77	1.09	1.36	1.21	(
Total from investment operations	1.87	2.08	2.36	2.01	
Dividends from net investment income to common shareholders	(1.18)	(1.01)	(1.10)	(0.96)	(

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Dividends from net realized gain on investments to common shareholders	(0.01)	--	--	--	
Increase from dividends reinvested	0.01	0.01	0.03	0.01	
Total dividends	(1.18)	(1.00)	(1.07)	(0.95)	(
NET ASSET VALUE: END OF YEAR	\$ 12.90	\$ 12.21	\$ 11.13	\$ 9.84	\$
PER SHARE MARKET VALUE: END OF YEAR	\$ 14.70	\$ 14.05	\$ 13.31	\$ 11.65	\$
Total investment return					
Market value	16.81%	17.25%	25.77%	35.50%	1
Net asset value(c)	18.64%	22.51%	25.14%	23.72%	
Net assets (in millions):					
End of year	\$ 126.52	\$ 119.02	\$ 107.61	\$ 94.40	\$ 8
Ratio of operating expenses to average net assets	1.17%	1.45%	1.63%	1.65%	
Ratio of interest expense to average net assets	0.57%	0.80%	0.89%	0.97%	
Ratio of total expenses before custodian reduction to average net assets	1.78%	2.28%	2.52%	2.62%	
Ratio of net expenses after custodian reduction to average net assets	1.74%	2.25%	2.52%	2.62%	
Ratio of net investment income to average net assets	8.43%	8.45%	9.60%	8.55%	
Portfolio turnover	34.14%	31.50%	51.25%	55.08%	3

(A) CALCULATED USING AVERAGE SHARES.

(B) AMOUNT INCLUDES \$0.10 PER SHARE IN LITIGATION PROCEEDS.

(C) NET ASSET VALUE RETURN REPRESENTS PORTFOLIO RETURNS BASED ON CHANGE IN THE TRUST'S NET ASSET ASSUMING THE REINVESTMENT OF ALL DIVIDENDS AND DISTRIBUTIONS WHICH DIFFERS FROM THE TOTAL INVESTMENT RETURN BASED ON THE TRUST'S MARKET VALUE DUE TO THE DIFFERENCE BETWEEN THE TRUST'S NET ASSET VALUE AND THE MARKET VALUE OF ITS SHARES OUTSTANDING; PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Senior securities:

Total principal amount (in millions)	\$ 12	\$ 12	\$ 22.5	\$ 22.5	\$
Asset coverage per \$1,000 of indebtedness	\$ 11,543	\$ 10,918	\$ 5,783	\$ 5,195	\$ 4

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS. 12

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Shares, Units, Warrants, Ownership or Principal Amount	Acquisition Date
Corporate Restricted Securities - 78.75%:(A)		

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Private Placement Investments - 73.90%

A T I ACQUISITION COMPANY

A for-profit post-secondary school serving students in Texas, Florida and Arizona.

12% Senior Subordinated Note due 2012	\$ 1,125,000	04/08/04
Warrant, exercisable until 2012, to purchase common stock at \$.02 per share (B)	1,230 shs.	04/08/04
Warrant, exercisable until 2012, to purchase preferred stock at \$.01 per share (B)	33,505 shs.	03/23/06

ADORN, INC.

A manufacturer of wall panels, cabinets, moldings and countertops for houses and recreational veh

12.5% Subordinated Note due 2012	\$ 775,862	02/29/00
Warrant, exercisable until 2012, to purchase common stock at \$.02 per share	192 shs.	02/29/00

AMERCABLE, INC.

A manufacturer of electric power, instrumentation and control cables, primarily for the mining an

12% Senior Subordinated Note due 2013	\$ 583,333	04/08/05
Limited Partnership Interest (B)	0.19% int.	04/07/05
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	66 shs.	04/08/05

AMERICAN HOSPICE MANAGEMENT HOLDING LLC

A for-profit hospice care provider in the United States.

12% Senior Subordinated Note due 2010	\$ 1,125,000	01/22/04
Preferred Class A Unit (B)	1,706 uts.	*
Common Class B Unit	16,100 uts.	01/22/04
Common Class D Unit (B)	3,690 uts.	09/12/06

*01/22/04 AND 09/12/06.

ARROW TRU-LINE HOLDINGS, INC.

A manufacturer of hardware for residential and commercial overhead garage doors in North America.

12% Senior Subordinated Note due 2012	\$ 861,702	05/18/05
Common Stock (B)	263 shs.	05/18/05
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	69 shs.	05/18/05

AUGUSTA SPORTSWEAR HOLDING CO.

A manufacturer and distributor of athletic apparel, activewear and team uniforms.

12% Senior Subordinated Note due 2012	\$ 893,000	12/31/04
Common Stock (B)	275 shs.	**
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	73 shs.	12/31/04

**12/31/04, 03/31/05 AND 05/02/06.

MassMutual Participation Investors

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CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

Corporate Restricted Securities:(A) continued	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
<hr/>		
BETA BRANDS LTD.		
A manufacturer of hard candy and chocolate-coated products sold primarily to the Canadian market.		
5% Promissory Note due 2009 (B)	\$ 96,698	03/31/04
Warrant, exercisable until 2009, to purchase common stock at \$.01 per share (B)	2,421 shs.	03/31/04
BRAVO SPORTS HOLDING CORPORATION		
A designer and marketer of niche branded consumer products including canopies, trampolines, in-line and urethane wheels.		
12.5% Senior Subordinated Note due 2014	\$ 1,207,902	06/30/06
Preferred Stock Class A (B)	465 shs.	06/30/06
Common Stock (B)	1 sh.	06/30/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	164 shs.	06/30/06
CAINS FOODS, L.P.		
A producer of mayonnaise and sauce products for both the retail and food service markets.		
Limited Partnership Interest	1.81% int.	09/29/95
CAPESUCCESS LLC		
A provider of diversified staffing services.		
Preferred Membership Interests (B)	806 uts.	04/29/00
Common Membership Interests (B)	10,421 uts.	04/29/00
CAPITAL SPECIALTY PLASTICS, INC.		
A producer of desiccant strips used for packaging pharmaceutical products.		
Common Stock (B)	55 shs.	*
*12/30/97 AND 05/29/99.		
COEUR, INC.		
A producer of proprietary, disposable power injection syringes.		
8.75% Senior Secured Term Note due 2010	\$ 264,493	04/30/03
11.5% Senior Subordinated Note due 2011	\$ 242,754	04/30/03
Common Stock (B)	72,464 shs.	04/30/03
Warrant, exercisable until 2010, to purchase common stock at \$.01 per share (B)	50,099 shs.	04/30/03
COINING CORPORATION OF AMERICA LLC		
A manufacturer of close tolerance parts and metal stampings.		
10.62% Senior Secured Revolving Credit Facility due 2007 (C)	\$ 24,691	01/07/02
10.62% Senior Secured Tranche A Note due 2007 (C)	\$ 403,358	06/26/01
13% Senior Secured Tranche B Note due 2008	\$ 370,370	06/26/01

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Limited Partnership Interest (B)	3.65% int.	06/26/01
Warrant, exercisable until 2008, to purchase common stock at \$.01 per share (B)	61,163 shs.	06/26/01

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisiti Principal Amount Date
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Corporate Restricted Securities:(A) continued

CONNOR SPORT COURT INTERNATIONAL, INC.		
A designer and manufacturer of outdoor and indoor synthetic sports flooring and other temporary f		
12% Senior Subordinated Note due 2012 (D)	\$ 1,059,417	*
Limited Partnership Interest (B)	4.43% int.	**
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	92 shs.	*

*08/12/04 AND 01/18/05. **08/12/04 AND 01/14/05.

CONSOLIDATED FOUNDRIES HOLDINGS

A manufacturer of engineered cast metal components for the global aerospace and defense industrie		
12% Senior Subordinated Note due 2013	\$ 1,157,143	06/15/05
Common Stock (B)	269 shs.	***
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	54 shs.	06/15/05

***06/15/05 AND 05/22/06.

COREPHARMA LLC

A manufacturer of oral dose generic pharmaceuticals targeted at niche applications.		
12% Senior Subordinated Note due 2013	\$ 1,350,000	08/04/05
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	10 shs.	08/04/05

DAVIS-STANDARD LLC

A manufacturer, assembler, and installer of a broad range of capital equipment that is used in th and processing of plastic materials.		
12% Senior Subordinated Note due 2014	\$ 978,261	10/30/06
Limited Partnership Interest (B)	371,739 uts.	10/30/06
Warrant, exercisable until 2014, to purchase preferred stock at \$.01 per share (B)	26 shs.	10/30/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	18 shs.	10/30/06

DEXTER MAGNETICS TECHNOLOGIES, INC.

A designer, fabricator, assembler and distributor of industrial magnets and subassemblies in Nort		
Common Stock	310 shs.	07/19/01

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Warrant, exercisable until 2007, to purchase
common stock at \$.01 per share 157 shs. 07/19/01

DIRECTED ELECTRONICS, INC.

A designer and distributor of brand name automotive security systems, audio products and installa

Common Stock (B)	126,817 shs.	12/19/05
Common Stock (B)	68,301 shs.	06/17/06
Limited Partnership Interest (B)	4.61% int.	****

****12/22/99 AND 09/14/05.

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
Corporate Restricted Securities:(A) continued		

DIVERSCO, INC./DHI HOLDINGS, INC.

A contract provider of janitorial and equipment maintenance services and temporary production lab

Membership Interests of MM/Lincap Diversco Investments Ltd. LLC (B)	13.57% int.	08/27/98
Preferred Stock (B)	1,639 shs.	12/14/01
Warrants, exercisable until 2011, to purchase common stock of DHI Holdings, Inc. at \$.01 per share (B)	6,676 shs.	*

*10/24/96 AND 08/28/98.

DUNCAN SYSTEMS, INC.

A distributor of windshields and side glass for the recreational vehicle market.

10% Senior Secured Term Note due 2013	\$ 308,571	11/01/06
13% Senior Subordinated Note due 2014	\$ 488,572	11/01/06
Common Stock (B)	102,857 shs.	11/01/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	32,294 shs.	11/01/06

DWYER GROUP, INC.

A franchiser of a variety of home repair services.

Common Stock (B)	3,656 shs.	**
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)	1,077 shs.	10/30/03

**10/30/03 AND 01/02/04.

E X C ACQUISITION CORPORATION

A manufacturer of pre-filled syringes and pump systems used for intravenous drug delivery.

Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	11 shs.	06/28/04
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EAGLE PACK PET FOODS, INC.

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A manufacturer of premium pet food sold through independent pet stores.
 12% Senior Subordinated Note due 2011 \$ 803,572 ***
 Warrant, exercisable until 2011, to purchase
 common stock at \$.02 per share 2,163 shs. 09/24/04

***09/24/04 AND 4/20/06.

ENZYMATIC THERAPY, INC.
 A manufacturer and distributor of branded natural medicines and nutritional supplements.
 Limited Partnership Interest (B) 0.70% int. 03/30/00
 Warrant, exercisable until 2009, to purchase
 common stock at \$.01 per share (B) 15,415 shs. 03/30/00

EVANS CONSOLES, INC.
 A designer and manufacturer of consoles and control center systems
 Common Stock (B) 45,000 shs. 05/06/04

F H S HOLDINGS LLC
 A national provider of customized disease management services to large self-insured employers.
 12% Senior Subordinated Note due 2014 \$ 1,265,625 06/01/06
 Preferred Unit (B) 84 uts. 06/01/06
 Common Unit (B) 844 uts. 06/01/06
 Common Unit Class B (B) 734 shs. 06/01/06

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
 December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisiti Date
	Principal Amount	

Corporate Restricted Securities:(A) continued

FLUTES, INC.
 An independent manufacturer of micro fluted corrugated sheet material for the food and consumer p
 10% Senior Secured Term Note due 2013 \$ 524,791 04/13/06
 14% Senior Subordinated Note due 2014 \$ 315,599 04/13/06
 Common Stock (B) 62,535 shs. 04/13/06
 Warrant, exercisable until 2014, to purchase
 common stock at \$.01 per share (B) 17,680 shs. 04/13/06

FOWLER HOLDING, INC.
 Aprovider of site development services to residential homebuilders and developers in the
 Raleigh/Durham region of North Carolina.
 12% Senior Subordinated Note due 2013 \$ 1,252,174 02/03/06
 Common Stock (B) 98 shs. 02/03/06
 Warrant, exercisable until 2013, to purchase
 common stock at \$.01 per share (B) 135 shs. 02/03/06

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FUEL SYSTEMS HOLDING CORPORATION

An independent North American supplier of fuel tanks for a wide variety of commercial vehicles.

12% Senior Subordinated Note due 2014	\$ 1,237,500	01/31/06
Common Stock (B)	112,500 shs.	01/31/06
Warrant, exercisable until 2016, to purchase common stock at \$.01 per share (B)	73,275 shs.	01/31/06

H M HOLDING COMPANY

A designer, manufacturer, and importer of promotional and wood furniture.

12% Senior Subordinated Note due 2013	\$ 1,170,000	02/10/06
Common Stock (B)	180 shs.	02/10/06
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	67 shs.	02/10/06

HIGHGATE CAPITAL LLC

An acquirer of controlling or substantial interests in manufacturing and marketing entities.

Series A Preferred Units (B)	0.30% int.	07/21/94
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HOME DECOR HOLDING COMPANY

A designer, manufacturer and marketer of framed art and wall decor products.

12.5% Senior Subordinated Note due 2012	\$ 1,081,731	*
Common Stock (B)	33 shs.	*
Warrant, exercisable until 2012, to purchase common stock at \$.02 per share (B)	106 shs.	*

*06/30/04 AND 08/19/04.

INTEGRATION TECHNOLOGY SYSTEMS, INC.

A manufacturer of steel protective computer and network systems for the industrial and office environments.

12% Senior Secured Note due 2007	\$ 949,004	03/01/04
Common Stock (B)	130 shs.	06/01/00

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisition Date
Corporate Restricted Securities:(A) continued	Principal Amount	

ITC^DELTACOM, INC.

A provider of integrated communications services in the southeastern United States.

13.88% Senior Secured Note due 2009 (C)	\$ 1,184,808	07/26/05
17.38% Senior Secured Note due 2009 (C)	\$ 192,284	07/26/05
Warrant, exercisable until 2009, to purchase convertible preferred stock at \$.01 per share (B)	54,468 shs.	07/26/05

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JASON, INC.

A diversified manufacturing company serving various industrial markets.

13% Senior Subordinated Note due 2008	\$	510,187		08/04/00
14% Cumulative Redeemable Preferred Stock Series A (B)		153 shs.		08/04/00
Limited Partnership Interest of				
Saw Mill Capital Fund II, L.P. (B)		1.30% int.		08/03/00
Warrants, exercisable until 2008 and 2009, to purchase				
common stock at \$.01 per share (B)		26,931 shs.		08/04/00

JUSTRITE MANUFACTURING ACQUISITION CO.

A manufacturer of safety products such as storage cabinets and containers.

12% Senior Subordinated Note due 2011	\$	843,750		12/15/04
Warrant, exercisable until 2011, to purchase				
common stock at \$.01 per share (B)		594 shs.		12/15/04

K N B HOLDINGS CORPORATION

A designer, manufacturer and marketer of products for the custom framing market.

13.5% Senior Subordinated Note due 2013	\$	1,285,669		05/25/06
Common Stock (B)		71,053 shs.		05/25/06
Warrant, exercisable until 2013, to purchase				
common stock at \$.01 per share (B)		43,600 shs.		05/25/06

KEEPSAKE QUILTING, INC.

A seller of quilting fabrics, books, patterns, kits and notions to consumers.

8.87% Senior Secured Revolving Note due 2007 (C)	\$	62,902		06/16/00
8.87% Senior Secured Tranche A Note due 2007 (C)	\$	78,627		07/19/00
12% Senior Secured Tranche B Note due 2008	\$	314,509		06/16/00
Limited Partnership Interest of				
Riverside XVI Holding Company, L.P. (B)		3.02% int.		06/12/00
Warrant, exercisable until 2008, to purchase				
common stock at \$.01 per share (B)		633 shs.		06/12/00

KELE AND ASSOCIATES, INC.

A distributor of building automation control products.

12% Senior Subordinated Note due 2012	\$	969,643		02/27/04
Preferred Stock (B)		12 shs.		11/24/04
Common Stock (B)		6 shs.		02/27/04
Warrant, exercisable until 2012, to purchase				
common stock at \$.02 per share (B)		6 shs.		02/27/04

KEYSTONE NORTH AMERICA, INC.

An operator of funeral homes in North America.

Common Stock		28,577 shs.		02/08/05
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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

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December 31, 2006

Corporate Restricted Securities:(A) continued	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
LIH INVESTORS, L.P.		
A manufacturer and marketer of a broad line of external accessories for new and used sport utility vehicles.		
12.5% Senior Subordinated Note due 2008	\$ 2,036,000	*
Common Stock (B)	3,057 shs.	*
Warrant, exercisable until 2008, to purchase common stock at \$.11 per share (B)	8,245 shs.	*
*12/23/98 AND 01/28/99.		
MAGNATECH INTERNATIONAL, INC.		
A supplier of process equipment and related parts used in the manufacturing of medium and high-pressure vessels.		
12% Senior Subordinated Note due 2014	\$ 675,000	04/05/06
13% Preferred Stock (B)	299 shs.	04/05/06
Common Stock (B)	66 shs.	04/05/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	7 shs.	04/05/06
MAVERICK ACQUISITION COMPANY		
A manufacturer of capsules that cover the cork and neck of wine bottles.		
9.87% Senior Secured Tranche A Note due 2010 (C)	\$ 382,783	09/03/04
12% Senior Secured Tranche B Note due 2011	\$ 179,104	09/03/04
Limited Partnership Interest (B)	4.48% int.	09/03/04
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)	243 shs.	09/03/04
MAXON CORPORATION		
A manufacturer of industrial combustion equipment and related shut-off valves and control valves.		
12% Senior Subordinated Note due 2012	\$ 549,837	09/30/04
8.75% Senior Subordinated Note due 2012	\$ 660,322	09/30/04
Common Stock (B)	218,099 shs.	09/30/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	87,755 shs.	09/30/04
MEDASSIST, INC.		
A provider of patient eligibility and accounts receivable management services to hospitals and physicians.		
8% Preferred Stock (B)	44 shs.	10/28/04
Common Stock (B)	13,863 shs.	10/28/04
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	47,090 shs.	05/01/03
MICROGROUP, INC.		
A manufacturer of precision parts and assemblies, and a value-added supplier of metal tubing and fittings.		
12% Senior Subordinated Note due 2013	\$ 1,421,795	**
Common Stock (B)	238 shs.	**
Warrant, exercisable until 2013, to purchase common stock at \$.02 per share (B)	87 shs.	**

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**08/12/05 AND 09/11/06.

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

Corporate Restricted Securities:(A) continued	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
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MOMENTUM HOLDING CO.

A designer and supplier of upholstery fabric to commercial furniture manufacturers and architects

12% Senior Subordinated Note due 2014	\$ 618,802	08/04/06
Limited Partnership Interest (B)	56,198 uts.	08/04/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	586 shs.	08/04/06

MONESSEN HOLDING CORPORATION

A designer and manufacturer of a broad line of gas, wood and electric hearth products and accessories

12% Senior Subordinated Note due 2014	\$ 1,350,000	03/31/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	81 shs.	03/31/06

MORTON INDUSTRIAL GROUP, INC.

A manufacturer of highly engineered metal fabricated components.

12% Senior Subordinated Note due 2014	\$ 1,292,246	08/25/06
Common Stock (B)	57,754 shs.	08/25/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	91,923 shs.	08/25/06

MOSS, INC.

A manufacturer and distributor of large display and exhibit structures.

9.37% Senior Secured Revolving Note due 2010 (C)	\$ 94,118	07/03/06
9.37% Senior Secured Tranche A Note due 2010 (C)	\$ 529,412	12/21/05
12% Senior Secured Tranche B Note due 2010	\$ 200,000	12/21/05
Limited Partnership Interest of Riverside Capital Appreciation Fund I, L.P. (B)	19.20% int.	*
Warrant, exercisable until 2010, to purchase common stock at \$.01 per share (B)	122 shs.	12/21/05

*09/20/00 AND 05/23/02.

NABCO, INC.

A producer of explosive containment vessels in the United States.

12% Senior Subordinated Note due 2014	\$ 330,882	02/24/06
Limited Partnership Interest (B)	344 uts.	02/24/06
Warrant, exercisable until 2016, to purchase common stock at \$.01 per share (B)	26 shs.	02/24/06

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NEFF MOTIVATION, INC.

A manufacturer and distributor of customized awards and sportswear to schools.

12.5% Senior Subordinated Note due 2011	\$	562,500	01/31/03
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)		112 shs.	01/31/03

NONNI'S FOOD COMPANY

A producer and distributor of premium biscotti and bagel chips in North America.

12.25% Senior Subordinated Note due 2012	\$	986,538	03/29/04
10% Preferred Stock (B)		135 shs.	03/29/04
Common Stock (B)		3,418 shs.	03/29/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)		4,565 shs.	03/29/04

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

		Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
Corporate Restricted Securities:(A) continued			

NYLONCRAFT, INC.			
A supplier of engineered plastic components for the automotive industry.			
9% Senior Secured Note due 2009	\$	464,286	01/28/02
11.5% Senior Subordinated Note due 2012	\$	857,143	01/28/02
Common Stock (B)		178,571 shs.	01/28/02
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)		138,928 shs.	01/28/02
 O R S NASCO HOLDING, INC.			
A wholesale distributor of industrial supplies in North America.			
13% Senior Subordinated Note due 2013	\$	1,256,152	12/20/05
Common Stock (B)		93,848 shs.	12/20/05
Warrant, exercisable until 2015, to purchase common stock at \$.01 per share (B)		52,820 shs.	12/20/05
 OAKRIVER TECHNOLOGY, INC.			
Designs, engineers and assembles high precision automated process equipment for the medical device defibrillators and stents.			
10% Senior Secured Note due 2012	\$	323,115	01/03/06
13% Senior Subordinated Note due 2013	\$	392,709	01/03/06
Common Stock (B)		184,176 shs.	01/03/06
Warrant, exercisable until 2013, to purchase			

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common stock at \$.01 per share (B)	43,073 shs.	01/03/06
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OLYMPIC SALES, INC.

A boat retailer in Washington state, Oregon, California and British Columbia.

12% Senior Subordinated Note due 2008	\$ 803,000	08/07/98
12% Senior Subordinated Note due 2008	\$ 244,154	02/09/00
Limited Partnership Interest of Riverside VIII, VIII-A and VIII-B Holding Company, L.P.	10.66% int.	*
Warrants, exercisable until 2007 and 2008, to purchase common stock at \$.01 per share (B)	15,166 shs.	**

*08/07/98, 02/23/99, 12/22/99 AND 02/25/03. **08/07/98 AND 02/29/00.

ONTARIO DRIVE & GEAR LTD.

A manufacturer of all-wheel drive, off-road amphibious vehicles and related accessories.

13% Senior Subordinated Note due 2013	\$ 1,047,115	01/17/06
Limited Partnership Interest (B)	1,942 uts.	01/17/06
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	328 shs.	01/17/06

OVERTON'S HOLDING COMPANY

A marketer of marine and water sports accessories in the United States.

12% Senior Subordinated Note due 2014	\$ 962,104	04/28/06
Common Stock (B)	50 shs.	04/28/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	49 shs.	04/28/06

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisiti Principal Amount Date
Corporate Restricted Securities:(A) continued		

P A S HOLDCO LLC

An independent provider of maintenance, repair and overhaul services to the aerospace gas turbine

14% Senior Subordinated Note due 2014	\$ 1,153,231	07/03/06
Preferred Unit (B)	202 uts.	07/03/06
Preferred Unit (B)	36 uts.	07/03/06
Common Unit Class I (B)	78 uts.	07/03/06
Common Unit Class L (B)	17 uts.	07/03/06

P I I HOLDING CORPORATION

A manufacturer of plastic film and bags for the general industrial, medical, and food industries.

12% Senior Subordinated Note due 2013	\$ 1,215,000	03/31/06
Preferred Stock (B)	19 shs.	03/31/06

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Common Stock (B)		12 shs.	03/31/06
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)		7 shs.	03/31/06

PARADIGM PACKAGING, INC.

A manufacturer of plastic bottles and closures for the nutritional, pharmaceutical, personal care

12% Senior Subordinated Note due 2008	\$	1,125,000	12/19/00
Membership Interests of MM/Lincap PPI Investments, Inc., LLC (B)		1.28% int.	12/21/00

POSTLE ALUMINUM COMPANY LLC

A manufacturer and distributor of aluminum extruded products.

12% Senior Subordinated Note due 2014	\$	1,080,000	10/02/06
Limited Partnership Interest (B)		733 uts.	10/02/06
Warrant, exercisable until 2016, to purchase common stock at \$.01 per share (B)		182 shs.	10/02/06

PROTEIN GENETICS, INC.

A producer of bovine artificial insemination products, related breeding and healthcare products a
dairy and beef industries.

9.8% Redeemable Exchangeable Preferred Stock (B)		332 shs.	08/12/94
Common Stock (B)		867 shs.	*

*11/14/01 AND 08/12/94.

QUALIS AUTOMOTIVE LLC

A distributor of aftermarket automotive brake and chassis products.

12% Senior Subordinated Note due 2012	\$	937,500	05/28/04
Common Stock		187,500 shs.	05/28/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share		199,969 shs.	05/28/04

QUALSERV CORPORATION

A provider of foodservice equipment and supplies to major restaurant chains and their franchisees

14% Senior Subordinated Note due 2012 (D)	\$	1,002,475	07/09/04
Limited Partnership Interest (B)		4.90% int.	07/09/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)		280 shs.	07/09/04

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date
Corporate Restricted Securities:(A) continued		

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R A J MANUFACTURING HOLDINGS LLC

A designer and manufacturer of women's swimwear sold under a variety of licensed brand names.

12.5% Senior Subordinated Note due 2014	\$ 1,200,277	12/15/06
Limited Partnership Interest (B)	1,497 uts.	12/15/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)		2 shs. 12/15/06

RADIAC ABRASIVES, INC.

A manufacturer of bonded abrasive and super abrasive grinding wheels in the United States.

12% Senior Subordinated Note due 2014	\$ 1,196,809	02/10/06
Common Stock (B)	153,191 shs.	02/10/06
Warrant, exercisable until 2016, to purchase common stock at \$.01 per share (B)		69,647 shs. 02/10/06

RIVER RANCH FRESH FOODS LLC

A supplier of fresh produce to the retail and foodservice channels.

13% Senior Subordinated Note due 2011 (D)	\$ 975,000	09/29/04
Limited Partnership Interest (B)	21,500 uts.	09/29/04
18% Preferred Stock (B)	75,000 shs.	11/16/06
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)		12,481 shs. 09/29/04

ROYAL BATHS MANUFACTURING COMPANY

A manufacturer and distributor of acrylic and cultured marble bathroom products.

12.5% Senior Subordinated Note due 2011	\$ 562,500	11/14/03
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)		74 shs. 11/14/03

SAFETY SPEED CUT MANUFACTURING COMPANY, INC

A manufacturer of vertical panel saws and routers for the wood working industry.

8.87% Senior Secured Tranche A Note due 2007 (C)	\$ 161,522	06/02/99
12% Senior Secured Tranche B Note due 2007	\$ 646,089	06/02/99
Class B Common Stock (B)	846 shs.	06/02/99

SAVAGE SPORTS HOLDING, INC.

A manufacturer of sporting firearms.

12% Senior Subordinated Note due 2012	\$ 814,655	09/10/04
Common Stock (B)	310 shs.	09/10/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)		71 shs. 09/10/04

SPECIALTY FOODS GROUP, INC.

A manufacturer and distributor of branded meat products.

Limited Partnership Interest of MHD Holdings LLC	0.76% int.	08/29/00
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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

Corporate Restricted Securities:(A) continued	Shares, Units, Warrants, Ownership or Principal Amount	Acquisiti Date

STANTON CARPET HOLDING CO.		
A designer and marketer of high and mid-priced decorative carpets and rugs.		
12.13% Senior Subordinated Note due 2014	\$ 1,185,366	08/01/06
Common Stock (B)	165 shs.	08/01/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)	55 shs.	08/01/06
STRATEGIC EQUIPMENT & SUPPLY CORPORATION, INC.		
A provider of kitchen and restaurant design, equipment fabrication and installation services.		
Warrant, exercisable until 2008, to purchase common stock at \$.01 per share (B)	61,862 shs.	01/14/00
SYNVENTIVE EQUITY LLC		
A manufacturer of hot runner systems used in the plastic injection molding process.		
Limited Partnership Interest (B)	1.05% int.	08/20/03
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)	45,942 shs.	08/21/03
TANGENT RAIL CORPORATION		
A manufacturer of rail ties and provides specialty services to the North American railroad industry.		
13% Senior Subordinated Note due 2013	\$ 1,173,909	10/14/05
Preferred Stock	701 shs.	10/14/05
Common Stock (B)	1,167 shs.	10/14/05
Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	618 shs.	10/14/05
TERRA RENEWAL SERVICES, INC.		
A provider of wastewater residual management and required environmental reporting, permitting, and record keeping to companies involved in poultry and food processing.		
8.64% Senior Secured Tranche B Note due 2012 (C)	\$ 912,655	04/28/06
12% Senior Subordinated Note due 2014	\$ 664,062	*
Limited Partnership Interest of Saw Mill Capital Fund V, L.P . 2.30% int		03/01/05
Warrant, exercisable until 2016, to purchase common stock at \$.01 per share (B)	41 shs.	04/28/06
*04/28/06 and 09/13/06.		
THE TRANZONIC COMPANIES		
A producer of commercial and industrial supplies, such as safety products, janitorial supplies, and restroom supplies and sanitary care products.		
13% Senior Subordinated Note due 2009	\$ 1,356,000	02/05/98
Common Stock (B)	315 shs.	02/04/98
Warrant, exercisable until 2009, to purchase		

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common stock at \$.01 per share (B)	222 shs.	02/05/98
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TRANSTAR HOLDING COMPANY

A distributor of aftermarket automotive transmission parts

12% Senior Subordinated Note due 2013	\$ 918,000	08/31/05
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Common Stock (B)	432 shs.	08/31/05
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Warrant, exercisable until 2013, to purchase common stock at \$.01 per share (B)	46 shs.	08/31/05
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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisiti Date
Corporate Restricted Securities:(A) continued	Principal Amount	Date

TRONAIR, INC.

A designer, engineer and manufacturer of ground support equipment for the business, commuter and commercial aviation markets.

10.5% Senior Secured Term Note due 2008	\$ 451,394	01/20/00
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12% Senior Subordinated Note due 2010	\$ 758,100	01/20/00
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Common Stock (B)	129,960 shs.	01/20/00
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Warrant, exercisable until 2010, to purchase common stock at \$1 per share (B)	148,911 shs.	01/20/00
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TRUCK BODIES & EQUIPMENT INTERNATIONAL

A designer and manufacturer of accessories for heavy and medium duty trucks, primarily dump bodies and various forms of flat-bed bodies, landscape bodies and other accessories.

12% Senior Subordinated Note due 2013	\$ 1,222,698	*
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Common Stock (B)	393 shs.	*
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Warrant, exercisable until 2013, to purchase common stock at \$.02 per share (B)	81 shs.	*
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*07/19/05 AND 12/22/05.

TRUSTILE DOORS, INC.

A manufacturer and distributor of interior doors.

12.5% Senior Subordinated Note due 2010	\$ 562,500	04/11/03
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Warrant, exercisable until 2010, to purchase common stock at \$.01 per share (B)	3,060 shs.	04/11/03
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TUBULAR TEXTILE MACHINERY

A designer, manufacturer, sale and servicer of finishing machinery for the knit and woven segment

12% Senior Subordinated Note due 2014	\$ 705,457	05/28/04
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8.75% Senior Secured Note due 2011	\$ 409,310	05/28/04
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Common Stock (B)	385,233 shs.	05/28/04
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Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	116,521 shs.	05/28/04
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U S S HOLDINGS, INC.

A producer of high grade industrial and specialty silica sands. 14% Redeemable Preferred Stock (B)	499 shs.	09/30/99
Convertible Preferred Stock Series A and B, convertible into common stock at \$8.02 per share (B)	72,720 shs.	12/19/96
Common Stock (B)	10,013 shs.	09/30/99
Warrants, exercisable until 2010, to purchase common stock at \$.01 per share (B)	2,459 shs.	**

**12/19/96 AND 09/30/99.

U-LINE CORPORATION

A manufacturer of high-end, built-in, undercounter ice making, wine storage and refrigeration app 12.5% Senior Subordinated Note due 2012	\$ 996,500	04/30/04
Common Stock (B)	96 shs.	04/30/04
Warrant, exercisable until 2012, to purchase common stock at \$.01 per share (B)	122 shs.	04/30/04

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Shares, Units, Warrants, Ownership or	Acquisiti Principal Amount Date
Corporate Restricted Securities:(A) continued		

VICTORY VENTURES LLC

An acquirer of controlling or substantial interests in other entities. Series A Preferred Units (B)	0.04% int.	12/02/96
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VITALITY FOODSERVICE, INC.

A non-carbonated beverage dispensing company focused on the foodservice industry. 13% Senior Subordinated Note due 2011	\$ 999,153	09/24/04
Common Stock (B)	14,006 shs.	*
Warrant, exercisable until 2011, to purchase common stock at \$.01 per share (B)	12,593 shs.	09/24/04

*09/24/04 AND 12/22/06

VITEX PACKAGING GROUP, INC.

A manufacturer of specialty packaging, primarily envelopes and tags used on tea bags. 12.5% Senior Subordinated Note due 2012	\$ 900,000	07/19/04
Limited Partnership Interest Class A (B)	0.93% int.	07/19/04
Limited Partnership Interest Class B (B)	0.41% int.	07/19/04

WALLS INDUSTRIES, INC.

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A provider of branded workwear and sporting goods apparel.			
12.36% Senior Subordinated Lien Note due 2009 (C)	\$	444,079	07/12/04
14% Senior Subordinated Note due 2012	\$	574,613	07/12/04
Limited Partnership Interest (B)		0.20% int.	07/12/04
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)		2,133 shs.	07/12/04

WELLBORN FOREST HOLDING CO.

A manufacturer of semi-custom kitchen and bath cabinetry.			
12.13% Senior Subordinated Note due 2014	\$	911,250	11/30/06
Common Stock (B)		101 shs.	11/30/06
Warrant, exercisable until 2014, to purchase common stock at \$.01 per share (B)		51 shs.	11/30/06

TOTAL PRIVATE PLACEMENT INVESTMENTS

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Interest Rate	Due Date	Shares or Principal Amount
Corporate Restricted Securities:(A) continued			

Rule 144A Securities - 4.85%: (A)			
BONDS - 4.85%			
A E S Corporation	8.750%	05/15/13	\$ 425,000
A E S Corporation	9.000	05/15/15	175,000
Bombardier, Inc.	6.300	05/01/14	500,000
Charter Communications Op LLC	8.000	04/30/12	250,000
Douglas Dynamics LLC	7.750	01/15/12	325,000
G F S I, Inc. (C)	11.500	06/01/11	375,000
H C A, Inc.	9.250	11/15/16	500,000
Idearc, Inc.	8.000	11/15/16	300,000
Opti Canada, Inc.	8.250	12/15/14	200,000
Packaging Dynamics Corporation of America	10.000	05/01/16	850,000
Rental Service Corporation	9.500	12/01/14	500,000
Stewart & Stevenson LLC	10.000	07/15/14	600,000
T C W Lev Income Trust LP	8.410	11/30/07	330,002
Tenaska Alabama Partners LP	7.000	06/30/21	179,304
Titan International, Inc.	8.000	01/15/12	70,000
Tunica-Biloxi Gaming Authority	9.000	11/15/15	500,000
TOTAL BONDS			
WARRANTS - 0.00%			
Winsloew Furniture, Inc. (B)			700
TOTAL WARRANTS			

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TOTAL RULE 144A SECURITIES

TOTAL CORPORATE RESTRICTED SECURITIES

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

Corporate Public Securities-- 27.84%:(A)	Interest Rate	Due Date	Principal Amount

BONDS - 26.58%			
Allied Waste NA	7.875%	04/15/13	\$ 500,000
Appleton Papers, Inc.	8.125	06/15/11	250,000
Argo Tech Corporation	9.250	06/01/11	425,000
Arrow Electronics, Inc.	7.000	01/15/07	500,000
Atlas Pipeline Partners	8.125	12/15/15	600,000
BCP Crystal US Holdings Corporation	9.625	06/15/14	355,000
Basic Energy Services	7.125	04/15/16	625,000
Blockbuster, Inc. (C)	9.000	09/01/12	275,000
Cablevision Systems Corporation	8.000	04/15/12	500,000
Cadmus Communications Corporation	8.375	06/15/14	500,000
Chemed Corporation	8.750	02/24/11	600,000
Chesapeake Energy Corporation	7.000	08/15/14	650,000
Cincinnati Bell, Inc.	8.375	01/15/14	550,000
Clayton Williams Energy, Inc.	7.750	08/01/13	575,000
Del Monte Corporation	8.625	12/15/12	200,000
Dominos Pizza, Inc.	8.250	07/01/11	109,000
Dynegy Holdings, Inc.	8.375	05/01/16	665,000
Edison Mission Energy	7.750	06/15/16	235,000
El Paso Corporation	7.875	06/15/12	250,000
Electronic Data Systems Corporation	7.125	10/15/09	500,000
Esterline Technologies	7.750	06/15/13	175,000
Exco Resources, Inc.	7.250	01/15/11	500,000
Ford Motor Credit Co.	7.375	10/28/09	750,000
Ford Motor Credit Co.	8.000	12/15/16	150,000
Gencorp, Inc.	9.500	08/15/13	130,000
Geo Sub Corporation	11.000	05/15/12	500,000
General Motors Acceptance Corporation	5.850	01/14/09	750,000
Goodyear Tire & Rubber Co.	7.857	08/15/11	350,000
Goodyear Tire & Rubber Co.	9.000	07/01/15	100,000
GulfMark Offshore, Inc.	7.750	07/15/14	300,000
Harrah's Operating Co.	6.500	06/01/16	450,000
Inergy LP	8.250	03/01/16	75,000
Intelsat Subsidiary Holding Company Ltd. (C)	10.484	01/15/12	475,000
Interline Brands, Inc.	8.125	06/15/14	150,000
Iron Mountain, Inc.	8.750	07/15/18	500,000
K 2, Inc.	7.375	07/01/14	150,000
Koppers, Inc.	9.875	10/15/13	170,000
Lazard LLC	7.125	05/15/15	375,000
Leucadia National Corporation	7.000	08/15/13	350,000
Liberty Media Corporation	5.700	05/15/13	500,000
Lodgenet Entertainment Corporation	9.500	06/15/13	375,000
M G M Mirage, Inc.	6.000	10/01/09	225,000

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Mac-Gray Corporation	7.625	08/15/15	300,000
Majestic Star Casino LLC	9.500	10/15/10	250,000
Manitowoc Company, Inc.	7.125	11/01/13	100,000
Markwest Energy Operating Co.	6.875	11/01/14	550,000

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS December 31, 2006

Corporate Public Securities:(A) continued	Interest Rate	Due Date	Principal Amount

BONDS, CONTINUED			
Mediacom LLC	9.500%	01/15/13	\$ 750,000
Metaldyne Corporation (C)	10.000	11/01/13	340,000
N R G Energy, Inc.	7.375	02/01/16	600,000
Nalco Co.	7.750	11/15/11	250,000
National Wine & Spirits, Inc.	10.125	01/15/09	25,000
Neiman Marcus Group, Inc.	10.375	10/15/15	600,000
Nextel Communications, Inc.	7.375	08/01/15	400,000
North American Energy Partners	8.750	12/01/11	200,000
Nova Chemicals Corporation (C)	8.502	11/15/13	215,000
NTLCable PLC	9.125	08/15/16	690,000
O E D Corp/Diamond Jo Company Guarantee	8.750	04/15/12	500,000
Offshore Logistics, Inc.	6.125	06/15/13	350,000
PQ Corporation	7.500	02/15/13	685,000
Pacific Energy Partners	7.125	06/15/14	250,000
Pacific Energy Partners	6.250	09/15/15	100,000
Petrohawk Energy Corporation	9.125	07/15/13	500,000
Pinnacle Foods Group	8.250	12/01/13	225,000
Pliant Corporation (C)	11.850	06/15/09	681,103
Primedia, Inc.	8.000	05/15/13	500,000
Quicksilver Resources, Inc	7.125	04/01/16	600,000
Rent-A-Center, Inc.	7.500	05/01/10	250,000
Rock-Tenn Co.	8.200	08/15/11	500,000
Rogers Wireless, Inc.	7.500	03/15/15	560,000
Service Corporation International (C)	7.000	06/15/17	500,000
Sheridan Acquisition Corporation	10.250	08/15/11	225,000
Sierra Pacific Resources	6.750	08/15/17	330,000
Tekni-Plex, Inc.	12.750	06/15/10	500,000
Tenet Healthcare Corporation	6.375	12/01/11	250,000
Tenet Healthcare Corporation	9.875	07/01/14	350,000
Tenneco, Inc.	8.625	11/15/14	500,000
Tennessee Gas Pipeline Co.	7.000	03/15/27	250,000
Texas Industries, Inc.	7.250	07/15/13	35,000
Triton PCS, Inc.	8.500	06/01/13	500,000
Tyco International Group SA	6.375	10/15/11	150,000
Unisys Corporation	8.000	10/15/12	90,000
United Components, Inc.	9.375	06/15/13	535,000
United Rentals, Inc.	7.750	11/15/13	325,000
Universal City Florida (C)	8.375	05/01/10	100,000
Universal City Florida (C)	10.121	05/01/10	100,000
Vought Aircraft Industries	8.000	07/15/11	650,000
Warner Music Group	7.375	04/15/14	125,000
Wornick Co.	10.875	07/15/11	350,000

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TOTAL BONDS

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

Corporate Public Securities:(A)continued	Interest Rate	Due Date	Shares or Principal Amount

COMMON STOCK - 0.55%			
Allegiant Travel Co. (B) 7,000			
Distributed Energy Systems Corporation (B)			14,000
Heelys, Inc. (B)			5,000
Isilon Systems, Inc. (B)			500
Melco PBL Entertainment (B)			4,000
Nymex Holdings, Inc. (B)			1,500
Triana Solar Ltd (B)			200
Total Common Stock			
CONVERTIBLE BONDS - 0.71%			
Citadel Broadcasting Corporation	1.875%	02/15/11	\$ 300,000
ICOS Corporation	2.000	07/01/23	375,000
Q L T, Inc.	3.000	09/15/23	305,000
Total Convertible Bonds			
Total Corporate Public Securities			

Short-Term Securities:	Interest Rate/Yield	Due Date	Principal Amount

COMMERCIAL PAPER - 5.41%			
Cadbury Schweppes Finance plc	5.354%	01/02/07	\$ 2,587,000
ConocoPhillips	5.354	01/03/07	2,000,000
Kraft Foods, Inc.	5.450	01/04/07	775,000
Whirlpool Corporation	5.375	01/02/07	1,496,000
Total Short-Term Securities			
Total Investments			
	112.00%		

Other Assets	4.66		
Liabilities	(16.66)		

Total Net Assets	100.00%		
	=====		

(A) IN EACH OF THE CONVERTIBLE NOTE, WARRANT, CONVERTIBLE PREFERRED AND COMMON STOCK INVESTMENTS, AGREED TO PROVIDE CERTAIN REGISTRATION RIGHTS.

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- (B) NON-INCOME PRODUCING SECURITY.
 (C) VARIABLE RATE SECURITY; RATE INDICATED IS AS OF 12/31/06.
 (D) DEFAULTED SECURITY; INTEREST NOT ACCRUED.

SEE NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS December 31, 2006

Industry Classification:	Fair Value/ Market Value	Industry Classification: co
AEROSPACE - 3.31%		BUILDINGS & REAL ESTATE - 1
Argo Tech Corporation	\$ 459,000	Adorn, Inc.
Consolidated Foundries Holdings	1,409,281	Texas Industries, Inc.
Esterline Technologies	178,500	TruStile Doors, Inc.
Gencorp, Inc.	137,800	
P A S Holdco LLC	1,378,985	
Vought Aircraft Industries	625,625	
	4,189,191	CHEMICAL, PLASTICS & RUBBER
		BCP Crystal US Holdings Cor
		Capital Specialty Plastics,
		Koppers, Inc.
		Nalco Co.
		Nova Chemicals Corporation
		P Q Corporation
AUTOMOBILE - 10.03%		CONSUMER PRODUCTS - 8.83%
Ford Motor Credit Co.	900,376	Augusta Sportswear Holding
Fuel Systems Holding Corporation	1,360,006	Bravo Sports Holding Corpor
General Motors Acceptance Corporation	747,158	G F S I, Inc.
Goodyear Tire & Rubber Co.	456,500	K N B Holdings Corporation
Jason, Inc.	1,050,615	Momentum Holding Co.
LIH Investors, L.P.	1,733,963	Neff Motivation, Inc.
Metaldyne Corporation	363,800	R A J Manufacturing Holding
Nyloncraft, Inc.	869,644	Royal Baths Manufacturing C
Ontario Drive & Gear Ltd.	1,324,593	The Tranzonic Companies
Qualis Automotive LLC	1,394,148	Walls Industries, Inc.
Tenneco, Inc.	510,000	Winsloew Furniture, Inc.
Titan International, Inc.	70,438	
Transtar Holding Company	1,354,914	
United Components, Inc.	553,725	
	12,689,880	
BEVERAGE, DRUG & FOOD - 3.95%		CONTAINERS, PACKAGING & GLA
Beta Brands Ltd.	--	Flutes, Inc.
Cains Foods, L.P.	63,647	Maverick Acquisition Compan
Del Monte Corporation	211,000	P I I Holding Corporation
Dominos Pizza, Inc.	112,951	Packaging Dynamics Corporat
Eagle Pack Pet Foods, Inc.	856,881	Paradigm Packaging, Inc.
National Wine & Spirits, Inc.	25,000	Pliant Corporation
Nonni's Food Company	1,217,599	Tekni-Plex, Inc.
Pinnacle Foods Group	230,344	Vitex Packaging, Inc.
River Ranch Fresh Foods LLC	855,000	
Specialty Foods Group, Inc.	--	
Vitality Foodservice, Inc.	1,112,030	
Wornick Co.	313,250	
	4,997,702	

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BROADCASTING & ENTERTAINMENT - 2.09%		DISTRIBUTION - 3.76%
Cablevision Systems Corporation	491,250	Duncan Systems, Inc.
Charter Communications Op LLC	259,688	Kele and Associates, Inc.
Citadel Broadcasting Corporation	243,375	Magnatech International, Inc.
Liberty Media Corporation	471,069	O R S Nasco Holding, Inc.
Lodgenet Entertainment Corporation	404,063	QualServ Corporation
Mediacom LLC	772,500	Strategic Equipment & Suppl

	2,641,945	

MassMutual Participation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS
December 31, 2006

	Fair Value/ Market Value	
Industry Classification: continued		Industry Classification: co
DIVERSIFIED/CONGLOMERATE, MANUFACTURING - 8.90%		HEALTHCARE, EDUCATION & CHI
AmerCable, Inc.	\$ 821,317	A T I Acquisition Company
Arrow Tru-Line Holdings, Inc.	1,211,292	American Hospice Management
Bombardier, Inc.	470,000	F H S Holdings LLC
Coining Corporation of America LLC	2,051,191	H C A, Inc.
Dexter Magnetics Technologies, Inc.	642,592	ICOS Corporation
Douglas Dynamics LLC	305,500	MedAssist, Inc.
Evans Consoles, Inc.	--	Q L T, Inc.
Geo Sub Corporation	482,500	Tenet Healthcare Corporatio
Postle Aluminum Company LLC	1,331,164	
Radiac Abrasives, Inc.	1,357,567	
Truck Bodies & Equipment International	2,432,788	HOME & OFFICE FURNISHINGS, AND DURABLE CONSUMER PRODU
Tyco International Group SA	156,972	Connor Sport Court Internat
	-----	H M Holding Company
	11,262,883	Home Decor Holding Company
	-----	Justrite Manufacturing Acqui
DIVERSIFIED/CONGLOMERATE, SERVICE - 4.90%		Monessen Holding Corporatio
Allied Waste NA	515,625	Stanton Carpet Holding Co.
CapeSuccess LLC	2,512	U-Line Corporation
Chemed Corporation	621,000	Wellborn Forest Holding Co.
Diversco, Inc./DHI Holdings, Inc.	696,032	
Dwyer Group, Inc.	492,191	
Fowler Holding, Inc.	1,323,910	LEISURE, AMUSEMENT, ENTERTA
Interline Brands, Inc.	154,125	Harrah's Operating Co.
Iron Mountain, Inc.	530,000	K 2, Inc.
Keystone North America, Inc.	146,086	Keepsake Quilting, Inc.
Mac-Gray Corporation	304,500	M G M Mirage, Inc.
Moss, Inc.	910,485	Majestic Star Casino LLC
Service Corporation International	506,250	Melco PBL Entertainment
	-----	O E D Corp/Diamond Jo Compa
	6,202,716	Overton's Holding Company
	-----	Savage Sports Holding, Inc.
ELECTRONICS - 3.16%		Tunica-Biloxi Gaming Author
A E S Corporation	643,406	Universal City Florida
Arrow Electronics, Inc.	500,197	Warner Music Group
Directed Electronics, Inc.	2,277,057	
Distributed Energy Systems Corporation	50,400	
Electronic Data Systems Corporation	521,252	

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	----- 3,992,312 -----	
FARMING & AGRICULTURE - 0.00%		MACHINERY - 8.57%
Protein Genetics, Inc.	--	Davis-Standard LLC
	-----	Integration Technology Syst
FINANCIAL SERVICES - 0.95%		Manitowoc Company, Inc.
Highgate Capital LLC	--	Maxon Corporation
Lazard LLC	388,431	Morton Industrial Group, In
Leucadia National Corporation	355,250	Safety Speed Cut Manufactur
Nymex Holdings, Inc.	186,015	Stewart & Stevenson LLC
T C W Leveraged Income Trust, L.P.	277,564	Synventive Equity LLC
Victory Ventures LLC	--	Tronair, Inc.
	-----	Tubular Textile Machinery
	1,207,260 -----	

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MassMutual Paticipation Investors

CONSOLIDATED SCHEDULE OF INVESTMENTS

December 31, 2006

Industry Classification: continued	Fair Value/ Market Value	Industry Classification: co
-----	-----	-----
MEDICAL DEVICES/BIOTECH - 2.96%		TECHNOLOGY - 0.07%
Coeur, Inc.	\$ 755,634	Triana Solar Ltd.
E X C Acquisition Corporation	72,676	Unisys Corporation
MicroGroup, Inc.	2,042,509	
OakRiver Technology, Inc.	878,837	

	3,749,656 -----	TELECOMMUNICATIONS - 3.80%
MINING, STEEL, IRON & NON PRECIOUS METALS - 0.37%		Cincinnati Bell, Inc.
U S S Holdings, Inc.	466,871	Intelsat Subsidiary Holding
	-----	Isilon Systems, Inc.
NATURAL RESOURCES - 0.62%		ITC^DeltaCom, Inc.
Appleton Papers, Inc.	255,000	Nextel Communications, Inc.
Rock-Tenn Co.	527,500	NTL Cable PLC
	-----	Rogers Wireless, Inc.
	782,500 -----	Triton P C S, Inc.
OIL AND GAS - 4.03%		TRANSPORTATION - 1.68%
Atlas Pipeline Partners	616,500	Allegiant Travel Co.
Basic Energy Services	615,625	NABCO, Inc.
Chesapeake Energy Corporation	660,563	Tangent Rail Corporation
Clayton Williams Energy, Inc.	530,438	
El Paso Corporation	268,125	
Exco Resources, Inc.	507,500	UTILITIES - 2.80%
GulfMark Offshore, Inc.	306,000	Dynegy Holdings, Inc.
North American Energy Partners	201,000	Edison Mission Energy
Offshore Logistics, Inc.	330,750	Inergy LP
Opti Canada, Inc.	205,500	Markwest Energy Operating C
Quicksilver Resources, Inc.	586,500	N R G Energy, Inc.
Tennessee Gas Pipeline Co.	263,478	Pacific Energy Partners
	-----	Petrohawk Energy Corporatio
	5,091,979	

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PHARMACEUTICALS - 1.15%		Sierra Pacific Resources
CorePharma LLC	1,399,327	Tenaska Alabama Partners LP
Enzymatic Therapy, Inc.	56,250	

	1,455,577	WASTE MANAGEMENT / POLLUTIO
	-----	Terra Renewal Services, Inc
PUBLISHING/PRINTING - 1.20%		
Cadmus Communications Corporation	497,500	TOTAL CORPORATE RESTRICTED
Idearc, Inc.	304,500	AND PUBLIC SECURITIES - 106
Primedia, Inc	483,750	
Sheridan Acquisition Corporation	234,000	
	-----	SEE NOTES TO CONSOLIDATED F
	1,519,750	

RETAIL STORES - 3.33%		
Blockbuster, Inc.	266,063	
Heelys, Inc.	160,550	
Neiman Marcus Group, Inc.	667,500	
Olympic Sales, Inc.	2,030,008	
Rent-A-Center, Inc.	250,625	
Rental Service Corporation	516,250	
United Rentals, Inc.	326,217	

	4,217,213	

MassMutual Participation Investors

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2006

1. HISTORY

MassMutual Participation Investors (the "Trust") was organized as a Massachusetts business trust under the laws of the Commonwealth of Massachusetts pursuant to a Declaration of Trust dated April 7, 1988.

The Trust is a diversified closed-end management investment company. Babson Capital Management LLC ("Babson Capital"), a wholly-owned indirect subsidiary of Massachusetts Mutual Life Insurance Company ("MassMutual"), acts as its investment adviser. The Trust's investment objective is to maximize total return by providing a high level of current income, the potential for growth of such income, and capital appreciation, by investing primarily in a portfolio of privately placed, below investment grade, long-term corporate debt obligations purchased directly from their issuers, at least half of which normally will include equity features.

On January 27, 1998, the Board of Trustees authorized the formation of a wholly owned subsidiary of the Trust ("MMPI Subsidiary Trust") for the purpose of holding certain investments. The results of the MMPI Subsidiary Trust are consolidated in the accompanying financial statements. Footnote 2.D below discusses the federal tax consequences of the MMPI Subsidiary Trust.

2. SIGNIFICANT ACCOUNTING POLICIES

The following is a summary of significant accounting policies followed consistently by the Trust in the preparation of its consolidated financial statements in conformity with accounting principles generally accepted in the United States of America.

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A. VALUATION OF INVESTMENTS:

Valuation of a security in the Trust's portfolio is made on the basis of market price whenever market quotations are readily available and all securities of the same class held by the Trust can be readily sold in such market.

Nearly all securities which are acquired by the Trust directly from the issuers and shares into which such securities may be converted or which may be purchased on the exercise of warrants attached to such securities will be subject to legal or contractual delays in, or restrictions on, resale and will therefore be "restricted securities". Generally speaking, as contrasted with open-market sales of unrestricted securities, which may be effected immediately if the market is adequate, absent an exemption from registration, restricted securities can be sold only in a public offering for which a registration statement is in effect under the Securities Act of 1933, as amended (the "1933 Act").

The value of restricted securities, including warrants, and of any other assets for which there are no reliable market quotations, is the fair value as determined in good faith by the Trust's Board of Trustees (the "Trustees"). Each restricted security is valued by the Trustees as of the time of its acquisition and at least quarterly thereafter. The Trustees have established guidelines to aid in the valuation of each security. Generally, restricted securities are initially valued at cost or less at the time of acquisition by the Trust. Values greater or less than cost are thereafter used for restricted securities in appropriate circumstances. Among the factors ordinarily considered are the existence of restrictions upon the sale of a security held by the Trust; an estimate of the existence and the extent of a market for the security; the extent of any discount at which the security was acquired; the estimated period of time during which the security will not be freely marketable; the estimated expenses of registering or otherwise qualifying the security for public sale; estimated underwriting commissions if underwriting would be required to effect a sale; in the case of a convertible security, whether or not it would trade on the basis of its stock equivalent; in the case of a debt obligation which would trade independently of any equity equivalent, the current yields on comparable securities; the estimated amount of the floating supply of such securities available for purchase; the proportion of the issue held by the Trust; changes in the financial condition and prospects of the issuer; the existence of merger proposals or tender offers affecting the issuer; and any other factors affecting fair value, all in accordance with the Investment Company Act of 1940, as amended (the "1940 Act"). In making valuations, opinions of counsel may be relied upon as to whether or not securities are restricted securities and as to the legal requirements for public sale.

When market quotations are readily available for unrestricted securities of an issuer, restricted securities of the same class are generally valued at a discount from the market price of such unrestricted securities. The Trustees, however, consider all factors in fixing any discount, including the filing of a registration statement for such securities under the 1933 Act and any other developments which are likely to increase the probability that the securities may be publicly sold by the Trust without restriction.

The Trustees meet at least once in each quarter to approve the value of the Trust's portfolio securities as of the close of business on the last business day of the preceding quarter. This valuation requires the approval of a majority of the Trustees of the Trust, including a majority of the Trustees who are not interested persons of the Trust or of Babson Capital. In making valuations, the Trustees will consider Babson Capital's reports analyzing each portfolio security in accordance with the relevant factors referred to

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above. Babson Capital has agreed to provide such reports to the Trust at least quarterly.

The consolidated financial statements include private placement restricted securities valued at \$93,493,887 (73.90% of net assets) as of December 31, 2006 whose values have been determined by the Trustees in the absence of readily ascertainable market values. Due to the inherent uncertainty of valuation, those values may differ significantly from the values that would have been used had a ready market for the securities existed, and the differences could be material.

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MassMutual Participation Investors

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS DECEMBER 31, 2006

The values for Rule 144A restricted securities and corporate public securities are stated at the last reported sales price or at prices based upon quotations obtained from brokers and dealers as of December 31, 2006, subject to discount where appropriate, and are approved by the Trustees.

Short-term securities with more than sixty days to maturity are valued at fair value and short-term securities having a maturity of sixty days or less are valued at amortized cost, which approximates market value.

B. ACCOUNTING FOR INVESTMENTS:

Investment transactions are accounted for on the trade date. Dividend income is recorded on the ex-dividend date. Interest income is recorded on the accrual basis including the amortization of premiums and accretion of discount on bonds held using the yield-to-maturity method. The Trust does not accrue income when payment is delinquent and when management believes payment is questionable.

Realized gains and losses on investment transactions and unrealized appreciation and depreciation of investments are reported for financial statement and federal income tax purposes on the identified cost method.

C. USE OF ESTIMATES:

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

D. FEDERAL INCOME TAXES:

The Trust has elected to be taxed as a "regulated investment company" under the Internal Revenue Code, and intends to maintain this qualification, and to distribute substantially all of its net taxable income to its shareholders. In any year when net long-term capital gains are realized by the Trust, management, after evaluating the prevailing economic conditions, will recommend that Trustees either designate the net realized long-term gains as undistributed and pay the federal capital gains taxes thereon, or distribute all or a portion of such net gains. For the year ended December 31, 2006, the Trust had a net realized taxable long-term capital gain balance of \$9,831,327, which the Trustees voted to retain and pay the federal capital

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gain tax thereon. The Trust has accrued income tax expense of \$3,407,168 on the Statement of Operations related to the retained realized capital gains.

In 2006, the Trust re-classified a total of \$927,862 to undistributed net investment income. \$900,000 was re-classified from accumulated net realized gain on investments and \$27,862 was re-classified from additional paid in capital to more accurately display the Trust's financial position on a tax-basis in accordance with accounting principles generally accepted in the United States of America. These re-classifications had no impact on net asset value.

The Trust is taxed as a regulated investment company and is therefore limited as to the amount of non-qualified income that it may receive as the result of operating a trade or business, e.g. the Trust's PRO RATA share of income allocable to the Trust by a partnership operating company. The Trust's violation of this limitation could result in the loss of its status as a regulated investment company, thereby subjecting all of its net income and capital gains to corporate taxes prior to distribution to its shareholders. The Trust, from time-to-time, identifies investment opportunities in the securities of entities that could cause such trade or business income to be allocable to the Trust. The MMPI Subsidiary Trust (described in Footnote 1, above) was formed in order to allow investment in such securities without adversely affecting the Trust's status as a regulated investment company.

The MMPI Subsidiary Trust is not taxed as a regulated investment company. Accordingly, prior to the Trust's receiving any distributions from the MMPI Subsidiary Trust, all of the MMPI Subsidiary Trust's taxable income and realized gains, including non-qualified income and realized gains, is subject to taxation at prevailing corporate tax rates. For the year ended December 31, 2006, the MMPI Subsidiary Trust has accrued income tax expense on net realized gains of \$228,578 and increased accrued deferred income tax expenses on net unrealized gains by \$208,811.

E. DISTRIBUTIONS TO SHAREHOLDERS:

The Trust records distributions to shareholders from net investment income and net realized gains, if any, on the exdividend date. The Trust's net investment income dividend is declared four times per year, in April, July, October and December. The Trust's net realized capital gain distribution, if any, is declared in December.

The tax character of distributions declared during the years ended December 31, 2006 and 2005 was as follows:

DISTRIBUTIONS PAID FROM:	2006	2005
Ordinary Income	\$11,648,274	\$ 9,818,640

As of December 31, 2006, the components of distributable earnings on a tax basis included \$1,067,029 of undistributed ordinary income. Such distributions and distributable earnings on a tax basis are determined in conformity with income tax regulations, which may differ from accounting principles generally accepted in the United States of America.

Net investment income of the Trust as presented under accounting principles generally accepted in the United States of America differs from distributable earnings due to earnings from the MMPI Subsidiary Trust as well as timing differences in the recognition of income on certain investments.

F. EXPENSE REDUCTION:

Citibank, N.A. ("Citibank") serves as custodian to the Trust. Pursuant to the

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custodian agreement, Citibank receives a fee

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MassMutual Participation Investors

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 2006

reduced by credits on cash balances the Trust maintains with Citibank. All credit balances, if any, used to reduce the Trust's custodian fees are reported as fees paid indirectly on the Statement of Operations.

3. INVESTMENT ADVISORY AND ADMINISTRATIVE SERVICES FEE

A. SERVICES:

Under an Investment Advisory and Administrative Services Contract (the "Contract") with the Trust, Babson Capital has agreed to use its best efforts to present to the Trust a continuing and suitable investment program consistent with the investment objectives and policies of the Trust. Babson Capital represents the Trust in any negotiations with issuers, investment banking firms, securities brokers or dealers and other institutions or investors relating to the Trust's investments. Under the Contract, Babson Capital also provides administration of the day-to-day operations of the Trust and provides the Trust with office space and office equipment, accounting and bookkeeping services, and necessary executive, clerical and secretarial personnel for the performance of the foregoing services.

B: FEE:

For its services under the Contract, Babson Capital is paid a quarterly Investment Advisory fee equal to .225% of the value of the Trust's net assets as of the last business day of each fiscal quarter, an amount approximately equivalent to .90% on an annual basis. A majority of the Trustees, including a majority of the Trustees who are not interested persons of the Trust or of Babson Capital, approve the valuation of the Trust's net assets as of such day.

4. SENIOR SECURED INDEBTEDNESS:

A. NOTE PAYABLE:

MassMutual holds the Trust's \$12,000,000 Senior Fixed Rate Convertible Note (the "Note") issued by the Trust in 1995. The Note, as amended, is due December 13, 2011 and accrues interest at 5.80% per annum. MassMutual, at its option, can convert the principal amount of the Note into common shares. The dollar amount of principal would be converted into an equivalent dollar amount of common shares based upon the average price of the common shares for ten business days prior to the notice of conversion. For the year ended December 31, 2006, the Trust incurred total interest expense on the Note of \$696,000.

The Trust may redeem the Note, in whole or in part, at the principal amount proposed to be redeemed together with the accrued and unpaid interest thereon through the redemption date plus a Make Whole Premium. The Make Whole Premium equals the excess of (i) the present value of the scheduled payments of principal and interest which the Trust would have paid but for the proposed redemption, discounted at the rate of interest of U.S. Treasury obligations whose maturity approximates that of the Note plus 0.50% over (ii) the principal of the Note proposed to be redeemed.

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B. REVOLVING CREDIT AGREEMENT:

The Trust entered into a \$15,000,000 Revolving Credit Agreement with Bank of America (formerly Fleet National Bank) (the "Agent Bank") dated May 29, 1997, which had a stated maturity date of May 31, 2004. The maturity date of this loan was extended to May 31, 2007, and its terms amended and restated pursuant to the First Amended and Restated Revolving Credit Agreement (the "Revolver") dated May 27, 2004, between the Trust and the Agent Bank.

The Revolver bears interest payable quarterly in arrears at a per annum rate that varies depending upon whether the Trust requests a Base Rate Loan or LIBOR Rate Loan. Interest on Base Rate loans equals the higher of: (i) the annual "Base Rate" as set periodically by the Agent Bank and (ii) the most recent Federal Funds Effective Rate plus .50% per annum. Per annum interest on LIBOR Rate Loans equals .60% plus the London Inter Bank Offered Rate ("LIBOR") rate, divided by 1 minus LIBOR Reserve Rate. The Trust also incurs expense on the undrawn portion of the total Revolver at a rate of .25% per annum.

As of December 31, 2006, there were no outstanding loans against the Revolver. For the year ended December 31, 2006, the Trust incurred expense on the Revolver of \$37,292 related to the undrawn portion.

5. PURCHASES AND SALES OF INVESTMENTS

FOR THE YEAR ENDED 12/31/2006	COST OF INVESTMENTS ACQUIRED
Corporate restricted securities	\$ 38,190,067
Corporate public securities	10,160,208
	PROCEEDS FROM SALES OR MATURITIES
Corporate restricted securities	\$ 26,895,345
Corporate public securities	16,385,819

The aggregate cost of investments is substantially the same for financial reporting and federal income tax purposes as of December 31, 2006. The net unrealized appreciation of investments for financial reporting and federal tax purposes as of December 31, 2006 is \$2,530,287 and consists of \$13,025,470 appreciation and \$10,495,183 depreciation.

Net unrealized appreciation of investments on the Statement of Assets and Liabilities reflects the balance net of a deferred tax accrual of \$384,226 on net unrealized gains in the MMPI Subsidiary Trust.

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MassMutual Participation Investors

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

DECEMBER 31, 2006

6. QUARTERLY RESULTS OF INVESTMENT OPERATIONS (UNAUDITED)

	AMOUNT	PER SHARE
MARCH 31, 2006		
Investment income	\$3,229,245	

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Net investment income	2,668,897	\$ 0.27
Net realized and unrealized gain on investments (net of taxes)	3,988,640	0.41

 JUNE 30, 2006

Investment income	3,094,537	
Net investment income	2,530,332	0.26
Net realized and unrealized gain on investments (net of taxes)	3,610,163	0.37

 SEPTEMBER 30, 2006

Investment income	3,090,554	
Net investment income	2,542,211	0.26
Net realized and unrealized gain on investments (net of taxes)	2,345,586	0.24

 DECEMBER 31, 2006

Investment income	3,533,178	
Net investment income	2,987,222	0.31
Net realized and unrealized loss on investments (net of taxes)	(2,396,709)	(0.25)

7. AGGREGATE REMUNERATION PAID TO OFFICERS, TRUSTEES AND THEIR AFFILIATED PERSONS

For the year ended December 31, 2006, the Trust paid its Trustees aggregate remuneration of \$126,875. During the year the Trust did not pay any compensation to any of its Trustees who are "interested persons" (as defined by the 1940 Act) of the Trust. The Trust classifies Messrs. Crandall and Joyal as "interested persons" of the Trust.

All of the Trust's officers are employees of Babson Capital or MassMutual. Pursuant to the Contract, the Trust does not compensate its officers who are employees of Babson Capital or MassMutual.

Mr. Crandall, one of the Trust's Trustees is an "affiliated person" (as defined by the 1940 Act) of MassMutual and Babson Capital. The Trust did not make any payments to Babson Capital for the year ended December 31, 2006, other than amounts payable to Babson Capital pursuant to the Contract. For the year ended December 31, 2006, the Trust paid the following amounts to MassMutual, exclusive of interest expense on the Note explained in Footnote 4.A:

Preparation of the Trust's Quarterly and Annual Reports to Shareholders	\$12,823
Preparation of Certain of the Trust's Shareholder Communications	208
Preparation of the Trust's Annual Proxy Statements	241

	\$13,272
	=====

8. NEW ACCOUNTING PRONOUNCEMENTS

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In June 2006, the Financial Accounting Standards Board ("FASB") issued FASB Interpretation No. 48, ACCOUNTING FOR UNCERTAINTY IN INCOME TAXES -- AN INTERPRETATION OF FASB STATEMENT 109 ("FIN 48"). FIN 48 supplements FASB 109 by prescribing a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. The adoption of FIN 48 will require financial statements to be adjusted to reflect only those tax positions that are more likely than not to be sustained as of the adoption date. Management of the Trust is currently evaluating the impact that the adoption of FIN 48 will have on the financial statements. FIN 48 will become effective for fiscal years beginning after December 15, 2006.

In September 2006, FASB issued Statement of Financial Accounting Standards No. 157, FAIR VALUE MEASUREMENTS ("FAS 157"). FAS 157 establishes a single authoritative definition of fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. FAS 157 applies to fair value measurements already required or permitted by existing standards. The change to current generally accepted accounting principles from the application of FAS 157 relates to the definition of fair value, the methods used to measure fair value, and the expanded disclosures about fair value measurements. Management of the Trust does not believe the adoption of FAS 157 will materially impact the financial statement amounts, however, additional disclosures may be required about the inputs used to develop the measurements and the effect of certain of the measurements on changes in net assets for the period. FAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007 and interim periods within those fiscal years.

9. CERTIFICATIONS (UNAUDITED)

As required under New York Stock Exchange ("NYSE") Corporate Governance Rules, the Trust's principal executive officer has certified to the NYSE that he was not aware, as of the certification date, of any violation by the Trust of the NYSE's Corporate Governance listing standards. In addition, as required by Section 302 of the Sarbanes-Oxley Act of 2002 and related SEC rules, the Trust's principal executive and principal financial officers have made quarterly certifications, included in filings with the Securities and Exchange Commission on Forms N-CSR and N-Q, relating to, among other things, the Trust's disclosure controls and procedures and internal control over financial reporting, as applicable.

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MassMutual Participation Investors

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Shareholders and Board of Trustees of MassMutual Participation Investors

We have audited the accompanying statement of assets and liabilities of MassMutual Participation Investors (the Trust), including the schedule of investments, as of December 31, 2006, and the related statements of operations and cash flows for the year then ended and the statements of changes in net assets for each of the years in the two-year period then ended and the financial highlights for each of the years in the three-year period then ended. These financial statements and financial highlights are the responsibility of the Trust's management. Our responsibility is to express an opinion on these financial statements and financial highlights based on our audits. The financial highlights for each of the years in the two-year period ended December 31, 2003 were audited by other independent registered public accountants whose report, dated February 6, 2004, expressed an unqualified opinion on those financial highlights.

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We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and financial highlights are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. Our procedures included verification of securities owned as of December 31, 2006 by correspondence with the custodian and brokers, or by other appropriate auditing procedures where replies from brokers were not received. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements and financial highlights referred to above present fairly, in all material respects, the financial position of MassMutual Participation Investors as of December 31, 2006, and the results of its operations, its cash flows, the changes in its net assets, and the financial highlights for the years described above in conformity with accounting principles generally accepted in the United States of America.

/s/ KPMG LLP

 Boston, Massachusetts
 February 9, 2007

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MassMutual Participation Investors

INTERESTED TRUSTEES

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS	PORT OVER IN F COMP
ROGER W. CRANDALL* (42) Massachusetts Mutual Life Insurance Company 1295 State Street Springfield, MA 01111	Trustee (since 2005) Chairman (since 2005)	3 years/ 1 year, 7 months 1 year/ 7 months	Executive Vice President and Chief Investment Officer (since 2005) of MassMutual; and Chairman (since 2005), President and Chief Executive Officer (since 2006), Vice Chairman (2005), Member of the Board of Managers (since 2004), Member of the Board of Directors (2003- 2004), and Managing Director of Babson Capital (2000-2005).	

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*MR. CRANDALL IS CLASSIFIED AS AN "INTERESTED PERSON" OF THE TRUST AND BABSON CAPITAL (AS DEFINED IN THE INVESTMENT COMPANY ACT OF 1940, AS AMENDED) BECAUSE OF HIS POSITION AS AN OFFICER OF THE TRUST; AND CHAIRMAN, PRESIDENT , CHIEF EXECUTIVE OFFICER, AND MEMBER OF THE BOARD OF MANAGERS OF BABSON CAPITAL.

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MassMutual Participation Investors

INTERESTED TRUSTEES

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS	PORT OVER IN F COMP
ROBERT E. JOYAL* (62) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 2003)	3 years/ 2 years, 10 months	President (2001-2003) of Babson Capital.	5

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*MR. JOYAL RETIRED AS PRESIDENT OF BABSON CAPITAL IN JUNE 2003. IN ADDITION AND AS NOTED ABOVE, MR. JOYAL IS A DIRECTOR OF JEFFERIES GROUP, INC., WHICH HAS A WHOLLY OWNED BROKER-DEALER SUBSIDIARY THAT MAY EXECUTE PORTFOLIO TRANSACTIONS AND/OR ENGAGE IN PRINCIPAL TRANSACTIONS WITH THE TRUST, OTHER INVESTMENT COMPANIES ADVISED BY BABSON CAPITAL OR ANY OTHER ADVISORY ACCOUNTS OVER WHICH BABSON CAPITAL HAS BROKERAGE PLACEMENT DISCRETION. ACCORDINGLY, THE TRUST HAS DETERMINED TO CLASSIFY MR. JOYAL AS AN "INTERESTED PERSON" OF THE TRUST AND BABSON CAPITAL (AS DEFINED IN THE INVESTMENT COMPANY ACT OF 1940, AS AMENDED).

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MassMutual Participation Investors

INDEPENDENT TRUSTEES

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS	PORT OVER IN F COMP
WILLIAM J. BARRETT (67) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 2006)	3 years/ 10 months*	President (since 2002), Barrett-Gardner Associates, Inc. (investments); and Senior Vice President (1976-2002), Janney Montgomery Scott LLC (investments).	2
DONALD E. BENSON (76) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 1988)	3 years/ 2 years, 10 months	Executive Vice President and Director (since 1992), Marquette Financial Companies (financial services); Partner (since 1996), Benson Family Limited Partnership No. 1 and Benson Family Limited Partnership No. 2 (investment partnerships); and Partner (1987-2004), Benson, Pinckney, Oates Partnership (building partnership).	2

*MR. BARRETT WAS ELECTED BY THE BOARD OF TRUSTEES TO FILL A NEWLY CREATED BOARD SEAT ON JULY 18, 2006.

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MassMutual Participation Investors

INDEPENDENT TRUSTEES

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS	PORT OVER IN F COMP
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MICHAEL H. BROWN (50) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 2005)	3 years/ 1 year, 7 months	Private Investor; and Managing Director (1994-2005), Morgan Stanley.	2
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DONALD GLICKMAN (73) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 1992)	3 years/ 2 years, 10 months	Chairman (since 1992), Donald Glickman and Company, Inc. (private investments); and Partner (since 1992), J.F. Lehman & Co. (private investments).	2
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MassMutual Participation Investors

INDEPENDENT TRUSTEES

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS	PORT OVER IN F COMP
MARTIN T. HART (71) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Trustee (since 1991)	3 years/ 10 months	Private Investor; and President and Director (since 1983), H Investment Company LLC (family partnership).	2

CORINE T. NORGAARD (69) MassMutual Participation Investors 1500 Main Street Suite 600 P.O. Box 15189	Trustee (since 1998)	3 years/ 1 year, 10 months	President, (2004-2005), Thompson Enterprises Real Estate Investment; and Dean (1996-2004), Barney School of Business, University of Hartford.	3
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Springfield, MA 01115-5189

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MassMutual Participation Investors

OFFICERS OF THE TRUST

NAME (AGE), ADDRESS	POSITION WITH THE TRUST	OFFICE TERM/LENGTH OF TIME SERVED	PRINCIPAL OCCUPATION(S) DURING PAST 5 YEARS
CLIFFORD M. NOREEN (49) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	President	1 year/ 7 months	President (since 2005), Vice Pre Member of the Board of Managers Director (since 2000) of Babson and President (since 2005) MMCI Subsidiary Trust; and President (1993-2005), MassMutual Corporat
RODNEY J. DILLMAN (54) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Vice President, Secretary, and Chief Legal Officer	1 year/ 7 months	Vice President, Secretary, and C of the Trust; Vice President and 2000) of MassMutual; General Cou of Babson Capital; Secretary (si and MMPI Subsidiary Trust; and V Chief Legal Officer (since 2006)
JAMES M. ROY (44) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Vice President and Chief Financial Officer	1 year/ 7 months	Vice President and Chief Financi Treasurer (2003-2005), and Assoc Trust; Managing Director (since of Babson Capital; Trustee (sinc and Controller (2003-2005), MMCI Subsidiary Trust; and Vice Presi (since 2005), Treasurer (2003-20 (1999-2003), MassMutual Corporat
JOHN T. DAVITT, JR. (39) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Comptroller	1 year/ 7 months	Comptroller (since 2001) of the Babson Capital; Controller (sinc and MMPI Subsidiary Trust; and C MassMutual Corporate Investors.

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MELISSA M. LAGRANT (33) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Chief Compliance Officer	1 year/ 7 months	Chief Compliance Officer (since Director (since 2005) of Babson Senior Compliance Trading Manage Company, L.P.; Assistant Vice Pr Group (2002-2003), and Assistant Compliance (2001-2002), Zurich S Management; and Chief Compliance Corporate Investors.
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RONALD S. TALAIA (38) MassMutual Participation Investors 1500 Main Street o Suite 600 P.O. Box 15189 Springfield, MA 01115-5189	Treasurer	1 year/ 7 months	Treasurer (since 2006) of the Tr Babson Capital; and Treasurer (s Investors.
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MassMutual Participation Investors

Members of the Board of Trustees

[PHOTO]

Left to right:

Donald Glickman
 CHAIRMAN, DONALD GLICKMAN
 & COMPANY, INC.

Robert E. Joyal
 RETIRED PRESIDENT OF
 BABSON CAPITAL MANAGEMENT LLC

William J. Barrett
 PRESIDENT, BARRETT-GARDNER
 ASSOCIATES, INC.

Michael H. Brown
 PRIVATE INVESTOR

Donald E. Benson*
 EXECUTIVE VICE PRESIDENT
 AND DIRECTOR,
 MARQUETTE FINANCIAL COMPANIES

Corine T. Norgaard*
 PRESIDENT, THOMPSON ENTERPRISES
 REAL ESTATE INVESTMENT

Roger W. Crandall
 EXECUTIVE VICE PRESIDENT AND
 CHIEF INVESTMENT OFFICER,
 MASSACHUSETTS MUTUAL
 LIFE INSURANCE COMPANY

Martin T. Hart*
 PRIVATE INVESTOR

*MEMBER OF THE AUDIT COMMITTEE

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MassMutual Participation Investors offers a Dividend Reinvestment and Cash Purchase Plan. The Plan provides a simple and automatic way for shareholders to add to their holdings in the Trust through the receipt of dividend shares issued by the Trust or through the reinvestment of cash dividends in Trust shares purchased in the open market. The dividends of each shareholder will be automatically reinvested in the Trust by Shareholder Financial Services Inc., the Transfer Agent, in accordance with the Plan, unless such shareholder elects not to participate by providing written notice to the Transfer Agent. A shareholder may terminate his or her participation by notifying the Transfer Agent in writing.

Participating shareholders may also make additional contributions to the Plan from their own funds. Such contributions may be made by personal check or other means in an amount not less than \$100 nor more than \$5,000 per quarter.

Whenever the Trust declares a dividend payable in cash or shares, the Transfer Agent, acting on behalf of each participating shareholder, will take the dividend in shares only if the net asset value is lower than the market price plus an estimated brokerage commission as of the close of business on the valuation day. The valuation day is the last day preceding the day of dividend payment. When the dividend is to be taken in shares, the number of shares to be received is determined by dividing the cash dividend by the net asset value as of the close of business on the valuation date or, if greater than net asset value, 95% of the closing share price. If the net asset value of the shares is higher than the market value plus an estimated commission, the Transfer Agent, consistent with obtaining the best price and execution, will buy shares on the open market at current prices promptly after the dividend payment date.

The reinvestment of dividends does not, in any way, relieve participating shareholders of any federal, state or local tax. For federal income tax purposes, the amount reportable in respect of a dividend received in newly-issued shares of the Trust will be the fair market value of the shares received, which will be reportable as ordinary income and/or capital gains.

As compensation for its services, the Transfer Agent receives a fee of 5% of any dividend and cash contribution (in no event in excess of \$2.50 per distribution per shareholder.)

Any questions regarding the Plan should be addressed to Shareholder Financial Services, Inc., Agent for MassMutual Participation Investors' Dividend Reinvestment and Cash Purchase Plan, P.O. Box 173673, Denver, CO 80217-3673.

Dividend Reinvestment and Cash Purchase Plan

Officers

Roger W. Crandall
CHAIRMAN

Clifford M. Noreen
PRESIDENT

James M. Roy
VICE PRESIDENT &
CHIEF FINANCIAL OFFICER

Rodney J. Dillman
VICE PRESIDENT, SECRETARY &
CHIEF LEGAL OFFICER

Jill A. Fields

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VICE PRESIDENT

Michael P. Hermsen
VICE PRESIDENT

Mary Wilson Kibbe
VICE PRESIDENT

Michael L. Klofas
VICE PRESIDENT

Richard E. Spencer, II
VICE PRESIDENT

Ronald S. Talaia
TREASURER

John T. Davitt, Jr.
COMPTROLLER

Melissa M. LaGrant
CHIEF COMPLIANCE OFFICER

[LOGO] MassMutual Participation Investors

DB 1036 207

ITEM 2. CODE OF ETHICS.

The Registrant adopted a Code of Ethics for Senior Financial Officers (the "Code") on October 17, 2003, which is available on the Registrant's website at www.babsoncapital.com/mpv. During the period covered by this Form N-CSR, there were no amendments to, or waivers from, the Code.

ITEM 3. AUDIT COMMITTEE FINANCIAL EXPERT.

The Registrant's Board of Trustees has determined that Mr. Donald E. Benson, a Trustee of the Registrant and a member of its Audit Committee, is an audit committee financial expert. Mr. Benson is "independent" for purposes of this Item 3 as required by applicable regulation.

ITEM 4. PRINCIPAL ACCOUNTANT FEES AND SERVICES.

FEES BILLED TO THE REGISTRANT

	KPMG LLP Year Ended December 31, 2006	KPMG LLP Year Ended December 31, 2005
Audit Fees	\$ 35,500	\$ 39,200
Audit-Related Fees	5,400	5,000
Tax Fees	34,500	25,900
All Other Fees	0	0
Total Fees	\$ 75,400	\$ 70,100

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NON-AUDIT FEES BILLED TO BABSON CAPITAL AND MASSMUTUAL

	KPMG LLP Year Ended December 31, 2006	KPMG LLP Year Ended December 31, 2005
Audit-Related Fees	\$ 988,727	\$1,229,916
Tax Fees	18,000	0
All Other Fees	0	0
Total Fees	\$1,006,727	\$1,229,916

The category "Audit Related Fees" reflects fees billed by KPMG for various non-audit and non-tax services rendered to the Registrant, Babson Capital Management LLC ("Babson Capital") and Massachusetts Mutual Life Insurance Company ("MassMutual"), such as SAS 70 review, agreed upon procedures reports. Preparation of Federal, state and local income tax and compliance work are representative of the fees billed in the "Tax Fees" category. The category "All Other Fees" represents fees billed by KPMG for tax consulting rendered to Babson Capital and MassMutual. The Sarbanes-Oxley Act of 2002 and its implementing regulations allows the Registrant's Audit Committee to establish a pre-approval policy for certain services rendered by the Registrant's independent accountants. During 2006, the Registrant's Audit Committee approved all of the services rendered to the Registrant by KPMG and did not rely on such a pre-approval policy for any such services.

The Audit Committee reviewed the aggregate fees billed for professional services rendered by KPMG for the Registrant and for the non-audit services provided to Babson Capital, and Babson Capital's parent, MassMutual. As part of this review, the Audit Committee considered whether the provision of such non-audit services were compatible with maintaining the principal accountant's independence.

The 2005 fees billed represent final 2005 amounts, which may differ from the preliminary figures available as of the filing date of the Trust's 2006 Annual Form N-CSR and includes, among other things, fees for services that may not have been billed as of the filing date of the Trust's 2006 Annual Form N-CSR, but are now properly included in the 2005 fees billed to the Trust, Babson Capital, and MassMutual.

ITEM 5. AUDIT COMMITTEE OF LISTED REGISTRANTS.

The Registrant maintains an Audit Committee composed exclusively of Trustees of the Registrant who qualify as "independent" Trustees under the current listing standards of the New York Stock Exchange and the rules of U.S. Securities and Exchange Commission. The Committee operates pursuant to a written Audit Committee Charter, which is available (1) on the Registrant's website, www.babsoncapital.com/mpv; and (2) without charge, upon request, by calling, toll-free 866-399-1516. The current members of the Audit Committee are Donald E. Benson, Martin T. Hart, and Corine T. Norgaard.

ITEM 6. SCHEDULE OF INVESTMENTS

Not applicable for this filing.

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ITEM 7. DISCLOSURE OF PROXY VOTING POLICIES AND PROCEDURES FOR CLOSED END MANAGEMENT INVESTMENT COMPANIES.

The Registrant's Board of Trustees delegated proxy voting responsibilities relating to voting securities held by the Registrant to its investment adviser, Babson Capital Management LLC ("Babson Capital"). A summary of Babson Capital's proxy voting policies and procedures is set forth below.

Summary of Babson Capital's Proxy Voting Policy

Babson Capital views the voting of proxies as an integral part of its investment management responsibility and believes, as a general principle, that proxies should be voted solely in the best interests of its clients (i.e. prudently and in a manner believed by Babson to best protect and enhance an investor's returns). To implement this general principle, it is Babson Capital's policy to generally vote proxies in accordance with the recommendations of Institutional Shareholder Services ("ISS"), a recognized authority on proxy voting and corporate governance, or, in cases where ISS has not made any recommendations with respect to a proxy, in accordance with ISS's proxy voting guidelines.

Babson Capital recognizes, however, that there may be times when Babson Capital believes that it will be in the best interests of clients holding the securities to (1) vote against ISS's recommendations or (2) in cases where ISS has not provided Babson Capital with any recommendations with respect to a proxy, vote against ISS's proxy voting guidelines. Babson Capital may vote, in whole or part, against ISS's recommendations or ISS's proxy voting guidelines, as applicable, if such vote is authorized by the Policy. The procedures set forth in the Policy are designed to ensure that votes against ISS's recommendations or proxy voting guidelines have been made in the best interests of clients and are not the result of any material conflict of interest (a "Material Conflict").

Summary of Babson Capital's Proxy Voting Procedures

Babson Capital has (1) established a Proxy Committee that is responsible for the implementation and governance of the Policy and (2) designated Proxy Administrators who will receive and post proxies for voting with ISS. In accordance with the Policy, Babson Capital will generally vote all client proxies in accordance with ISS's recommendation or proxy voting guidelines, unless a person authorized by the Proxy Committee (each a "Proxy Analyst") determines that it is in its clients' best interest to vote against ISS's recommendation or proxy voting guidelines. In these cases, Babson Capital will vote against ISS's recommendation or proxy voting guidelines, so long as no other Proxy Analyst reviewing such proxy disagrees with such recommendation, and no known Material Conflict is identified by the Proxy Analyst(s) or the Proxy Administrator. Otherwise, the proxy is to be submitted to a member of the Proxy Committee, who shall determine how to vote the proxy unless (i) the Proxy Administrator has identified a Babson Capital Material Conflict or (ii) said Proxy Committee member has identified a Material Conflict. In such cases, the proxy shall be

submitted to the Proxy Committee, which may authorize a vote against ISS's recommendation or proxy voting guidelines only if the Proxy

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Committee determines that such vote is in the clients' best interests.

No employee, officer or director of Babson Capital or its affiliates (other than those assigned such responsibilities under the Policy) may influence how Babson Capital votes any proxy, unless such person has been requested to provide such assistance by a Portfolio Manager or Proxy Committee member and has disclosed any known Material Conflict. Any pre-vote communications prohibited by the Policy shall be reported to the Proxy Committee member prior to voting and to Babson Capital's General Counsel.

Obtaining a Copy of the Policy

The full text of Babson Capital's Policy is available (1) without charge, upon request, by calling 1-866-399-1516 or (2) on the Registrant's website, www.babsoncapital.com/mpv.

ITEM 8. PORTFOLIO MANAGERS OF CLOSED-END MANAGEMENT INVESTMENT COMPANIES.

The following disclosure item is made as of the date of this Form N-CSR unless otherwise indicated.

PORTFOLIO MANAGER. Clifford M. Noreen serves as the President of the Registrant (since 2005) and as its Portfolio Manager. Mr. Noreen began his service to the Registrant in 1993 as a Vice President. With over 25 years of industry experience, Mr. Noreen is a Managing Director and a Member of the Board of Managers of Babson Capital Management LLC ("Babson Capital") and head of Babson Capital's Corporate Securities Group, where he oversees public equities and corporate credit related investments, including public and private bonds, mezzanine, and private equity investments, and structured credit products. Mr. Noreen joined Massachusetts Mutual Life Insurance Company ("MassMutual"), Babson Capital's parent company, in 1985 and began leading its High Yield Team in 1992, where he was responsible for oversight of all public high yield portfolios. In 2004, Mr. Noreen assumed responsibility for Babson Capital's Public Corporate Credit Group, which included the Investment Grade and High Yield Institutional Fixed Income teams. Mr. Noreen also presently serves as President of MassMutual Corporate Investors, another closed-end registered investment company advised by Babson Capital. Mr. Noreen holds a B.A. from the University of Massachusetts and an M.B.A from American International College.

PORTFOLIO MANAGEMENT TEAM. Mr. Noreen has primary responsibility for overseeing the investment of the Registrant's portfolio, with the day-to-day investment management responsibility of the Registrant's portfolio being shared with the following Babson Capital investment professionals (together with the Portfolio Manager, the "Portfolio Team").

Michael P. Hermsen, Michael L. Klofas, and Richard E. Spencer II are each a Vice President of the Registrant and a Managing Director of Babson Capital. Together they are responsible for managing Babson Capital's Mezzanine Investment and Private Equity Investments Team within the Corporate Securities Group, which is responsible for finding, analyzing, negotiating and servicing mezzanine private placement securities for the Registrant.

Mr. Hermsen joined MassMutual in 1990 and has been an officer of the Registrant since 1992. Previously, he worked at Teachers Insurance and Annuity Association where he was a generalist private placement analyst. At MassMutual and then Babson Capital, Mr. Hermsen has

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analyzed and invested in traditional private placements, high yield public and private bonds, and leveraged bank loans. He has also been responsible for managing a small portfolio of distressed investments. Since 1993, he has focused on originating, analyzing, structuring and documenting mezzanine and private equity investments. He holds a B.A. from Bowdoin College and an M.B.A. from Columbia University.

Mr. Klofas joined MassMutual in 1988 and has been an officer of the Registrant since 1989. Prior to joining MassMutual, he spent two years at a small venture capital firm and two years at a national public accounting firm. At MassMutual and then Babson Capital, Mr. Klofas has analyzed and invested in traditional private placements and high yield public bonds. He also spent four years leading Babson Capital's workout and restructuring activities. Since 1993, he has focused on originating, analyzing, structuring and documenting mezzanine and private equity investments. Mr. Klofas holds a B.A. from Brandeis University and an M.B.A. from Babson College as well as a Certified Public Accountant designation.

Mr. Spencer joined MassMutual in 1989 after three years as a corporate loan analyst at a major New England bank. He has been an officer of Registrant since 1990. At MassMutual and then Babson Capital, Mr. Spencer has analyzed and invested in traditional private placements, high yield public and private bonds, leveraged bank loans, mezzanine debt and private equity. From 1993 to 1999, he was the lead restructuring professional at Babson Capital. Since 1999, Mr. Spencer has been focused on the origination, analysis, structuring and documentation of mezzanine and private equity investments. He holds a B.A. from Bucknell University and an M.B.A. from the State University of New York at Buffalo.

Starting in 2006, Jill A. Fields assumed primary day-to-day responsibility for managing the Registrant's public high yield and investment grade fixed income portfolio. Ms. Fields has been a Vice President of the Registrant since 2006. Ms. Fields is a Managing Director of Babson Capital with over 20 years of industry experience in high yield total return, structured credit, leveraged loans and private placemet investing. Prior to joining Babson Capital in 1997, she was a credit analyst at Shawmut National Bank, and the Director of Corporate Bond Research at Hartford Life Insurance Group. Ms. Fields holds a B.S. from Pennsylvania State University and an M.B.A. from the University of Connecticut.

OTHER ACCOUNTS MANAGED BY THE PORTFOLIO TEAM. The members of the Registrant's Portfolio Team also have primary responsibility for the day-to-day management of other Babson Capital advisory accounts, including, among others, closed-end and open-end investment companies, private investment funds, MassMutual-affiliated accounts, as well as separate accounts for institutional clients. These advisory accounts are identified below.

PORTFOLIO TEAM	ACCOUNT CATEGORY	TOTAL NUMBER OF ACCOUNTS	APPROXIMATE TOTAL ASSET SIZE (A)	NUMBER OF ACCOUNTS WITH PERFORMANCE-BASED ADVISORY FEE	APPROXIMATE ASSET SIZE BASED ON PERFORMANCE-BASED ADVISORY FEE ACCO
Clifford M. Noreen (B)	Registered Investment Companies	1	\$251.7 million	1	\$251.7 m

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	Other Pooled Investment Vehicles	1	\$56.5 million	1	\$56.5 million
	Other Accounts	0	N/A	0	N/A
Jill A. Fields	Registered Investment Companies	3	\$867.1 million	1	\$251.7 million
	Other Pooled Investment Vehicles	1	\$49.7 million	1	\$49.7 million
	Other Accounts	3	\$545.6 million	0	N/A
Michael P. Hermsen	Registered Investment Companies	1	\$251.7 million	1	\$251.7 million
	Other Pooled Investment Vehicles	5	\$577.3 million	5	\$577.3 million
	Other Accounts	1 (C)	\$1.38 billion	N/A	N/A
Michael L. Klofas	Registered Investment Companies	1	\$251.7 million	1	\$251.7 million
	Other Pooled Investment Vehicles	5	\$577.3 million	5	\$577.3 million
	Other Accounts	1 (C)	\$1.38 billion	N/A	N/A
Richard E. Spencer II	Registered Investment Companies	1	\$251.7 million	1	\$251.7 million
	Other Pooled Investment Vehicles	5	\$577.3 million	5	\$577.3 million
	Other Accounts	1 (C)	\$1.38 billion	N/A	N/A

(A) Account asset size has been calculated as of December 31, 2006.

(B) Mr. Noreen, as the head of Babson Capital's Corporate Securities Group, has overall responsibility for all corporate credit related investments, including public and private bonds, mezzanine, and private equity investments, as well as structured credit products managed by Babson Capital. Except for the accounts noted in the table above, Mr. Noreen is not primarily responsible for the day-to-day management of the other accounts managed by Babson Capital's Corporate Securities Group.

(C) The listed account and managed assets represent that portion of the general investment account of MassMutual and C.M. Life Insurance Company for which an individual Portfolio Team member has primary day-to-day responsibility. As of December 31, 2005, Babson Capital's total general investment account assets under management were \$58.5 billion dollars.

MATERIAL CONFLICTS OF INTEREST. The potential for material conflicts of interest may exist as the members of the Portfolio Team have responsibilities for the day-to-day management of multiple accounts. These conflicts may be heightened to the extent the individual, Babson Capital and/or an affiliate has an investment in one or much of such

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accounts or an interest in the performance of such accounts. Babson Capital has identified (and summarized below) areas where material conflicts of interest are most likely to arise, and has adopted policies and procedures that it believes are reasonably designed to address such conflicts.

It is possible that an investment opportunity may be suitable for both the Registrant and other accounts managed by a member of the Portfolio Team, but may not be available in sufficient quantities for both the Registrant and the other accounts to participate fully. Similarly, there may be limited opportunity to sell an investment held by the Registrant and another account. A conflict may arise where a member of the Portfolio Team may have an incentive to treat an account preferentially as compared to the Registrant because the account pays Babson Capital a performance-based fee or a member of the Portfolio Team, Babson Capital, or an affiliate has an interest in the account. Babson Capital has adopted an investment allocation policy and trade allocation procedures to address allocation of portfolio transactions and investment opportunities across multiple clients. These policies are designed to achieve fair and equitable treatment of all clients over time, and specifically prohibit allocations based on performance of an account, the amount or structure of the management fee, performance fee or profit sharing allocations, participation or investment by an employee, Babson Capital or an affiliate, whether the account is public, private, proprietary or third party. Additionally, the Registrant, MassMutual, Babson Capital, MassMutual Corporate Investors, and any private investment company advised or sub-advised by Babson Capital have obtained a blanket order from the Securities and Exchange Commission pursuant to Section 17(d), and Rule 17(d)-1 thereunder, of the Investment Company Act of 1940, as amended, which sets forth the conditions by which the entities can engage in private placement co-investment activities.

Potential material conflicts of interest may also arise related to the knowledge and timing of the Registrant's trades, investment opportunities and broker selection. A member of the Portfolio Team will have information about the size, timing and possible market impact of the Registrant's trades. It is theoretically possible that a member of the Portfolio Team could use this information for his or her personal advantage or the advantage of other accounts he manages or the possible detriment of the Registrant. For example, a member of the Portfolio Team could front run a fund's trade or short sell a security for an account immediately prior to the Registrant's sale of that security. To address these conflicts, Babson Capital has adopted policies and procedures governing employees' personal securities transactions, the use of short sales, and trading between the Registrant and other accounts managed by members of the Portfolio Team or accounts owned by Babson Capital or its affiliates.

With respect to securities transactions for the Registrant, Babson Capital determines which broker to use to execute each order, consistent with its duty to seek best execution of the transaction. Babson Capital manages certain other accounts, however, where Babson Capital may be limited by the client with respect to the selection of brokers or directed to trade such client's transactions through a particular broker. In these cases, trades for a fund in a particular security may be placed separately from, rather than aggregated with, such other accounts. Placing separate transaction orders for a security may temporarily affect the market price of the security or otherwise affect the execution of the transaction to the possible detriment of a fund or the other account(s) involved. Babson Capital has policies and procedures that address best execution and directed brokerage.

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Members of the Portfolio Team may also face other potential conflicts of interest in managing the Registrant, and the above is not a complete description of every conflict of interest that could be deemed to exist in managing both the Registrant and the other accounts listed above.

COMPENSATION. The current Babson Capital compensation and incentive program for investment professionals is designed to attract, motivate and retain high-performing individuals.

To help Babson Capital make informed decisions, the Company participates in annual compensation surveys of investment management firms using McLagan Partners, in addition to other industry specific resources. The firms selected for periodic peer-group comparisons typically have similar asset size or business mix. Annually, a review is conducted of total compensation versus market, to ensure that individual pay is competitive with the defined overall market.

The compensation package for the members of the Portfolio Team is comprised of a market-driven base salary, a performance-driven annual bonus, and discretionary long-term incentives. The performance-driven bonus is based on the performance of the accounts managed by the members of the Portfolio Team relative to appropriate benchmarks, including with respect to the Registrant, to the Lehman Brothers Intermediate U.S. Credit and the S & P Industrial Index, in addition to the Russell 2000 Index and Lehman Brothers U.S. Corporate High Yield Index. Performance of the Registrant, like other accounts Portfolio Team members manage, are evaluated on a pre-tax basis, and are reviewed over one and three-year periods, with greater emphasis given to the latter. There are other factors that affect bonus awards to a lesser extent, such as client satisfaction, teamwork, the assets under management, and the overall success of Babson Capital. Such factors are considered as a part of the overall annual bonus evaluation process by the management of Babson Capital.

Long-Term incentives are designed to share with participants the longer-term value created in Babson Capital. Long-term incentives may take the form of deferred cash awards (including deferred cash awards that provide a portfolio manager with the economic equivalent of a "shareholder" interest in the firm by linking the value of the award to a formula which ties to the value of the business), and/or, in the case of a portfolio manager who manages a private investment fund with a performance fee, a deferred cash award or a direct profit sharing interest that results in the manager receiving amounts based on the amount of the performance fee paid by such fund. These long-term incentives vest over time and are granted annually, based upon the same criteria used to determine the performance-driven annual bonus detailed above. Because the Portfolio Team members are generally responsible for multiple accounts (including the Registrant), they are compensated on the overall performance of the accounts that they manage, rather than a specific account, except for the portion of compensation relating to any performance fee award.

BENEFICIAL OWNERSHIP. As of December 31, 2006, members of the Portfolio Team beneficially owned the following dollar range of equity securities in the Registrant:

PORTFOLIO TEAM	DOLLAR RANGE OF BENEFICIALLY OWNED* EQUITY SECURITIES OF THE REGISTRANT
-----	-----
Clifford M. Noreen	None
Jill A. Fields	None

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Michael P. Hermsen	\$10,001-\$50,000
Michael L. Klofas	None
Richard E. Spencer II	None

* Beneficial ownership has been determined in accordance with Rule 16a-1(a)(2) under the Securities Exchange Act of 1934, as amended.

ITEM 9. PURCHASES OF EQUITY SECURITIES BY CLOSED-END MANAGEMENT INVESTMENT COMPANY AND AFFILIATED PURCHASERS.

Not Applicable for this filing.

ITEM 10. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

Not Applicable for this filing.

ITEM 11. CONTROLS AND PROCEDURES.

- (a) The principal executive officer and principal financial officer of the Registrant evaluated the effectiveness of the Registrant's disclosure controls and procedures (as defined in Rule 30a-3(c) under the Investment Company Act of 1940 (the "Act")) as of a date within 90 days of the filing date of this report and based on that evaluation have concluded that such disclosure controls and procedures are effective to provide reasonable assurance that material information required to be disclosed by the Registrant on Form N-CSR is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.
- (b) There were no changes in the Registrant's internal control over financial reporting (as defined in Rule 30a-3(d) under the Act) during the Registrant's second fiscal half-year that have materially affected, or are reasonably likely to materially affect, the Registrant's internal control over financial reporting.

ITEM 12. EXHIBITS.

- (a) (1) ANY CODE OF ETHICS, OR AMENDMENTS THERETO, THAT IS THE SUBJECT OF DISCLOSURE REQUIRED BY ITEM 2, TO THE EXTENT THAT THE REGISTRANT INTENDS TO SATISFY THE ITEM 2 REQUIREMENTS THROUGH THE FILING OF AN EXHIBIT.

None.

- (a) (2) A SEPARATE CERTIFICATION FOR EACH PRINCIPAL EXECUTIVE OFFICER AND PRINCIPAL FINANCIAL OFFICER OF THE REGISTRANT AS REQUIRED BY RULE 30a-2 UNDER THE ACT.

Attached hereto as EX-99.31.1
Attached hereto as EX-99.31.2

- (a) (3) ANY WRITTEN SOLICITATION TO PURCHASE SECURITIES UNDER RULE 23c-1 UNDER THE ACT (17 CFR 270.23c-1) SENT OR GIVEN DURING THE PERIOD COVERED BY THE REPORT BY OR ON BEHALF OF THE REGISTRANT TO 10 OR MORE PERSONS.

Not Applicable for this filing.

- (b) CERTIFICATIONS PURSUANT TO RULE 302-2(b) UNDER THE ACT.

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Attached hereto as EX-99.32

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

(Registrant): MassMutual Participation Investors

By: /s/ Clifford M Noreen

Clifford M Noreen, President

Date: March 6, 2007

Pursuant to the requirements of the Securities Exchange Act of 1934 and the Investment Company Act of 1940, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By: /s/ Clifford M Noreen

Clifford M Noreen, President

Date: March 6, 2007

By: /s/ James M. Roy

James M. Roy, Vice President, and
Chief Financial Officer

Date: March 6, 2007
