



MFS® New Discovery Series

MFS® Variable Insurance Trust
Semiannual report

6/30/10
VND-SEM

MFS® NEW DISCOVERY SERIES

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This report is prepared for the general information of contract owners. It is authorized for distribution to prospective investors only when preceded or accompanied by a current prospectus.

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LETTER FROM THE CEO

Dear Contract Owners:

After having suffered their biggest declines since the Great Depression, most global markets experienced an impressive resurgence during the latter months of 2009 and the first quarter of 2010. The global economy was able to reap the benefits of two major trends. The first of these was the massive efforts of governments and central banks to increase liquidity in the financial system as they sought to prevent the credit crisis from further affecting the banking system. The second was the move by companies around the world to cut costs and operations to prepare for rapidly changing market conditions. We believe that these moves not only shortened the length of the downturn but also set the stage for recovery.



Even with the significant market gains of 2009 and the early part of 2010, the recovery is unrolling at a moderate pace, with rebounds in the manufacturing sector and corporate America leading the way. Central bankers are proceeding with caution and many have held benchmark interest rates unchanged as they debate the best way to withdraw stimulus measures without disrupting the fragile growth process. Complicating that debate late in the period was the emergence of the European debt crisis and worries about whether this crisis could derail the global recovery. As that crisis unrolled with no clear resolution, risk aversion rose along with volatility. Weakening economic data late in the period added uncertainty to the mix and sparked a retrenchment in global equity markets.

While hurdles remain, we believe that the global economy is proceeding on the road to recovery. As always, we continue to be mindful of the many challenges faced at the individual, national, and international levels. It is at times such as these that we want to remind investors of the merits of maintaining a long-term view, adhering to basic investing principles such as asset allocation and diversification, and working closely with advisors to identify and research investment opportunities. At MFS®, we take particular pride in how well mutual funds can provide a broad range of products that can fit investor needs in any type of market climate.

Respectfully,

A handwritten signature in black ink that reads "Robert J. Manning".

Robert J. Manning
Chairman and Chief Executive Officer
MFS Investment Management®

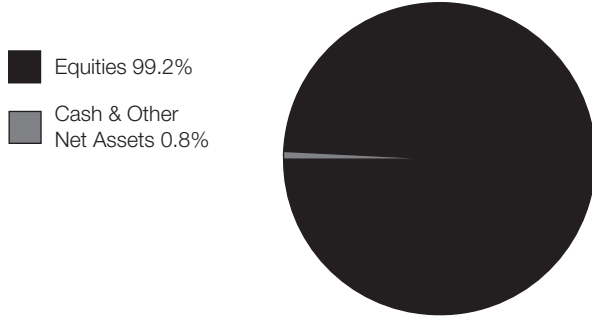
August 16, 2010

The opinions expressed in this letter are subject to change, may not be relied upon for investment advice, and no forecasts can be guaranteed.

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PORTFOLIO COMPOSITION

Portfolio structure



Top ten holdings

EXCO Resources, Inc.	2.1%
NetLogic Microsystems, Inc.	1.7%
DexCom, Inc.	1.6%
Hittite Microwave Corp.	1.6%
Lincare Holdings, Inc.	1.6%
Iluka Resources Ltd.	1.5%
NxStage Medical, Inc.	1.5%
Sensata Technologies Holding B.V.	1.5%
Gen-Probe, Inc.	1.5%
Constant Contact, Inc.	1.5%

Equity sectors

Health Care	29.0%
Technology	25.1%
Special Products & Services	8.3%
Retailing	6.3%
Energy	5.4%
Leisure	5.1%
Consumer Staples	4.9%
Industrial Goods & Services	4.5%
Basic Materials	4.5%
Financial Services	2.3%
Transportation	1.9%
Autos & Housing	1.0%
Utilities & Communications	0.9%

Percentages are based on net assets as of 6/30/10.

The portfolio is actively managed and current holdings may be different.

MARKET ENVIRONMENT

After having suffered through one of the largest and most concentrated downturns since the 1930s, most asset markets staged a remarkable rebound during 2009 and early 2010. This recovery in global activity has been led importantly by emerging Asian economies, but broadening to include most of the global economy to varying degrees. Primary drivers of the recovery included an unwinding of the inventory destocking that took place earlier, the production of manufacturing and capital goods, as well as massive fiscal and monetary stimulus.

Late in the period, though, heightened risk surrounding the public-debt profiles of several of the peripheral European countries impaired market sentiment. At the same time, the improving trend in global macroeconomic data began to weaken somewhat. These two dynamics caused most asset prices to retrench significantly, as many questioned the durability of the global recovery.

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EXPENSE TABLE

Fund Expenses Borne by the Contract Holders During the Period, January 1, 2010 through June 30, 2010

As a contract holder of the fund, you incur ongoing costs, including management fees; distribution and/or service (12b-1) fees; and other fund expenses. This example is intended to help you understand your ongoing costs (in dollars) of investing in the fund and to compare these costs with the ongoing costs of investing in other mutual funds.

The example is based on an investment of \$1,000 invested at the beginning of the period and held for the entire period January 1, 2010 through June 30, 2010.

Actual Expenses

The first line for each share class in the following table provides information about actual account values and actual expenses. You may use the information in this line, together with the amount you invested, to estimate the expenses that you paid over the period. Simply divide your account value by \$1,000 (for example, an \$8,600 account value divided by \$1,000 = 8.6), then multiply the result by the number in the first line under the heading entitled "Expenses Paid During Period" to estimate the expenses you paid on your account during this period.

Hypothetical Example for Comparison Purposes

The second line for each share class in the following table provides information about hypothetical account values and hypothetical expenses based on the fund's actual expense ratio and an assumed rate of return of 5% per year before expenses, which is not the fund's actual return. The hypothetical account values and expenses may not be used to estimate the actual ending account balance or expenses you paid for the period. You may use this information to compare the ongoing costs of investing in the fund and other funds. To do so, compare this 5% hypothetical example with the 5% hypothetical examples that appear in the shareholder reports of the other funds.

Please note that the expenses shown in the table are meant to highlight the fund's ongoing costs only and do not take into account the fees and expenses imposed under the variable contracts through which your investment in the fund is made. Therefore, the second line for each share class in the table is useful in comparing ongoing costs associated with an investment in vehicles (such as the fund) which fund benefits under variable annuity and variable life insurance contracts and to qualified pension and retirement plans only, and will not help you determine the relative total costs of investing in the fund through variable annuity and variable life insurance contracts. If the fees and expenses imposed under the variable contracts were included, your costs would have been higher.

Share Class		Annualized Expense Ratio	Beginning Account Value 1/01/10	Ending Account Value 6/30/10	Expenses Paid During Period (p) 1/01/10-6/30/10
Initial Class	Actual	1.02%	\$1,000.00	\$1,021.59	\$5.11
	Hypothetical (h)	1.02%	\$1,000.00	\$1,019.74	\$5.11
Service Class	Actual	1.27%	\$1,000.00	\$1,019.92	\$6.36
	Hypothetical (h)	1.27%	\$1,000.00	\$1,018.50	\$6.36

(h) 5% class return per year before expenses.

(p) Expenses paid is equal to each class' annualized expense ratio, as shown above, multiplied by the average account value over the period, multiplied by the number of days in the period, divided by the number of days in the year.

PORTFOLIO OF INVESTMENTS – 6/30/10 (unaudited)

The Portfolio of Investments is a complete list of all securities owned by your fund. It is categorized by broad-based asset classes.

Issuer	Shares/Par	Value (\$)	Issuer	Shares/Par	Value (\$)
COMMON STOCKS – 99.2%			COMMON STOCKS – continued		
Airlines – 0.5%			Consumer Services – 1.8%		
Copa Holdings S.A., "A"	66,540	\$ 2,942,400	Anhanguera Educacional Participacoes S.A., IEU	451,300	\$ 6,823,256
Apparel Manufacturers – 0.4%			Capella Education Co. (a)	55,380	4,505,163
Stella International Holdings	1,157,500	\$ 2,226,732			\$ 11,328,419
Biotechnology – 2.5%			Electrical Equipment – 1.5%		
Alimera Sciences, Inc. (a)	95,130	\$ 707,767	Sensata Technologies Holding B.V. (a)	587,680	\$ 9,397,003
Gen-Probe, Inc. (a)	205,040	9,312,917	Electronics – 7.3%		
Human Genome Sciences, Inc. (a)	246,360	5,582,518	ARM Holdings PLC	1,356,810	\$ 5,613,662
		\$ 15,603,202	DynaVox, Inc., "A" (a)	345,060	5,524,411
Brokerage & Asset Managers – 0.6%			Fabrinet (a)	474,740	5,079,718
Stifel Financial Corp. (a)	64,870	\$ 2,814,709	Hittite Microwave Corp. (a)	220,720	9,875,013
Thomas Weisel Partners Group (a)	180,400	1,062,556	NetLogic Microsystems, Inc. (a)	374,940	10,198,368
		\$ 3,877,265	Silicon Laboratories, Inc. (a)	210,620	8,542,747
Business Services – 5.9%					\$ 44,833,919
Concur Technologies, Inc. (a)	139,870	\$ 5,969,652	Energy – Independent – 4.2%		
Constant Contact, Inc. (a)	424,342	9,051,215	Continental Resources, Inc. (a)	130,160	\$ 5,807,739
CoStar Group, Inc. (a)	221,880	8,608,944	Denbury Resources, Inc. (a)	195,000	2,854,800
Higher One Holdings, Inc. (a)	136,460	1,978,670	EXCO Resources, Inc.	863,930	12,622,017
IFM Investments Ltd., ADR (a)	161,250	843,338	Oasis Petroleum LLC (a)	308,860	4,478,470
Redecard S.A.	5,400	76,288			\$ 25,763,026
Ultimate Software Group, Inc. (a)	143,380	4,711,467	Engineering – Construction – 1.1%		
Verisk Analytics, Inc., "A" (a)	162,500	4,858,750	North American Energy Partners, Inc. (a)	759,130	\$ 6,703,118
		\$ 36,098,324	Food & Beverages – 1.6%		
Computer Software – 7.9%			Green Mountain Coffee Roasters, Inc. (a)	216,840	\$ 5,572,788
ArcSight, Inc. (a)	228,260	\$ 5,110,741	Mead Johnson Nutrition Co., "A"	87,940	4,407,553
Ariba, Inc. (a)	331,820	5,285,893			\$ 9,980,341
Autonomy Corp. PLC (a)	282,920	7,635,505	Forest & Paper Products – 1.0%		
Blackboard, Inc. (a)	236,110	8,813,986	Universal Forest Products, Inc.	201,820	\$ 6,117,164
Nuance Communications, Inc. (a)	325,724	4,869,574	Gaming & Lodging – 0.6%		
Salesforce.com, Inc. (a)	71,600	6,144,712	Morgans Hotel Group Co. (a)	585,790	\$ 3,608,466
SolarWinds, Inc. (a)	253,510	4,066,300	Health Maintenance Organizations – 0.4%		
Sourcefire, Inc. (a)	82,040	1,558,760	OdontoPrev S.A.	73,900	\$ 2,575,241
SuccessFactors, Inc. (a)	258,800	5,380,452	Internet – 3.4%		
		\$ 48,865,923	Art Technology Group, Inc. (a)	618,760	\$ 2,116,159
Computer Software – Systems – 0.6%			GSI Commerce, Inc. (a)	151,830	4,372,704
PROS Holdings, Inc. (a)	534,580	\$ 3,474,770	LogMeIn, Inc. (a)	88,180	2,312,961
Construction – 1.0%			Rackspace Hosting, Inc. (a)	263,040	4,824,154
NVR, Inc. (a)	9,660	\$ 6,327,590	Shutterfly, Inc. (a)	129,490	3,102,580
Consumer Products – 3.3%			TechTarget, Inc. (a)	812,716	4,372,412
Colgate-Palmolive (India) Ltd.	212,423	\$ 3,794,981			\$ 21,100,970
Dabur India Ltd.	615,210	2,770,087	Machinery & Tools – 1.9%		
Hengan International Group Co. Ltd.	388,500	3,134,811	Bucyrus International, Inc.	190,150	\$ 9,022,618
Hypermecas S.A. (a)	223,700	2,872,779	Douglas Dynamics, Inc. (a)	157,950	1,816,425
L'Occitane International S.A. (a)	1,952,750	4,258,138	Jain Irrigation Systems Ltd.	49,467	1,130,498
Natura Cosmeticos S.A.	166,540	3,690,637			\$ 11,969,541
		\$ 20,521,433			

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Portfolio of Investments (unaudited) – continued

Issuer	Shares/Par	Value (\$)	Issuer	Shares/Par	Value (\$)
COMMON STOCKS – continued			COMMON STOCKS – continued		
Medical & Health Technology & Services – 14.4%			Precious Metals & Minerals – 0.5%		
Allscripts Healthcare Solutions, Inc. (a)	441,590	\$ 7,109,599	Stillwater Mining Co. (a)	241,210	\$ 2,802,860
Brookdale Senior Living, Inc. (a)	548,435	8,226,525	Printing & Publishing – 2.4%		
Cerner Corp. (a)	89,390	6,783,807	MSCI, Inc., "A" (a)	315,430	\$ 8,642,782
DaVita, Inc. (a)	100,300	6,262,732	VistaPrint Ltd. (a)	130,080	6,177,499
Diagnosticos da America S.A.	702,600	6,613,393			\$ 14,820,281
Fleury S.A. (a)	321,200	3,557,223	Railroad & Shipping – 1.4%		
Healthcare Services Group, Inc.	361,180	6,844,361	Aegean Marine Petroleum Network, Inc.	426,700	\$ 8,525,466
IDEXX Laboratories, Inc. (a)	118,826	7,236,503	Real Estate – 0.9%		
IPC The Hospitalist Co., Inc. (a)	317,710	7,974,521	Brasil Brokers Participacoes	991,300	\$ 3,196,325
Lincare Holdings, Inc.	299,600	9,739,996	Chesapeake Lodging Trust, REIT (a)	147,290	2,330,128
MedAssets, Inc. (a)	252,950	5,838,086			\$ 5,526,453
MEDNAX, Inc. (a)	94,060	5,230,677	Restaurants – 2.1%		
MWI Veterinary Supply, Inc. (a)	139,545	7,013,532	P.F. Chang's China Bistro, Inc.	211,780	\$ 8,397,077
		\$ 88,430,955	Peet's Coffee & Tea, Inc. (a)	41,360	1,624,207
Medical Equipment – 10.5%			Texas Roadhouse, Inc., "A" (a)	216,840	2,736,521
AGA Medical Holdings, Inc. (a)	324,160	\$ 4,113,590			\$ 12,757,805
Align Technology, Inc. (a)	157,520	2,342,322	Special Products & Services – 0.6%		
Conceptus, Inc. (a)	104,550	1,628,889	PICO Holdings, Inc. (a)	120,960	\$ 3,625,171
DexCom, Inc. (a)	871,465	10,074,135	Specialty Chemicals – 0.6%		
Edwards Lifesciences Corp. (a)	126,780	7,102,216	Asian Paints Ltd.	72,326	\$ 3,560,636
Heartware International, Inc. (a)	81,392	5,703,137	Specialty Stores – 5.9%		
Masimo Corp.	270,200	6,433,462	Blue Nile, Inc. (a)	77,340	\$ 3,641,167
NxStage Medical, Inc. (a)	633,817	9,405,844	Citi Trends, Inc. (a)	192,040	6,325,798
Orthovita, Inc. (a)	1,012,670	2,055,720	hhgregg, Inc. (a)	186,050	4,338,686
ResMed, Inc. (a)	141,450	8,601,575	Monro Muffler Brake, Inc.	158,890	6,280,922
Thoratec Corp. (a)	161,980	6,921,405	Rue21, Inc. (a)	143,820	4,363,499
		\$ 64,382,295	Titan Machinery, Inc. (a)	456,660	5,995,946
Metals & Mining – 2.4%			Vitacost.Com, Inc. (a)	396,590	3,565,344
Globe Specialty Metals, Inc. (a)	534,070	\$ 5,516,943	Zumiez, Inc. (a)	90,210	1,453,283
Iluka Resources Ltd. (a)	2,433,550	9,426,264			\$ 35,964,645
		\$ 14,943,207	Telecommunications – Wireless – 0.9%		
Network & Telecom – 5.9%			SBA Communications Corp. (a)	156,640	\$ 5,327,326
Acme Packet, Inc. (a)	263,190	\$ 7,074,547	Total Common Stocks		
Ciena Corp. (a)	385,400	4,886,872	(Identified Cost, \$594,547,406)		
F5 Networks, Inc. (a)	111,320	7,633,212			\$610,120,490
Fortinet, Inc. (a)	289,100	4,752,804			
Polycom, Inc. (a)	208,240	6,203,470			
Riverbed Technology, Inc. (a)	212,970	5,882,231			
		\$ 36,433,136			
Oil Services – 1.2%					
Dresser-Rand Group, Inc. (a)	239,980	\$ 7,571,369			
Other Banks & Diversified Financials – 0.8%					
First Interstate BancSystem, Inc.	137,730	\$ 2,166,493			
Metro Bancorp, Inc. (a)	209,130	2,580,664			
		\$ 4,747,157			
Pharmaceuticals – 1.2%					
Auxilium Pharmaceuticals, Inc. (a)	63,800	\$ 1,499,300			
Eurand N.V. (a)	264,840	2,566,300			
Genomma Lab Internacional S.A., "B" (a)	1,000,100	3,321,281			
		\$ 7,386,881			

Strike Price First Exercise

WARRANTS – 0.0%

Alcoholic Beverages – 0.0%

Castle Brands, Inc.

(1 share for 1 warrant)

(Identified Cost,

\$166,679) (a)(z) \$6.57 5/08/07 118,680 \$ 1,374

Portfolio of Investments (unaudited) – continued

Issuer	Shares/Par	Value (\$)
MONEY MARKET FUNDS (v) – 0.9%		
MFS Institutional Money Market Portfolio, 0.22%, at Cost and Net Asset Value	5,305,068	\$ 5,305,068
Total Investments (Identified Cost, \$600,019,153)		<u>\$615,426,932</u>
OTHER ASSETS, LESS LIABILITIES – (0.1)%		<u>(629,883)</u>
Net Assets – 100.0%		<u>\$614,797,049</u>

(a) Non-income producing security.

(v) Underlying fund that is available only to investment companies managed by MFS. The rate quoted is the annualized seven-day yield of the fund at period end.

(z) Restricted securities are not registered under the Securities Act of 1933 and are subject to legal restrictions on resale. These securities generally may be resold in transactions exempt from registration or to the public if the securities are subsequently registered. Disposal of these securities may involve time-consuming negotiations and prompt sale at an acceptable price may be difficult. The fund holds the following restricted securities:

Restricted Securities	Acquisition Date	Cost	Current Market Value
Castle Brands, Inc. (Warrants)	4/18/07	\$166,679	\$1,374
% of Net Assets			0.0%

The following abbreviations are used in this report and are defined:

ADR	American Depository Receipt
IEU	International Equity Unit
PLC	Public Limited Company
REIT	Real Estate Investment Trust

See Notes to Financial Statements

MFS New Discovery Series

FINANCIAL STATEMENTS | STATEMENT OF ASSETS AND LIABILITIES (unaudited)

This statement represents your fund's balance sheet, which details the assets and liabilities comprising the total value of the fund.

At 6/30/10

Assets

Investments –		
Non-affiliated issuers, at value (identified cost, \$594,714,085)		\$610,121,864
Underlying funds, at cost and value		5,305,068
Total investments, at value (identified cost, \$600,019,153)		\$615,426,932
Foreign currency, at value (identified cost, \$339,280)		335,811
Receivables for		
Investments sold		8,228,167
Fund shares sold		288,824
Interest and dividends		82,895
Other assets		3,662
Total assets		\$624,366,291

Liabilities

Payable to custodian		\$8,015
Payables for		
Investments purchased		8,084,747
Fund shares reacquired		876,229
Payable to affiliates		
Investment adviser		31,129
Shareholder servicing costs		593
Distribution and/or service fees		3,091
Administrative services fee		523
Payable for independent Trustees' compensation		1,833
Accrued expenses and other liabilities		563,082
Total liabilities		\$9,569,242
Net assets		\$614,797,049

Net assets consist of

Paid-in capital		\$641,706,198
Unrealized appreciation (depreciation) on investments and translation of assets and liabilities in foreign currencies (net of \$290,434 deferred country tax)		15,113,651
Accumulated net realized gain (loss) on investments and foreign currency transactions		(40,217,877)
Accumulated net investment loss		(1,804,923)
Net assets		\$614,797,049
Shares of beneficial interest outstanding		45,309,601

	Net assets	Shares outstanding	Net asset value per share
Initial Class	\$394,813,775	28,780,616	\$13.72
Service Class	219,983,274	16,528,985	13.31

See Notes to Financial Statements

FINANCIAL STATEMENTS | STATEMENT OF OPERATIONS (unaudited)

This statement describes how much your fund earned in investment income and accrued in expenses. It also describes any gains and/or losses generated by fund operations.

Six months ended 6/30/10**Net investment loss**

Income		
Dividends	\$1,807,019	
Interest	37,956	
Dividends from underlying funds	3,938	
Foreign taxes withheld	(7,708)	
Total investment income		\$1,841,205
Expenses		
Management fee	\$2,924,023	
Distribution and/or service fees	286,213	
Shareholder servicing costs	39,764	
Administrative services fee	51,271	
Independent Trustees' compensation	9,954	
Custodian fee	123,472	
Shareholder communications	118,755	
Auditing fees	24,372	
Legal fees	6,013	
Miscellaneous	18,856	
Total expenses		\$3,602,693
Fees paid indirectly	(265)	
Reduction of expenses by investment adviser	(2,113)	
Net expenses		\$3,600,315
Net investment loss		\$(1,759,110)
Realized and unrealized gain (loss) on investments and foreign currency transactions		
Realized gain (loss) (identified cost basis)		
Investment transactions (net of \$174,406 country tax)	\$62,010,137	
Foreign currency transactions	(135,910)	
Net realized gain (loss) on investments and foreign currency transactions		\$61,874,227
Change in unrealized appreciation (depreciation)		
Investments (net of \$10,348 increase in deferred country tax)	\$(46,826,647)	
Translation of assets and liabilities in foreign currencies	(4,112)	
Net unrealized gain (loss) on investments and foreign currency translation		\$(46,830,759)
Net realized and unrealized gain (loss) on investments and foreign currency		\$15,043,468
Change in net assets from operations		\$13,284,358

See Notes to Financial Statements

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FINANCIAL STATEMENTS | STATEMENTS OF CHANGES IN NET ASSETS

These statements describe the increases and/or decreases in net assets resulting from operations, any distributions, and any shareholder transactions.

	Six months ended 6/30/10 (unaudited)	Year ended 12/31/09
Change in net assets		
From operations		
Net investment loss	\$(1,759,110)	\$(3,294,332)
Net realized gain (loss) on investments and foreign currency transactions	61,874,227	60,533,291
Net unrealized gain (loss) on investments and foreign currency translation	(46,830,759)	191,879,268
Change in net assets from operations	\$13,284,358	\$249,118,227
Change in net assets from fund share transactions	\$(41,510,777)	\$(21,111,266)
Total change in net assets	\$(28,226,419)	\$228,006,961
Net assets		
At beginning of period	643,023,468	415,016,507
At end of period (including accumulated net investment loss of \$1,804,923 and \$45,813, respectively)	\$614,797,049	\$643,023,468

See Notes to Financial Statements

FINANCIAL STATEMENTS | FINANCIAL HIGHLIGHTS

The financial highlights table is intended to help you understand the fund's financial performance for the semiannual period and the past 5 fiscal years. Certain information reflects financial results for a single fund share. The total returns in the table represent the rate by which an investor would have earned (or lost) on an investment in the fund share class (assuming reinvestment of all distributions) held for the entire period.

Initial Class	Six months ended 6/30/10 (unaudited)	Years ended 12/31				
		2009	2008	2007	2006	2005
Net asset value, beginning of period	\$13.43	\$8.23	\$16.63	\$17.42	\$15.65	\$14.87
Income (loss) from investment operations						
Net investment loss (d)	\$(0.03)	\$(0.06)	\$(0.04)	\$(0.09)	\$(0.10)	\$(0.09)
Net realized and unrealized gain (loss) on investments and foreign currency	0.32	5.26	(5.54)	0.58	2.16	0.87
Total from investment operations	\$0.29	\$5.20	\$(5.58)	\$0.49	\$2.06	\$0.78
Less distributions declared to shareholders						
From net realized gain on investments	\$—	\$—	\$(2.82)	\$(1.28)	\$(0.29)	\$—
Net asset value, end of period	\$13.72	\$13.43	\$8.23	\$16.63	\$17.42	\$15.65
Total return (%) (k)(r)(s)	2.16(n)	63.18	(39.33)	2.52	13.22	5.25
Ratios (%) (to average net assets) and Supplemental data:						
Expenses before expense reductions (f)	1.02(a)	1.03	1.01	1.01	1.03	1.06
Expenses after expense reductions (f)	1.02(a)	1.03	1.01	1.01	1.03	1.06
Net investment loss	(0.45)(a)	(0.57)	(0.36)	(0.50)	(0.63)	(0.61)
Portfolio turnover	81	158	121	95	106	132
Net assets at end of period (000 omitted)	\$394,814	\$423,042	\$289,596	\$520,726	\$533,322	\$406,190

See Notes to Financial Statements

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Financial Highlights – continued

Service Class	Six months ended 6/30/10 (unaudited)	Years ended 12/31				
		2009	2008	2007	2006	2005
Net asset value, beginning of period	\$13.05	\$8.01	\$16.31	\$17.15	\$15.45	\$14.71
Income (loss) from investment operations						
Net investment loss (d)	\$(0.05)	\$(0.08)	\$(0.07)	\$(0.13)	\$(0.14)	\$(0.12)
Net realized and unrealized gain (loss) on investments and foreign currency	0.31	5.12	(5.41)	0.57	2.13	0.86
Total from investment operations	\$0.26	\$5.04	\$(5.48)	\$0.44	\$1.99	\$0.74
Less distributions declared to shareholders						
From net realized gain on investments	\$—	\$—	\$(2.82)	\$(1.28)	\$(0.29)	\$—
Net asset value, end of period	\$13.31	\$13.05	\$8.01	\$16.31	\$17.15	\$15.45
Total return (%) (k)(r)(s)	1.99(n)	62.92	(39.52)	2.25	12.93	5.03
Ratios (%) (to average net assets) and Supplemental data:						
Expenses before expense reductions (f)	1.27(a)	1.28	1.26	1.26	1.28	1.30
Expenses after expense reductions (f)	1.27(a)	1.28	1.26	1.26	1.28	1.30
Net investment loss	(0.70)(a)	(0.82)	(0.60)	(0.75)	(0.88)	(0.86)
Portfolio turnover	81	158	121	95	106	132
Net assets at end of period (000 omitted)	\$219,983	\$219,982	\$125,421	\$242,510	\$285,511	\$296,399

(a) Annualized.

(d) Per share data is based on average shares outstanding.

(f) Ratios do not reflect reductions from fees paid indirectly, if applicable.

(k) The total return does not reflect expenses that apply to separate accounts. Inclusion of these charges would reduce the total return figures for all periods shown.

(n) Not annualized.

(r) Certain expenses have been reduced without which performance would have been lower.

(s) From time to time the fund may receive proceeds from litigation settlements, without which performance would be lower.

See Notes to Financial Statements

NOTES TO FINANCIAL STATEMENTS (unaudited)

(1) Business and Organization

MFS New Discovery Series (the fund) is a series of MFS Variable Insurance Trust (the trust). The trust is organized as a Massachusetts business trust and is registered under the Investment Company Act of 1940, as amended, as an open-end management investment company. The shareholders of each series of the trust are separate accounts of insurance companies, which offer variable annuity and/or life insurance products, and qualified retirement and pension plans.

(2) Significant Accounting Policies

General – The preparation of financial statements in conformity with U.S. generally accepted accounting principles 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. In the preparation of these financial statements, management has evaluated subsequent events occurring after the date of the fund's Statement of Assets and Liabilities through the date that the financial statements were issued. The fund can invest in foreign securities, including securities of emerging market issuers. Investments in foreign securities are vulnerable to the effects of changes in the relative values of the local currency and the U.S. dollar and to the effects of changes in each country's legal, political, and economic environment. The markets of emerging markets countries are generally more volatile than the markets of developed countries with more mature economies. All of the risks of investing in foreign securities previously described are heightened when investing in emerging markets countries.

Investment Valuations – Equity securities, including restricted equity securities, are generally valued at the last sale or official closing price as provided by a third-party pricing service on the market or exchange on which they are primarily traded. Equity securities, for which there were no sales reported that day, are generally valued at the last quoted daily bid quotation as provided by a third-party pricing service on the market or exchange on which such securities are primarily traded. Equity securities held short, for which there were no sales reported for that day, are generally valued at the last quoted daily ask quotation as provided by a third-party pricing service on the market or exchange on which such securities are primarily traded. Short-term instruments with a maturity at issuance of 60 days or less generally are valued at amortized cost, which approximates market value. Open-end investment companies are generally valued at net asset value per share. Securities and other assets generally valued on the basis of information from a third-party pricing service may also be valued at a broker/dealer bid quotation. Values obtained from third-party pricing services can utilize both transaction data and market information such as yield, quality, coupon rate, maturity, type of issue, trading characteristics, and other market data. The values of foreign securities and other assets and liabilities expressed in foreign currencies are converted to U.S. dollars using the mean of bid and asked prices for rates provided by a third-party pricing service.

The Board of Trustees has delegated primary responsibility for determining or causing to be determined the value of the fund's investments (including any fair valuation) to the adviser pursuant to valuation policies and procedures approved by the Board. If the adviser determines that reliable market quotations are not readily available, investments are valued at fair value as determined in good faith by the adviser in accordance with such procedures under the oversight of the Board of Trustees. Under the fund's valuation policies and procedures, market quotations are not considered to be readily available for most types of debt instruments and floating rate loans and many types of derivatives. These investments are generally valued at fair value based on information from third-party pricing services. In addition, investments may be valued at fair value if the adviser determines that an investment's value has been materially affected by events occurring after the close of the exchange or market on which the investment is principally traded (such as foreign exchange or market) and prior to the determination of the fund's net asset value, or after the halting of trading of a specific security where trading does not resume prior to the close of the exchange or market on which the security is principally traded. Events that occur on a frequent basis after foreign markets close (such as developments in foreign markets and significant movements in the U.S. markets) and prior to the determination of the fund's net asset value may be deemed to have a material effect on the value of securities traded in foreign markets. Accordingly, the fund's foreign equity securities may often be valued at fair value. The adviser generally relies on third-party pricing services or other information (such as the correlation with price movements of similar securities in the same or other markets; the type, cost and investment characteristics of the security; the business and financial condition of the issuer; and trading and other market data) to assist in determining whether to fair value and at what value to fair value an investment. The value of an investment for purposes of calculating the fund's net asset value can differ depending on the source and method used to determine value. When fair valuation is used, the value of an investment used to determine the fund's net asset value may differ from quoted or published prices for the same investment. There can be no assurance that the fund could obtain the fair value assigned to an investment if it were to sell the investment at the same time at which the fund determines its net asset value per share.

MFS New Discovery Series

Notes to Financial Statements (unaudited) – continued

Various inputs are used in determining the value of the fund's assets or liabilities. These inputs are categorized into three broad levels. In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, an investment's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement. The fund's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the investment. Level 1 includes unadjusted quoted prices in active markets for identical assets or liabilities. Level 2 includes other significant observable market-based inputs (including quoted prices for similar securities, interest rates, prepayment speed, and credit risk). Level 3 includes unobservable inputs, which may include the adviser's own assumptions in determining the fair value of investments. Other financial instruments are derivative instruments not reflected in total investments, such as futures, forwards, swap contracts, and written options. The following is a summary of the levels used as of June 30, 2010 in valuing the fund's assets or liabilities:

Investments at Value	Level 1	Level 2	Level 3	Total
Equity Securities:				
United States	\$492,082,275	\$1,374	\$—	\$492,083,649
Brazil	29,405,142	—	—	29,405,142
Australia	5,703,137	9,426,264	—	15,129,401
United Kingdom	—	13,249,168	—	13,249,168
Netherlands	11,963,303	—	—	11,963,303
India	—	11,256,201	—	11,256,201
Greece	8,525,466	—	—	8,525,466
Canada	6,703,118	—	—	6,703,118
Cayman Islands	5,079,718	—	—	5,079,718
Other Countries	11,365,155	5,361,543	—	16,726,698
Mutual Funds	5,305,068	—	—	5,305,068
Total Investments	\$576,132,382	\$39,294,550	\$—	\$615,426,932

For further information regarding security characteristics, see the Portfolio of Investments.

Foreign Currency Translation – Purchases and sales of foreign investments, income, and expenses are converted into U.S. dollars based upon currency exchange rates prevailing on the respective dates of such transactions or on the reporting date for foreign denominated receivables and payables. Gains and losses attributable to foreign currency exchange rates on sales of securities are recorded for financial statement purposes as net realized gains and losses on investments. Gains and losses attributable to foreign exchange rate movements on receivables, payables, income and expenses are recorded for financial statement purposes as foreign currency transaction gains and losses. That portion of both realized and unrealized gains and losses on investments that results from fluctuations in foreign currency exchange rates is not separately disclosed.

Derivatives – The fund may use derivatives for different purposes, including to earn income and enhance returns, to increase or decrease exposure to a particular market, to manage or adjust the risk profile of the fund, or as alternatives to direct investments. Derivatives may be used for hedging or non-hedging purposes. While hedging can reduce or eliminate losses, it can also reduce or eliminate gains. When the fund uses derivatives as an investment to increase market exposure, or for hedging purposes, gains and losses from derivative instruments may be substantially greater than the derivative's original cost.

Derivative instruments include written options, purchased options, futures contracts, forward foreign currency exchange contracts, and swap agreements. For the six months ended June 30, 2010, the fund did not invest in any derivative instruments.

Security Loans – State Street Bank and Trust Company ("State Street"), as lending agent, may loan the securities of the fund to certain qualified institutions (the "Borrowers") approved by the fund. The loans are collateralized by cash and/or U.S. Treasury and federal agency obligations in an amount typically at least equal to the market value of the securities loaned. The market value of the loaned securities is determined at the close of business of the fund and any additional required collateral is delivered to the fund on the next business day. State Street provides the fund with indemnification against Borrower default. The fund bears the risk of loss with respect to the investment of cash collateral. On loans collateralized by cash, the cash collateral is invested in a money market fund or short-term securities. A portion of the income generated upon investment of the collateral is remitted to the Borrowers, and the remainder is allocated between the fund and the lending agent. On loans collateralized by U.S. Treasury and/or federal agency obligations, a fee is received from the Borrower, and is allocated between the fund and the lending agent. Income from securities lending is included in interest income on the Statement of Operations. The dividend and interest income earned on the securities loaned is accounted for in the same manner as other dividend and interest income.

Indemnifications – Under the fund's organizational documents, its officers and Trustees may be indemnified against certain liabilities and expenses arising out of the performance of their duties to the fund. Additionally, in the normal course of

Notes to Financial Statements (unaudited) – continued

business, the fund enters into agreements with service providers that may contain indemnification clauses. The fund's maximum exposure under these agreements is unknown as this would involve future claims that may be made against the fund that have not yet occurred.

Investment Transactions and Income – Investment transactions are recorded on the trade date. Interest income is recorded on the accrual basis. All premium and discount is amortized or accreted for financial statement purposes in accordance with U.S. generally accepted accounting principles. Dividends received in cash are recorded on the ex-dividend date. Certain dividends from foreign securities will be recorded when the fund is informed of the dividend if such information is obtained subsequent to the ex-dividend date. Dividend and interest payments received in additional securities are recorded on the ex-dividend or ex-interest date in an amount equal to the value of the security on such date.

The fund may receive proceeds from litigation settlements. Any proceeds received from litigation involving portfolio holdings are reflected in the Statement of Operations in realized gain/loss if the security has been disposed of by the fund or in unrealized gain/loss if the security is still held by the fund. Any other proceeds from litigation not related to portfolio holdings are reflected as other income in the Statement of Operations.

Fees Paid Indirectly – The fund's custody fee may be reduced according to an arrangement that measures the value of cash deposited with the custodian by the fund. This amount, for the six months ended June 30, 2010, is shown as a reduction of total expenses on the Statement of Operations.

Tax Matters and Distributions – The fund intends to qualify as a regulated investment company, as defined under Subchapter M of the Internal Revenue Code, and to distribute all of its taxable income, including realized capital gains. As a result, no provision for federal income tax is required. The fund's federal tax returns for the prior three fiscal years remain subject to examination by the Internal Revenue Service. Foreign taxes, if any, have been accrued by the fund in the accompanying financial statements.

Distributions to shareholders are recorded on the ex-dividend date. Income and capital gain distributions are determined in accordance with income tax regulations, which may differ from U.S. generally accepted accounting principles. Certain capital accounts in the financial statements are periodically adjusted for permanent differences in order to reflect their tax character. These adjustments have no impact on net assets or net asset value per share. Temporary differences which arise from recognizing certain items of income, expense, gain or loss in different periods for financial statement and tax purposes will reverse at some time in the future. Distributions in excess of net investment income or net realized gains are temporary overdistributions for financial statement purposes resulting from differences in the recognition or classification of income or distributions for financial statement and tax purposes.

Book/tax differences primarily relate to net operating losses and wash sale loss deferrals.

The tax character of distributions made during the current period, if any, will be determined at fiscal year end. The fund declared no distributions for the year ended December 31, 2009.

The federal tax cost and the tax basis components of distributable earnings were as follows:

As of 6/30/10	
Cost of investments	\$606,083,623
Gross appreciation	56,274,039
Gross depreciation	(46,930,730)
Net unrealized appreciation (depreciation)	\$9,343,309
As of 12/31/09	
Capital loss carryforwards	(96,027,632)
Post-October capital loss deferral	(45,813)
Other temporary differences	(279,668)
Net unrealized appreciation (depreciation)	56,159,606

The aggregate cost above includes prior fiscal year end tax adjustments, if applicable.

As of December 31, 2009, the fund had capital loss carryforwards available to offset future realized gains. Such losses expire as follows:

12/31/16	\$(96,027,632)
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Multiple Classes of Shares of Beneficial Interest – The fund offers multiple classes of shares, which differ in their respective distribution and/or service fees. The fund's income, realized and unrealized gain (loss), and common expenses are allocated to shareholders based on the daily net assets of each class. Dividends are declared separately for each class. Differences in per share dividend rates are generally due to differences in separate class expenses.

MFS New Discovery Series

Notes to Financial Statements (unaudited) – continued

(3) Transactions with Affiliates

Investment Adviser – The fund has an investment advisory agreement with MFS to provide overall investment management and related administrative services and facilities to the fund. The management fee is computed daily and paid monthly at the following annual rates:

First \$1 billion of average daily net assets	0.90%
Average daily net assets in excess of \$1 billion	0.80%

The management fee incurred for the six months ended June 30, 2010 was equivalent to an annual effective rate of 0.90% of the fund's average daily net assets.

Distributor – MFS Fund Distributors, Inc. (MFD), a wholly-owned subsidiary of MFS, is the distributor of shares of the fund. The Trustees have adopted a distribution plan for the Service Class shares pursuant to Rule 12b-1 under the Investment Company Act of 1940.

The fund's distribution plan provides that the fund will pay MFD distribution and/or service fees equal to 0.25% per annum of its average daily net assets attributable to Service Class shares as partial consideration for services performed and expenses incurred by MFD and financial intermediaries (including participating insurance companies that invest in the fund to fund variable annuity and variable life insurance contracts, sponsors of qualified retirement and pension plans that invest in the fund, and affiliates of these participating insurance companies and plan sponsors) in connection with the sale and distribution of the Service Class shares. MFD may subsequently pay all, or a portion, of the distribution and/or service fees to financial intermediaries.

Shareholder Servicing Agent – MFS Service Center, Inc. (MFSC), a wholly-owned subsidiary of MFS, receives a fee from the fund for its services as shareholder servicing agent. For the six months ended June 30, 2010, the fee was \$38,869, which equated to 0.0120% annually of the fund's average daily net assets. MFSC also receives payment from the fund for out-of-pocket expenses paid by MFSC on behalf of the fund. For the six months ended June 30, 2010, these costs amounted to \$895.

Administrator – MFS provides certain financial, legal, shareholder communications, compliance, and other administrative services to the fund. Under an administrative services agreement, the fund partially reimburses MFS the costs incurred to provide these services. The fund is charged an annual fixed amount of \$17,500 plus a fee based on average daily net assets. The administrative services fee incurred for the six months ended June 30, 2010 was equivalent to an annual effective rate of 0.0158% of the fund's average daily net assets.

Trustees' and Officers' Compensation – The fund pays compensation to independent Trustees in the form of a retainer, attendance fees, and additional compensation to Board and Committee chairpersons. The fund does not pay compensation directly to Trustees or officers of the fund who are also officers of the investment adviser, all of whom receive remuneration for their services to the fund from MFS. Certain officers and Trustees of the fund are officers or directors of MFS, MFD, and MFSC.

Other – This fund and certain other funds managed by MFS (the funds) have entered into services agreements (the Agreements) which provide for payment of fees by the funds to Tarantino LLC and Griffin Compliance LLC in return for the provision of services of an Independent Chief Compliance Officer (ICCO) and Assistant ICCO, respectively, for the funds. The ICCO and Assistant ICCO are officers of the funds and the sole members of Tarantino LLC and Griffin Compliance LLC, respectively. The funds can terminate the Agreements with Tarantino LLC and Griffin Compliance LLC at any time under the terms of the Agreements. For the six months ended June 30, 2010, the aggregate fees paid by the fund to Tarantino LLC and Griffin Compliance LLC were \$2,634 and are included in miscellaneous expense on the Statement of Operations. MFS has agreed to reimburse the fund for a portion of the payments made by the fund in the amount of \$2,113, which is shown as a reduction of total expenses in the Statement of Operations. Additionally, MFS has agreed to bear all expenses associated with office space, other administrative support, and supplies provided to the ICCO and Assistant ICCO.

The fund may invest in the MFS Institutional Money Market Portfolio which is managed by MFS and seeks a high level of current income consistent with preservation of capital and liquidity. Income earned on this investment is included in dividends from underlying funds on the Statement of Operations. This money market fund does not pay a management fee to MFS.

(4) Portfolio Securities

Purchases and sales of investments, other than U.S. Government securities, purchased option transactions, and short-term obligations, aggregated \$520,843,459 and \$562,808,277, respectively.

Notes to Financial Statements (unaudited) – continued

(5) Shares of Beneficial Interest

The fund's Declaration of Trust permits the Trustees to issue an unlimited number of full and fractional shares of beneficial interest. Transactions in fund shares were as follows:

	Six months ended 6/30/10		Year ended 12/31/09	
	Shares	Amount	Shares	Amount
Shares sold				
Initial Class	2,235,100	\$31,901,702	7,403,523	\$73,426,835
Service Class	2,542,801	35,028,022	5,182,927	54,257,791
	4,777,901	\$66,929,724	12,586,450	\$127,684,626
Shares reacquired				
Initial Class	(4,945,399)	\$(69,364,071)	(11,110,651)	\$(110,199,556)
Service Class	(2,871,321)	(39,076,430)	(3,979,125)	(38,596,336)
	(7,816,720)	\$(108,440,501)	(15,089,776)	\$(148,795,892)
Net change				
Initial Class	(2,710,299)	\$(37,462,369)	(3,707,128)	\$(36,772,721)
Service Class	(328,520)	(4,048,408)	1,203,802	15,661,455
	(3,038,819)	\$(41,510,777)	(2,503,326)	\$(21,111,266)

(6) Line of Credit

The fund and certain other funds managed by MFS participate in a \$1.1 billion unsecured committed line of credit, subject to a \$1 billion sublimit, provided by a syndication of banks under a credit agreement. Borrowings may be made for temporary financing needs. Interest is charged to each fund, based on its borrowings, generally at a rate equal to the higher of the Federal Reserve funds rate or one month LIBOR plus an agreed upon spread. A commitment fee, based on the average daily, unused portion of the committed line of credit, is allocated among the participating funds at the end of each calendar quarter. In addition, the fund and other funds managed by MFS have established unsecured uncommitted borrowing arrangements with certain banks for temporary financing needs. Interest is charged to each fund, based on its borrowings, at a rate equal to the Federal Reserve funds rate plus an agreed upon spread. For the six months ended June 30, 2010, the fund's commitment fee and interest expense were \$4,533 and \$0, respectively, and are included in miscellaneous expense on the Statement of Operations.

(7) Transactions in Underlying Funds – Affiliated Issuers

An affiliated issuer may be considered one in which the fund owns 5% or more of the outstanding voting securities, or a company which is under common control. For the purposes of this report, the fund assumes the following to be affiliated issuers:

Underlying Funds	Beginning Shares/Par Amount	Acquisitions Shares/Par Amount	Dispositions Shares/Par Amount	Ending Shares/Par Amount
MFS Institutional Money Market Portfolio	3,339,409	117,077,067	(115,111,408)	5,305,068
Underlying Funds	Realized Gain (Loss)	Capital Gain Distributions	Dividend Income	Ending Value
MFS Institutional Money Market Portfolio	\$—	\$—	\$3,938	\$5,305,068

MFS New Discovery Series

RESULTS OF SHAREHOLDER MEETING (unaudited)

At a special meeting of shareholders of MFS Variable Insurance Trust, which was held on January 28, 2010, the following actions were taken:

Item 1. To elect the following individuals as Trustees:

Nominee	Number of Dollars	
	For	Withheld Authority
Robert E. Butler	6,823,651,821.26	1,818,252,669.55
Lawrence H. Cohn, M.D.	6,813,621,200.14	1,828,283,290.67
Maureen R. Goldfarb	6,825,332,620.76	1,816,571,870.05
David H. Gunning	6,823,081,841.37	1,818,822,649.44
William R. Gutow	6,813,678,877.22	1,828,225,613.59
Michael Hegarty	6,827,456,515.87	1,814,447,974.94
John P. Kavanaugh	6,830,363,113.12	1,811,541,377.69
Robert J. Manning	6,825,511,264.17	1,816,393,226.64
Robert C. Pozen	6,824,854,120.27	1,817,050,370.54
J. Dale Sherratt	6,816,913,203.87	1,824,991,286.94
Laurie J. Thomsen	6,823,590,745.56	1,818,313,745.25
Robert W. Uek	6,818,161,803.66	1,823,742,687.15

BOARD REVIEW OF INVESTMENT ADVISORY AGREEMENT

A discussion regarding the Board's most recent review and renewal of the fund's Investment Advisory Agreement with MFS will be available on or about November 1, 2010 by clicking on the fund's name under "Variable Insurance Portfolios — VIT" in the "Products and Performance" section of the MFS Web site (*mfs.com*).

PROXY VOTING POLICIES AND INFORMATION

A general description of the MFS funds' proxy voting policies and procedures is available without charge, upon request, by calling 1-800-225-2606, by visiting the Proxy Voting section of *mfs.com* or by visiting the SEC's Web site at <http://www.sec.gov>.

Information regarding how the fund voted proxies relating to portfolio securities during the most recent twelve-month period ended June 30 is available without charge by visiting the Proxy Voting section of *mfs.com* or by visiting the SEC's Web site at <http://www.sec.gov>.

QUARTERLY PORTFOLIO DISCLOSURE

The fund will file a complete schedule of portfolio holdings with the Securities and Exchange Commission (the Commission) for the first and third quarters of each fiscal year on Form N-Q. The fund's Form N-Q may be reviewed and copied at the:

Public Reference Room
Securities and Exchange Commission
100 F Street, NE, Room 1580
Washington, D.C. 20549

Information on the operation of the Public Reference Room may be obtained by calling the Commission at 1-800-SEC-0330. The fund's Form N-Q is available on the EDGAR database on the Commission's Internet Web site at <http://www.sec.gov>, and copies of this information may be obtained, upon payment of a duplicating fee, by electronic request at the following e-mail address: publicinfo@sec.gov or by writing the Public Reference Section at the above address.

FURTHER INFORMATION

From time to time, MFS may post important information about the fund or the MFS funds on the MFS web site (*mfs.com*). This information is available by visiting the "News & Commentary" section of *mfs.com* or by clicking on the fund's name under "Variable Insurance Portfolios — VIT" in the "Products and Performance" section of *mfs.com*.

