



**Monthly Performance Report**  
for underlying funds available in  
Variable Universal Life Insurance Products issued  
by  
Pacific Life

November 30, 2018





Variable universal life (VUL) insurance's primary objective is to provide death benefit protection with the opportunity for you to allocate your net premium payments and policy cash values among a selection of investment options.

Pacific Life's VUL products may offer over 90 variable investment options in the following investment categories:

- Alternatives
- Asset Allocation
- Domestic Equity
- Emerging Markets Debt
- Emerging Markets Equity
- Fixed Income
- Global Debt
- Global Equity
- International Equity
- Money Market
- Sector

Work with your life insurance producer to determine a mix of investment options that can help you meet your life insurance and financial goals.

Not all variable investment options are available with all Pacific Life VUL products. Please see your VUL prospectus for details.

Each variable investment option invests in a corresponding fund of the American Century Variable Portfolios, Inc., American Funds Insurance Series® Funds, BlackRock® Variable Series Funds, Inc., Dreyfus Variable Investment Fund, Fidelity® Variable Insurance Products Funds, Franklin Templeton Variable Insurance Products Trust, Invesco Variable Insurance Funds, Janus Aspen Series, Lazard Retirement Series, Inc., Legg Mason Partners Variable Equity Trust, Legg Mason Partners Variable Income Trust, Lord Abbett Series Fund, Inc., MFS® Variable Insurance Trust, M Fund Inc., Neuberger Berman Advisers Management Trust, Oppenheimer Variable Account Funds, Pacific Select Fund, PIMCO Variable Insurance Trust, Royce Capital Fund, State Street Variable Insurance Series Funds, Inc., T. Rowe Price Equity Series, Inc., or VanEck VIP Trust.

Although some funds may have names of investment goals/objectives that resemble retail mutual funds managed by the fund managers, these funds will not have the same underlying holdings or performance as the retail mutual funds.

*Insurance products are issued by Pacific Life Insurance Company in all states except New York, and in New York by Pacific Life & Annuity Company. Product availability and features may vary by state.*

### **Important information about the performance report**

Performance information for each of the underlying funds is provided by the respective fund groups. Performance for some of the underlying funds predate their availability in a Pacific Life VUL separate account.

The underlying funds are subject to market fluctuation, investment risk, and possible loss of principal. When redeemed, the value of accumulation units may be worth more or less than the original cost.

The fund performance in this report include only fund level fees and expenses, reinvestment of dividends, and distributions. Performance **does not** include any policy charges. Policy charges are deducted monthly. The policy charges may include, but are not limited to, Cost of Insurance charges, administrative charges, mortality and expense risk charges, coverage charges, and any rider charges. Additionally, a premium load is deducted from each premium payment. Policy performance would be significantly lower after all policy fees and expenses are deducted and policy cash values could be less than total premiums paid. You are encouraged to ask your life insurance producer for a personalized illustration since policy charges can vary by product. The illustration includes an analysis of charges report, to help you understand how the policy charges affect your policy cash values. See the applicable product prospectus for more information. Call (800) 800-7681 for the Fixed Account rates.

All Pacific Select Fund portfolios offered are Class I shares, except for the PSF DFA Balanced Allocation Portfolio which are Class D shares.

### **What you will find in the report**

This report provides you and your life insurance producer with a snapshot of performance on the underlying funds for our VUL products. It shows performance data, if available, over the following periods; 1-month, year-to-date, 1-year, 3-years, 5-years, 10-years and as of a fund's inception date. The report also includes a fund's inception date, annual fund operating expense, as well as Morningstar Category and Lipper index performance.

The funds are grouped by their Lipper Category. In addition to the performance of the funds, performance for their corresponding Lipper Index and Morningstar Category are listed. Providing performance of the Lipper Index and Morningstar Category gives you an idea of how the funds performed within their peer groups in a certain time period.

### **Helpful Terms**

**Asset Class:** Groups of securities that exhibit similar characteristics and behave similarly, such as equities, fixed income, or cash.

**Share Class:** Different share classes typically have different fees, expenses, and charges.

**Inception Date:** The date the fund share class began operations.

**Separate Account:** A type of Investment Company referred to as a unit investment trust which is registered with the U.S. Securities & Exchange Commission under the Investment Company Act of 1940. The assets in the separate accounts are kept separate from the Pacific Life general account.

**Lipper Category:** Grouping of funds by sector, industry, country and market capitalization as determined by Lipper.

**Lipper Indexes:** A series of indexes that tracks the financial performance of different types of funds.

**Morningstar Category:** A proprietary Morningstar data point that funds are assigned to based on the underlying securities in each fund's portfolio.

**Annual Fund Operating Expense:** The cost that a fund incurs for operations. See footnote 1 on page 12 for more details.

# Performance Information

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup> %	Period Ending 11/30/18							Quarter Ending 9/30/18					
						Average Annual Returns						Average Annual Returns			
			1 Mo %	YTD %	1 Yr %	3 Yr %	5 Yr %	10 Yr %	Since Inception %	YTD %	1 Yr %	3 Yr %	5 Yr %	10 Yr %	Since Inception %
<b>Absolute Return Funds</b>															
Lipper Index			-0.24	-2.31	-1.75	1.73	1.04	2.81	—	0.28	1.97	2.92	1.89	2.08	—
<b>PSF Global Absolute Return</b> (Eaton Vance)	9/28/2012	1.15	-1.03	-9.01	-9.27	0.28	2.15	—	1.37	-6.63	-5.90	2.52	2.84	—	1.85
Morningstar US VL Sub Nontraditional Bond			-0.90	-7.33	-7.48	0.99	2.27	—	—	-5.15	-4.41	2.94	2.94	—	—
<b>Alternative Other Funds</b>															
Lipper Index			0.41	-2.93	-2.23	3.24	2.52	—	—	0.18	2.46	5.31	3.69	—	—
<b>PIMCO VIT Global Multi-Asset Managed Allocation—Advisor CI</b>	4/15/2009	1.29	0.56	-2.17	-1.55	4.50	3.81	—	4.84	2.07	5.08	7.63	4.73	—	5.40
Morningstar US VL Sub Tactical Allocation			0.82	-3.30	-2.13	5.21	2.88	7.23	—	0.44	3.79	7.47	4.11	5.44	—
<b>PSF Currency Strategies</b> (UBS)	9/28/2012	0.91	-3.74	0.92	-3.46	0.77	1.17	—	1.54	4.89	1.37	2.65	2.56	—	2.24
Morningstar US VL Sub Multicurrency			-3.37	-0.23	-4.03	0.48	0.08	-3.64	—	3.63	0.54	2.05	1.34	-4.54	—
<b>PSF Diversified Alternatives<sup>3</sup></b> (PLFA)	10/30/2015	1.36	-0.80	-6.32	-6.87	1.97	—	—	2.02	-2.90	-2.27	—	—	—	3.40
Morningstar US VL Sub Multialternative			0.06	-5.09	-4.51	1.09	0.14	1.79	—	-2.18	-0.35	2.44	1.04	0.43	—
<b>PSF Equity Long/Short<sup>3</sup></b> (AQR Capital Management)	4/27/2015	1.40	-1.42	-16.33	-16.21	3.27	—	—	6.68	-9.38	-5.92	8.78	—	—	9.54
Morningstar US VL Sub Long-Short Equity			0.24	-9.14	-8.23	3.31	3.20	6.93	—	-4.21	0.09	6.81	4.75	4.57	—
<b>Core Bond Funds</b>															
Lipper Index			0.43	-1.98	-1.57	1.49	1.94	4.51	—	-1.56	-1.22	1.61	2.16	4.11	—
<b>Lord Abbett Series Fund Total Return VC</b>	4/30/2010	0.69	0.37	-2.10	-1.67	1.71	2.19	—	3.53	-1.62	-1.19	1.88	2.46	—	3.66
Morningstar US VL Sub Intermediate-Term Bond			0.37	-2.23	-1.83	1.24	1.65	4.16	—	-1.78	-1.55	1.39	1.88	3.81	—
<b>PSF Managed Bond</b> (PIMCO)	1/4/1988	0.69	0.16	-1.69	-1.17	1.75	1.94	5.65	6.71	-1.50	-1.37	2.02	2.19	5.36	6.75
Morningstar US VL Sub Intermediate-Term Bond			0.37	-2.23	-1.83	1.24	1.65	4.16	—	-1.78	-1.55	1.39	1.88	3.81	—
<b>Core Plus Bond Funds</b>															
Lipper Index			0.35	-2.20	-1.76	1.56	1.96	—	—	-1.74	-1.53	1.77	2.23	—	—
<b>PSF Diversified Bond</b> (Western Asset)	5/1/2006	0.64	0.38	-3.62	-3.01	2.44	3.20	5.40	3.90	-2.27	-1.61	3.18	3.69	5.12	4.07
Morningstar US VL Sub Intermediate-Term Bond			0.37	-2.23	-1.83	1.24	1.65	4.16	—	-1.78	-1.55	1.39	1.88	3.81	—
<b>Emerging Markets Funds</b>															
Lipper Index			4.11	-13.96	-11.17	7.80	1.02	8.32	—	-9.89	-4.25	10.82	2.64	4.58	—
<b>PSF Emerging Markets</b> (OppenheimerFunds)	4/1/1996	1.17	4.96	-9.24	-6.55	8.40	1.35	10.92	6.93	-4.52	0.10	12.68	3.00	7.46	7.23
Morningstar US VL Sub Diversified Emerging Mkts			3.87	-13.32	-10.82	8.17	0.88	8.64	—	-9.10	-3.76	11.68	2.40	4.84	—

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup> %	Period Ending 11/30/18							Quarter Ending 9/30/18					
			1 Mo	YTD	1 Yr	Average Annual Returns				YTD	1 Yr	Average Annual Returns			
						3 Yr	5 Yr	10 Yr	Since Inception			3 Yr	5 Yr	10 Yr	Since Inception
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
<b>Equity Income Funds</b>															
Lipper Index			2.56	0.64	1.81	9.39	7.66	11.77	—	3.65	9.38	13.26	9.64	9.35	—
<b>T. Rowe Price Equity Income-II</b>	4/30/2002	0.99	3.03	0.21	0.64	10.43	6.98	11.53	6.66	3.12	8.59	14.43	8.94	8.94	6.92
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—
<b>Flexible Portfolio Funds</b>															
Lipper Index			1.13	-1.01	-0.22	5.71	4.77	8.78	—	2.80	6.26	8.62	6.32	7.10	—
<b>American Funds Insurance Series® Asset Allocation CI 4</b>	12/14/2012	0.79	1.32	-0.03	0.90	7.39	6.42	—	9.16	3.96	7.08	11.41	8.38	—	10.18
Morningstar US VL Sub Allocation--50% to 70% Equity			1.22	-1.08	-0.26	5.81	5.07	9.34	—	2.96	6.62	8.78	6.79	7.66	—
<b>BlackRock Global Allocation V.I. III</b>	11/18/2003	1.01	1.21	-3.57	-2.99	4.08	3.07	6.89	6.91	-0.10	2.40	6.65	4.55	5.90	7.25
Morningstar US VL Sub World Allocation			1.04	-3.14	-2.26	4.46	2.86	7.55	—	0.94	4.49	7.26	4.46	6.29	—
<b>BlackRock iShares Dynamic Allocation V.I. CI<sup>3</sup></b>	5/1/2014	0.40	0.91	-0.54	0.51	6.14	—	—	3.81	4.04	7.83	8.94	—	—	5.02
Morningstar US VL Sub Multialternative			0.06	-5.09	-4.51	1.09	0.14	1.79	—	-2.18	-0.35	2.44	1.04	0.43	—
<b>Lazard Retirement Global Dynamic Multi Asset Portfolio - Service Shares<sup>3</sup></b>	4/30/2012	1.05	0.92	-2.18	-1.19	6.49	4.98	—	7.12	3.03	8.16	9.85	7.07	—	8.18
Morningstar US VL Sub World Allocation			1.04	-3.14	-2.26	4.46	2.86	7.55	—	0.94	4.49	7.26	4.46	6.29	—
<b>State Street Total Return V.I.S. CI 3</b>	5/1/2006	0.91	0.57	-2.41	-1.41	5.59	4.55	7.69	4.39	1.96	5.68	8.63	6.28	5.97	4.82
Morningstar US VL Sub Allocation--50% to 70% Equity			1.22	-1.08	-0.26	5.81	5.07	9.34	—	2.96	6.62	8.78	6.79	7.66	—
<b>General Bond Funds</b>															
Lipper Index			-0.18	-2.68	-2.18	2.40	2.12	5.97	—	-1.51	-0.97	2.90	2.54	5.07	—
<b>PIMCO VIT Income Fund Admin Class<sup>3</sup></b>	4/29/2016	0.82	-0.36	-0.45	-0.19	—	—	—	5.14	0.10	0.85	—	—	—	5.74
Morningstar US VL Sub Multisector Bond			-0.30	-2.58	-2.15	3.39	2.42	7.39	—	-0.73	0.07	4.30	3.02	5.98	—
<b>General U.S. Government Funds</b>															
Lipper Index			0.62	-0.76	-0.59	0.62	1.22	3.30	—	-1.03	-1.15	0.39	1.20	3.10	—
<b>PSF Short Duration Bond (T. Rowe Price)</b>	5/1/2003	0.63	0.15	0.70	0.77	1.09	0.91	2.23	1.79	0.56	0.48	1.04	0.96	1.85	1.80
Morningstar US VL Sub Short-Term Bond			0.12	0.14	0.19	0.79	0.65	2.00	—	0.04	-0.07	0.78	0.71	1.66	—
<b>Global Income Funds</b>															
Lipper Index			0.19	-2.44	-2.49	2.28	1.16	4.11	—	-1.88	-1.82	2.87	1.39	3.61	—
<b>PSF Emerging Markets Debt (Ashmore)</b>	4/30/2012	1.06	0.60	-6.54	-5.14	6.30	2.69	—	2.50	-5.43	-4.53	7.83	2.96	—	2.75
Morningstar US VL Sub Emerging Markets Bond			-0.45	-7.24	-6.47	4.06	2.05	5.66	—	-4.89	-4.36	6.12	2.54	4.62	—
<b>Templeton Global Bond VIP CI 2</b>	1/6/1999	0.78	0.65	2.67	1.13	1.68	1.20	5.72	6.66	0.36	-1.43	2.39	1.00	5.32	6.60
Morningstar US VL Sub World Bond			0.38	-0.05	-0.75	1.73	0.79	4.70	—	-0.70	-1.39	2.19	0.83	4.19	—
<b>Global Large-Cap Growth Funds</b>															
Lipper Index			1.49	1.03	2.25	9.17	7.44	11.87	—	7.54	14.09	14.25	9.86	9.10	—
<b>Oppenheimer Global Fund/VA Svc Shares</b>	7/13/2000	1.03	0.77	-6.12	-5.07	7.93	6.69	12.55	5.74	3.04	10.49	13.93	9.80	10.19	6.33
Morningstar US VL Sub World Large Stock			1.24	-4.19	-3.14	6.90	5.32	10.85	—	3.65	8.78	12.39	8.25	8.44	—
<b>Health/Biotechnology Funds</b>															
Lipper Index			5.01	13.89	12.97	8.42	12.43	17.92	—	18.76	18.88	12.21	14.95	15.37	—
<b>PSF Health Sciences (BlackRock)</b>	1/2/2001	1.13	5.50	17.52	16.33	11.79	14.30	21.40	11.07	20.37	22.22	14.89	15.07	18.61	11.33
Morningstar US VL Sub Health			4.78	12.36	11.50	7.44	10.95	15.79	—	17.16	17.09	11.01	13.26	13.28	—

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup> %	Period Ending 11/30/18							Quarter Ending 9/30/18						
			1 Mo	YTD	1 Yr	Average Annual Returns				YTD	1 Yr	Average Annual Returns				
			%	%	%	3 Yr	5 Yr	10 Yr	Since Inception	%	%	3 Yr	5 Yr	10 Yr	Since Inception	
			%	%	%	%	%	%	%	%	%	%	%	%		
<b>High Yield Funds</b>																
Lipper Index			-0.83	-0.37	-0.02	5.61	3.72	9.70	—	1.99	2.55	6.60	4.70	7.35	—	
<b>Lord Abnett Series Fund Bond Debenture VC<sup>3</sup></b>	12/3/2001	0.92	-0.50	-2.16	-1.63	5.52	4.40	9.50	6.99	1.01	2.67	7.04	5.64	8.17	7.27	
Morningstar US VL Sub Multisector Bond			-0.30	-2.58	-2.15	3.39	2.42	7.39	—	-0.73	0.07	4.30	3.02	5.98	—	
<b>PSF Floating Rate Income</b>	(Pacific 4/30/2013)	0.92	-0.93	2.51	2.88	4.69	3.25	—	3.22	3.61	4.65	4.94	3.77	—	3.53	
Asset Management)																
Morningstar US VL Sub Bank Loan			-0.86	2.37	2.66	4.31	2.76	5.63	—	3.37	4.27	4.44	3.15	3.74	—	
<b>PSF Floating Rate Loan</b> (Eaton Vance)	5/1/2007	0.94	-0.94	2.74	3.07	5.05	3.25	5.79	1.96	3.78	4.76	5.19	3.64	3.55	2.08	
Morningstar US VL Sub Bank Loan			-0.86	2.37	2.66	4.31	2.76	5.63	—	3.37	4.27	4.44	3.15	3.74	—	
<b>PSF High Yield Bond</b>	(Pacific 1/4/1988)	0.63	-0.73	-0.79	-0.59	6.09	3.54	9.91	7.02	1.78	2.65	7.10	4.77	7.86	7.15	
Asset Management)																
Morningstar US VL Sub High Yield Bond			-0.88	-1.16	-0.85	5.32	3.15	9.82	—	1.51	1.88	6.46	4.27	7.45	—	
<b>Western Asset Variable Global High Yield Bond Portfolio</b>	2/26/2004	1.08	-0.81	-2.73	-2.43	5.57	2.49	10.25	5.49	-0.74	-0.18	6.67	3.36	7.35	5.70	
<b>CI II<sup>3</sup></b>																
Morningstar US VL Sub High Yield Bond			-0.88	-1.16	-0.85	5.32	3.15	9.82	—	1.51	1.88	6.46	4.27	7.45	—	
<b>Inflation Protected Bond Funds</b>																
Lipper Index			0.21	-2.06	-1.24	1.44	1.02	4.35	—	-0.88	0.34	1.97	1.17	3.35	—	
<b>PSF Inflation Managed</b> (PIMCO)	1/4/1988	1.13	0.26	-2.35	-1.35	1.73	0.94	5.32	6.18	-1.02	0.26	2.33	1.10	4.04	6.26	
Morningstar US VL Sub Inflation-Protected Bond			0.14	-2.66	-1.75	1.17	0.65	4.01	—	-1.31	0.02	1.78	0.82	3.09	—	
<b>PSF Inflation Strategy</b> (Barings)	5/2/2011	1.54	0.38	-1.96	-1.04	0.75	0.10	—	0.69	-0.86	0.38	0.97	0.15	—	0.85	
Morningstar US VL Sub Inflation-Protected Bond			0.14	-2.66	-1.75	1.17	0.65	4.01	—	-1.31	0.02	1.78	0.82	3.09	—	
<b>International Large-Cap Core Funds</b>																
Lipper Index			0.15	-10.30	-9.05	4.11	1.58	7.11	—	-2.63	0.79	8.79	4.08	4.74	—	
<b>Lazard Retirement International Equity - Service Shares<sup>3</sup></b>	9/1/1998	1.10	-0.10	-9.63	-8.56	1.09	1.12	6.89	3.78	-2.33	1.93	5.54	3.68	5.32	4.21	
Morningstar US VL Sub Foreign Large Blend			0.03	-11.09	-9.77	2.95	0.43	6.51	—	-2.59	1.13	8.27	3.28	4.30	—	
<b>International Large-Cap Growth Funds</b>																
Lipper Index			0.79	-9.34	-8.21	3.35	2.13	8.36	—	-1.42	1.88	8.56	4.64	6.10	—	
<b>Invesco V.I. International Growth Series II</b>	9/19/2001	1.18	1.01	-11.11	-10.01	2.15	1.55	7.99	6.56	-3.45	-1.53	7.03	3.70	5.82	7.08	
Morningstar US VL Sub Foreign Large Growth			0.72	-10.06	-8.74	3.92	2.13	7.95	—	-2.12	1.73	9.04	4.67	5.63	—	
<b>M International Equity</b> (Northern Cross)	1/4/1996	0.87	-0.09	-15.76	-14.30	0.84	-1.04	4.92	5.37	-5.96	-3.48	6.53	1.71	3.01	5.92	
Morningstar US VL Sub Foreign Large Blend			0.03	-11.09	-9.77	2.95	0.43	6.51	—	-2.59	1.13	8.27	3.28	4.30	—	
<b>PSF International Large-Cap</b> (MFS)	1/3/2000	1.00	0.81	-7.86	-6.87	4.69	2.44	8.80	3.05	-0.35	3.24	9.24	4.84	6.71	3.51	
Morningstar US VL Sub Foreign Large Growth			0.72	-10.06	-8.74	3.92	2.13	7.95	—	-2.12	1.73	9.04	4.67	5.63	—	
<b>International Multi-Cap Growth Funds</b>																
Lipper Index			0.75	-10.04	-8.58	4.23	2.41	8.08	—	-1.74	2.62	9.56	5.05	5.80	—	
<b>Janus Henderson Overseas Svc Shares</b>	12/31/1999	0.82	-0.40	-10.45	-9.23	2.00	-2.60	6.31	2.33	-1.36	2.50	8.44	0.79	3.33	2.88	
Morningstar US VL Sub Foreign Large Blend			0.03	-11.09	-9.77	2.95	0.43	6.51	—	-2.59	1.13	8.27	3.28	4.30	—	

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup>  %	Period Ending 11/30/18							Quarter Ending 9/30/18						
			1 Mo	YTD	1 Yr	Average Annual Returns				YTD	1 Yr	Average Annual Returns				
			%	%	%	3 Yr	5 Yr	10 Yr	Since Inception	%	%	3 Yr	5 Yr	10 Yr	Since Inception	
			%	%	%	%	%	%	%	%	%	%	%	%		
<b>International Multi-Cap Value Funds</b>																
Lipper Index			-0.58	-12.22	-10.62	3.46	0.80	7.32	—	-3.96	-0.70	8.45	3.57	5.13	—	
<b>PSF International Value</b> (Wellington Management)	1/4/1988	0.90	-0.67	-9.59	-8.00	3.38	0.02	5.45	4.07	-1.80	1.44	7.94	2.53	2.87	4.37	
Morningstar US VL Sub Foreign Large Value			-0.31	-11.72	-10.16	2.69	-0.23	6.00	—	-3.70	-0.66	7.53	2.44	3.66	—	
<b>Templeton Foreign VIP CI 2</b>	5/1/1997	1.08	0.37	-10.66	-8.53	2.61	-1.21	6.58	4.42	-3.30	-0.73	7.20	1.39	4.52	4.84	
Morningstar US VL Sub Foreign Large Value			-0.31	-11.72	-10.16	2.69	-0.23	6.00	—	-3.70	-0.66	7.53	2.44	3.66	—	
<b>International Small/Mid-Cap Growth Funds</b>																
Lipper Index			-0.82	-13.24	-11.04	4.88	3.72	12.52	—	-1.89	3.99	11.14	7.18	9.65	—	
<b>PSF International Small-Cap</b> (QS Investors)	5/1/2006	1.09	-1.67	-17.25	-15.31	3.92	3.75	10.57	2.95	-6.07	-1.82	10.05	7.29	8.15	4.05	
Morningstar US VL Sub Foreign Small/Mid Blend			-0.94	-16.50	-14.54	4.24	3.38	10.79	—	-4.92	-0.71	10.72	6.89	8.20	—	
<b>Large-Cap Core Funds</b>																
Lipper Index			2.22	3.85	5.15	10.88	9.83	13.26	—	9.03	15.56	15.71	12.48	10.84	—	
<b>American Funds Insurance Series® Growth-Income CI 4</b>	12/14/2012	0.78	2.25	6.02	7.19	12.12	10.59	—	13.84	11.69	17.95	17.38	13.35	—	15.30	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>Dreyfus VIF Appreciation Svc Shares</b>	12/29/2000	1.06	1.22	1.62	3.63	10.73	8.29	11.55	5.39	6.11	14.06	15.12	10.60	9.90	5.70	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>Fidelity VIP Contrafund® Svc CI 2</b>	1/12/2000	0.87	1.57	2.11	2.77	9.47	9.05	13.55	6.77	11.44	16.64	15.95	12.49	11.41	7.33	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>Lazard Retirement US Equity Select - Service Shares</b>	3/18/1998	1.00	1.98	6.23	7.45	10.34	8.78	12.50	5.75	11.14	16.89	13.99	11.34	9.84	6.03	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>PSF Dividend Growth</b> (T. Rowe Price)	1/3/2000	0.89	3.95	7.54	7.67	12.10	10.81	14.02	6.36	8.79	15.04	15.64	12.54	11.03	6.49	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>PSF Main Street® Core</b> (OppenheimerFunds)	1/4/1988	0.68	2.25	2.22	3.07	9.61	9.67	13.93	8.64	6.92	9.16	14.37	12.12	11.18	8.84	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>Large-Cap Growth Funds</b>																
Lipper Index			1.90	8.21	8.71	12.83	12.15	15.59	—	16.82	24.76	19.38	15.49	13.21	—	
<b>American Funds Insurance Series® Growth CI 4</b>	12/14/2012	0.85	1.43	7.74	8.64	13.94	12.27	—	14.90	15.83	22.84	20.42	15.11	—	16.81	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>M Large Cap Growth</b> (DSM Capital)	1/4/1996	0.73	4.26	3.49	3.92	12.01	11.83	16.40	9.26	9.54	15.79	17.31	14.85	13.49	9.60	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>PSF Focused Growth</b> (Janus)	10/2/2000	0.97	2.08	14.83	14.49	14.20	13.84	16.98	7.51	25.04	29.83	20.89	17.36	13.54	8.09	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>PSF Growth</b> (MFS)	1/4/1994	0.78	1.48	11.23	11.63	14.02	12.72	15.43	10.43	21.38	29.37	21.06	16.22	12.88	10.89	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>PSF Large-Cap Growth</b> (BlackRock)	1/2/2001	0.90	2.84	11.38	11.99	13.76	12.61	16.33	4.36	21.04	30.24	20.67	15.98	13.75	4.89	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>T. Rowe Price Blue Chip Growth-II</b>	4/30/2002	1.00	3.11	11.00	10.95	14.66	13.55	17.87	9.20	18.52	26.67	21.13	17.06	15.07	9.74	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup>  %	Period Ending 11/30/18							Quarter Ending 9/30/18						
							Average Annual Returns					Average Annual Returns				
			1 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	
%	%	%	%	%	%	%	%	%	%	%	%	%	%			
<b>Large-Cap Value Funds</b>																
Lipper Index			2.29	0.24	1.80	8.86	7.73	11.97	—	4.00	9.55	13.11	10.01	9.51	—	
<b>Lord Abbett Series Fund Fundamental Equity VC</b>	4/30/2003	1.19	3.35	0.68	1.87	8.62	7.11	11.63	9.21	3.09	8.67	12.35	8.78	9.53	9.48	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>MFS VIT Value Series Service Class<sup>3</sup></b>	1/1/2002	0.98	3.45	-0.15	1.02	9.10	8.37	12.30	7.78	1.48	6.46	12.66	10.32	9.80	7.97	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>PSF Comstock (Invesco)</b>	10/2/2000	0.92	1.43	-1.96	0.35	9.26	7.36	12.85	5.30	4.77	12.61	14.94	10.51	10.22	5.74	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>PSF Large-Cap Value (ClearBridge)</b>	1/4/1999	0.82	3.56	1.13	2.69	8.32	7.64	11.74	6.54	2.85	7.60	11.43	9.56	9.55	6.69	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>Mid-Cap Core Funds</b>																
Lipper Index			2.12	-1.26	-0.69	8.51	7.73	13.85	—	5.70	11.81	13.50	10.35	10.77	—	
<b>ClearBridge Variable Mid Cap CI II</b>	5/21/2007	1.10	2.95	-2.51	-1.60	5.18	6.25	13.31	6.44	4.63	8.21	10.24	8.81	10.80	7.20	
Morningstar US VL Sub Mid-Cap Blend			2.01	-2.81	-2.04	7.41	6.94	13.55	—	5.25	11.14	12.59	9.78	10.75	—	
<b>PSF Mid-Cap Equity (Scout)</b>	1/4/1999	0.88	2.11	-1.05	-0.96	12.51	9.81	14.33	9.09	8.65	16.79	18.31	13.15	11.38	9.69	
Morningstar US VL Sub Mid-Cap Blend			2.01	-2.81	-2.04	7.41	6.94	13.55	—	5.25	11.14	12.59	9.78	10.75	—	
<b>Mixed-Asset Target Allocation 2010 Funds</b>																
Lipper Index			0.71	-1.28	-0.57	4.48	3.71	7.21	—	1.39	3.74	6.41	4.79	5.81	—	
<b>Fidelity VIP Freedom 2010 Svc CI 2</b>	4/26/2005	0.71	0.79	-2.19	-1.30	4.62	3.99	8.06	5.34	0.88	3.34	7.03	5.27	6.58	5.65	
Morningstar US VL Sub Target-Date 2000-2010			0.76	-2.23	-1.47	4.11	3.52	7.58	—	0.81	3.13	6.33	4.76	5.99	—	
<b>Mixed-Asset Target Allocation 2015 Funds</b>																
Lipper Index			0.86	-1.29	-0.51	4.89	4.14	7.89	—	1.58	4.32	7.00	5.34	6.15	—	
<b>Fidelity VIP Freedom 2015 Svc CI 2</b>	4/26/2005	0.74	0.87	-2.40	-1.42	5.26	4.48	8.51	5.70	1.33	4.17	8.15	5.96	6.96	6.07	
Morningstar US VL Sub Target-Date 2015			0.86	-2.44	-1.48	5.19	4.41	8.42	—	1.30	4.11	8.08	5.88	6.86	—	
<b>Mixed-Asset Target Allocation 2020 Funds</b>																
Lipper Index			0.92	-1.39	-0.61	5.08	4.34	8.62	—	1.97	4.85	7.59	5.76	6.72	—	
<b>Fidelity VIP Freedom 2020 Svc CI 2</b>	4/26/2005	0.77	0.92	-2.59	-1.53	5.69	4.81	9.33	5.87	1.70	4.88	8.92	6.47	7.35	6.28	
Morningstar US VL Sub Target-Date 2020			0.93	-2.54	-1.60	5.17	4.30	8.67	—	1.65	4.73	8.14	5.90	6.70	—	
<b>Mixed-Asset Target Allocation 2025 Funds</b>																
Lipper Index			1.13	-1.25	-0.46	6.01	5.07	9.59	—	2.39	5.74	8.81	6.64	7.32	—	
<b>Fidelity VIP Freedom 2025 Svc CI 2</b>	4/26/2005	0.79	0.94	-2.80	-1.69	6.03	5.17	10.10	6.35	1.96	5.42	9.65	7.07	8.03	6.82	
Morningstar US VL Sub Target-Date 2025			0.96	-2.64	-1.61	5.86	4.95	9.85	—	2.10	5.57	9.44	6.84	7.76	—	
<b>Mixed-Asset Target Allocation 2030 Funds</b>																
Lipper Index			1.23	-1.41	-0.45	6.80	5.53	10.05	—	3.00	7.04	10.23	7.38	7.72	—	
<b>Fidelity VIP Freedom 2030 Svc CI 2</b>	4/26/2005	0.85	1.09	-3.09	-1.81	6.91	5.77	10.69	6.48	2.58	6.77	11.24	7.96	8.37	7.02	
Morningstar US VL Sub Target-Date 2030			1.14	-3.00	-1.90	6.07	4.97	9.68	—	2.44	6.31	9.94	7.03	7.43	—	



Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup>  %	Period Ending 11/30/18							Quarter Ending 9/30/18						
							Average Annual Returns					Average Annual Returns				
			1 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	
%	%	%	%	%	%	%	%	%	%	%	%	%	%			
<b>Mixed-Asset Target Allocation 2035 Funds</b>																
Lipper Index			1.33	-1.56	-0.60	7.53	6.12	10.73	—	3.59	8.18	11.43	8.20	8.33	—	
<b>Fidelity VIP Freedom 2035 Svc CI 2</b>	4/8/2009	0.88	1.22	-3.22	-1.86	7.61	6.20	—	12.04	3.39	8.11	12.48	8.68	—	13.05	
Morningstar US VL Sub Target-Date 2035			1.22	-2.72	-1.49	7.36	6.09	—	—	3.58	8.21	12.02	8.57	—	—	
<b>Mixed-Asset Target Allocation 2045 Funds</b>																
Lipper Index			1.51	-1.60	-0.56	8.09	6.50	11.15	—	4.22	9.28	12.43	8.79	8.68	—	
<b>Fidelity VIP Freedom 2045 Svc CI 2</b>	4/8/2009	0.89	1.23	-3.36	-1.96	7.62	6.21	—	12.30	3.56	8.43	12.60	8.80	—	13.35	
Morningstar US VL Sub Target-Date 2045			1.27	-2.83	-1.53	7.56	6.11	—	—	3.86	8.77	12.43	8.69	—	—	
<b>Mixed-Asset Target Allocation Aggressive Growth Funds</b>																
Lipper Index			1.46	-1.74	-0.68	7.45	6.16	10.85	—	4.91	10.10	12.25	8.77	8.34	—	
<b>PSF Portfolio Optimization Aggressive-Growth (PLFA)</b>	5/2/2011	1.03	1.43	-3.20	-2.28	7.18	5.92	—	6.52	2.90	7.36	11.58	8.19	—	7.56	
Morningstar US VL Sub Allocation--85%+ Equity			1.45	-2.02	-0.83	7.01	5.50	10.18	—	3.75	7.55	11.31	7.88	7.85	—	
<b>Mixed-Asset Target Allocation Conservative Funds</b>																
Lipper Index			0.68	-1.51	-0.92	3.90	3.20	6.76	—	0.89	2.94	5.56	4.21	5.59	—	
<b>Fidelity VIP Freedom Income Svc CI 2</b>	4/26/2005	0.63	0.62	-1.72	-1.12	3.18	2.77	4.95	3.87	0.02	1.50	4.52	3.46	4.33	4.05	
Morningstar US VL Sub Target-Date Retirement			0.57	-1.77	-1.17	3.15	2.74	5.20	—	0.10	1.63	4.48	3.47	4.30	—	
<b>PSF Pacific Dynamix – Conservative Growth (PLFA)</b>	5/1/2009	0.59	0.81	-1.32	-0.67	4.56	3.98	—	6.79	1.51	3.81	6.52	5.15	—	7.24	
Morningstar US VL Sub Allocation--30% to 50% Equity			0.71	-1.84	-1.14	4.33	3.55	7.79	—	1.26	3.67	6.47	4.80	6.31	—	
<b>PSF Portfolio Optimization Conservative (PLFA)</b>	5/2/2011	0.93	0.22	-2.71	-2.29	3.01	2.73	—	3.41	-0.51	0.70	4.56	3.53	—	3.80	
Morningstar US VL Sub Allocation--15% to 30% Equity			0.56	-1.72	-1.25	2.61	2.44	4.94	—	-0.07	1.27	3.72	3.10	4.16	—	
<b>PSF Portfolio Optimization Moderate-Conservative (PLFA)</b>	5/2/2011	0.95	0.55	-2.93	-2.38	4.22	3.68	—	4.44	0.41	2.56	6.59	4.93	—	5.02	
Morningstar US VL Sub Allocation--30% to 50% Equity			0.71	-1.84	-1.14	4.33	3.55	7.79	—	1.26	3.67	6.47	4.80	6.31	—	
<b>Mixed-Asset Target Allocation Growth Funds</b>																
Lipper Index			1.25	-1.17	-0.27	6.49	5.55	9.46	—	3.61	7.77	10.03	7.49	7.85	—	
<b>PSF Pacific Dynamix – Growth (PLFA)</b>	5/1/2009	0.59	1.42	-1.38	-0.39	7.67	5.92	—	10.08	3.87	8.43	11.57	8.05	—	10.88	
Morningstar US VL Sub Allocation--70% to 85% Equity			1.29	-2.34	-1.31	6.38	4.87	9.78	—	3.03	7.22	10.16	7.01	7.69	—	
<b>PSF Portfolio Optimization Growth (PLFA)</b>	5/2/2011	1.02	1.14	-3.25	-2.42	6.43	5.43	—	6.13	2.08	5.85	10.20	7.45	—	7.05	
Morningstar US VL Sub Allocation--70% to 85% Equity			1.29	-2.34	-1.31	6.38	4.87	9.78	—	3.03	7.22	10.16	7.01	7.69	—	

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup>  %	Period Ending 11/30/18							Quarter Ending 9/30/18						
							Average Annual Returns					Average Annual Returns				
			1 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	
			%	%	%	%	%	%	%	%	%	%	%	%		
<b>Mixed-Asset Target Allocation Moderate Funds</b>																
Lipper Index			1.09	-0.76	-0.01	5.59	4.68	8.45	—	3.00	6.26	8.31	6.24	6.88	—	
<b>PSF DFA Balanced Allocation<sup>3</sup> (PLFA)</b>	4/29/2016	0.78	0.87	-1.68	-0.82	—	—	—	6.40	2.70	6.33	—	—	—	8.80	
Morningstar US VL Sub Allocation--50% to 70% Equity			1.22	-1.08	-0.26	5.81	5.07	9.34	—	2.96	6.62	8.78	6.79	7.66	—	
<b>PSF Pacific Dynamix – Moderate Growth (PLFA)</b>	5/1/2009	0.59	1.12	-1.40	-0.57	6.11	4.95	—	8.45	2.61	6.07	9.02	6.60	—	9.07	
Morningstar US VL Sub Allocation--50% to 70% Equity			1.22	-1.08	-0.26	5.81	5.07	9.34	—	2.96	6.62	8.78	6.79	7.66	—	
<b>PSF Portfolio Optimization Moderate (PLFA)</b>	5/2/2011	0.99	0.82	-3.05	-2.41	5.33	4.57	—	5.30	1.22	4.09	8.33	6.20	—	6.04	
Morningstar US VL Sub Allocation--50% to 70% Equity			1.22	-1.08	-0.26	5.81	5.07	9.34	—	2.96	6.62	8.78	6.79	7.66	—	
<b>Money Market Funds</b>																
Lipper Index			0.15	1.21	1.27	0.56	0.33	0.20	—	0.91	1.06	0.46	0.27	0.20	—	
<b>Fidelity VIP Government Money Market Svc Class</b>	7/7/2000	0.36	0.16	1.38	1.45	0.68	0.41	0.31	1.58	1.05	1.25	0.58	0.35	0.32	1.58	
The Fidelity VIP Government Money Market SEC 7-day SEC yield was 1.92%. The SEC yield more closely reflects the current earnings of the Money Market Portfolio than the total return.																
<b>Multi-Cap Core Funds</b>																
Lipper Index			1.82	1.07	2.06	8.39	7.09	12.19	—	7.04	13.04	13.10	9.65	9.52	—	
<b>ClearBridge Variable Aggressive Growth CI II</b>	2/2/2007	1.04	3.00	1.40	3.48	5.43	7.56	15.79	7.83	9.59	12.52	10.53	10.77	13.34	8.67	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>Fidelity VIP Mid Cap Svc CI 2</b>	1/12/2000	0.88	0.40	-4.07	-2.48	7.49	6.98	13.40	10.30	6.10	12.66	13.78	10.46	11.00	11.00	
Morningstar US VL Sub Mid-Cap Blend			2.01	-2.81	-2.04	7.41	6.94	13.55	—	5.25	11.14	12.59	9.78	10.75	—	
<b>Fidelity VIP Value Strategies Svc CI 2</b>	2/20/2002	0.93	1.58	-7.35	-6.15	4.92	4.97	14.69	7.23	0.92	5.97	10.62	8.18	10.33	7.86	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>Neuberger Berman AMT Sustainable Equity - I Class</b>	2/18/1999	0.94	3.50	4.45	6.06	10.22	8.90	13.53	7.27	8.94	14.87	14.46	11.23	10.51	7.57	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>PSF Mid-Cap Value (Boston Partners)</b>	1/2/2009	0.91	2.17	-4.72	-4.12	7.17	6.46	—	11.90	2.28	7.48	12.68	9.38	—	12.94	
Morningstar US VL Sub Mid-Cap Value			2.32	-3.38	-2.57	7.05	6.75	13.06	—	2.92	7.57	11.98	9.50	10.17	—	
<b>Multi-Cap Growth Funds</b>																
Lipper Index			2.06	7.44	8.02	11.84	10.79	15.20	—	16.16	23.72	17.71	13.89	12.45	—	
<b>Fidelity VIP Growth Svc CI 2</b>	1/12/2000	0.89	1.52	8.40	8.36	13.65	12.46	15.67	4.51	17.99	24.17	20.19	15.47	13.06	5.02	
Morningstar US VL Sub Large Growth			1.75	7.13	7.61	11.92	11.25	15.17	—	16.06	22.90	18.36	14.58	12.70	—	
<b>Janus Henderson Enterprise Svc Shares</b>	12/31/1999	0.98	2.61	8.39	8.59	14.58	13.14	17.96	3.91	15.14	21.64	19.89	15.63	14.07	4.28	
Morningstar US VL Sub Mid-Cap Growth			1.98	5.96	6.14	10.54	8.77	15.08	—	15.69	22.36	16.07	11.72	12.04	—	
<b>PSF Mid-Cap Growth (Ivy)</b>	1/2/2001	0.90	2.59	10.64	11.30	13.50	9.32	15.93	4.98	21.17	29.91	19.18	11.88	13.00	5.57	
Morningstar US VL Sub Mid-Cap Growth			1.98	5.96	6.14	10.54	8.77	15.08	—	15.69	22.36	16.07	11.72	12.04	—	

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup> %	Period Ending 11/30/18							Quarter Ending 9/30/18						
						Average Annual Returns						Average Annual Returns				
			1 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	
%	%	%	%	%	%	%	%	%	%	%	%	%	%			
<b>Multi-Cap Value Funds</b>																
Lipper Index			2.14	-0.99	0.87	8.27	7.19	11.94	—	4.51	10.58	12.84	9.97	9.72	—	
<b>American Century VP Mid Cap Value II</b>	10/29/2004	1.00	3.26	-2.55	-1.35	8.72	9.23	13.88	10.01	2.33	7.07	13.45	11.57	11.61	10.52	
Morningstar US VL Sub Mid-Cap Value			2.32	-3.38	-2.57	7.05	6.75	13.06	—	2.92	7.57	11.98	9.50	10.17	—	
<b>BlackRock Basic Value V.I. CI III</b>	5/24/2004	1.01	0.65	1.69	2.88	7.86	6.28	11.95	6.94	6.79	12.71	11.92	9.03	9.55	7.39	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>M Large Cap Value (AJO)</b>	2/1/2002	0.64	2.12	-2.51	-1.76	5.78	6.46	10.81	6.58	3.06	10.22	10.95	9.46	8.66	7.01	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>PSF Value Advantage (JPMorgan)</b>	4/30/2013	0.89	3.10	1.08	2.80	9.35	8.45	—	10.08	3.83	10.35	12.44	10.61	—	10.95	
Morningstar US VL Sub Large Value			2.23	-0.19	1.24	8.86	7.40	12.01	—	3.81	9.53	13.03	9.70	9.39	—	
<b>Natural Resources Funds</b>																
Lipper Index			-4.20	-14.00	-8.59	2.25	-4.98	3.21	—	0.99	8.27	10.53	-1.59	1.06	—	
<b>VanEck VIP Global Hard Assets Initial CI</b>	9/1/1989	1.09	-5.86	-20.73	-13.52	-0.10	-9.30	1.55	5.23	-6.45	0.77	7.32	-6.00	-0.45	5.86	
Morningstar US VL Sub Natural Resources			-4.92	-19.13	-12.59	-0.23	-8.70	1.82	—	-5.06	2.43	7.30	-5.47	-0.42	—	
<b>Real Estate Funds</b>																
Lipper Index			4.45	2.41	2.60	4.99	8.75	12.79	—	1.27	3.77	6.44	8.28	6.49	—	
<b>PSF Real Estate (Principal REI)</b>	1/4/1999	1.06	4.56	0.48	1.39	4.02	8.13	13.50	10.27	-0.90	2.87	5.16	7.70	6.66	10.28	
Morningstar US VL Sub Real Estate			4.37	2.35	2.57	4.89	8.50	13.60	—	1.11	3.53	6.20	8.02	6.75	—	
<b>S&amp;P 500 Index Objective Funds</b>																
Lipper Index			2.01	4.82	5.96	11.77	10.74	13.94	—	10.29	17.38	16.89	13.55	11.60	—	
<b>PSF Equity Index (BlackRock)</b>	1/30/1991	0.28	2.01	4.76	5.90	11.80	10.77	13.99	9.68	10.26	17.50	16.94	13.59	11.64	9.95	
Morningstar US VL Sub Large Blend			2.26	3.79	4.97	10.67	9.42	13.12	—	8.98	15.36	15.43	12.01	10.65	—	
<b>Science &amp; Technology Funds</b>																
Lipper Index			-0.09	5.93	5.38	15.63	14.42	18.18	—	19.18	26.59	24.66	18.33	15.80	—	
<b>PSF Technology (MFS)</b>	1/2/2001	1.14	0.06	10.21	10.13	11.46	9.82	13.51	1.50	24.33	32.58	19.92	13.15	10.84	2.21	
Morningstar US VL Sub Technology			0.47	7.66	7.07	15.52	13.86	17.74	—	20.34	27.71	24.15	17.22	15.18	—	
<b>Short-Intermediate Investment Grade Debt Funds</b>																
Lipper Index			0.11	0.38	0.47	1.36	1.16	2.72	—	0.33	0.33	1.35	1.26	2.23	—	
<b>PSF Core Income<sup>3</sup> (PAM)</b>	4/27/2015	0.77	-0.18	-2.10	-1.60	2.39	—	—	1.22	-1.04	-0.32	2.88	—	—	1.60	
Morningstar US VL Sub Corporate Bond			-0.19	-2.44	-2.03	1.78	1.72	5.18	—	-1.49	-1.13	2.16	2.19	4.74	—	
<b>Small-Cap Core Funds</b>																
Lipper Index			1.81	-0.05	-0.38	9.80	7.11	13.75	—	9.41	13.32	16.28	10.54	10.84	—	
<b>M Capital Appreciation (Frontier)</b>	1/4/1996	1.05	2.23	-3.15	-3.13	10.06	8.45	16.15	11.26	7.02	11.11	17.59	11.75	12.57	11.84	
Morningstar US VL Sub Small Growth			1.60	6.33	6.93	11.66	8.05	15.32	—	19.01	25.50	18.61	11.49	12.36	—	
<b>Oppenheimer Main Street Small Cap Fund/VA</b>	5/1/1998	0.80	1.53	2.45	2.49	9.63	8.33	15.69	8.31	11.96	13.95	15.89	11.17	12.28	8.85	
<b>Non Service Shares<sup>3</sup></b>																
Morningstar US VL Sub Small Blend			1.28	-0.13	-0.49	8.72	6.42	13.62	—	10.15	13.45	15.49	9.95	10.70	—	
<b>PSF Small-Cap Index (BlackRock)</b>	1/4/1999	0.56	1.54	0.46	0.00	9.49	6.94	13.56	7.54	11.03	14.59	16.51	10.49	10.58	8.15	
Morningstar US VL Sub Small Blend			1.28	-0.13	-0.49	8.72	6.42	13.62	—	10.15	13.45	15.49	9.95	10.70	—	
<b>PSF Small-Cap Value (AllianceBernstein)</b>	5/1/2003	0.98	1.44	-4.51	-4.57	8.29	6.85	12.91	11.14	4.73	8.77	15.13	10.09	10.68	11.94	
Morningstar US VL Sub Small Value			2.17	-3.74	-3.83	8.50	6.07	13.39	—	4.06	8.84	14.36	9.20	10.29	—	
<b>Royce Capital Fund—Micro-Cap Svc CI</b>	5/2/2006	1.67	-0.48	1.08	0.19	7.25	1.29	10.13	3.19	13.03	11.55	13.94	4.91	6.91	4.17	
Morningstar US VL Sub Small Blend			1.28	-0.13	-0.49	8.72	6.42	13.62	—	10.15	13.45	15.49	9.95	10.70	—	

Investment styles and categories based on Lipper <sup>2</sup>	Inception Date	Annual Fund Operating Expense <sup>1</sup> %	Period Ending 11/30/18							Quarter Ending 9/30/18						
			Average Annual Returns							Average Annual Returns						
			1 Mo	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	YTD	1 Yr	3 Yr	5 Yr	10 Yr	Since Inception	
%	%	%	%	%	%	%	%	%	%	%	%	%	%			
<b>Small-Cap Growth Funds</b>																
Lipper Index			1.34	5.95	6.35	10.78	8.05	15.36	—	19.14	24.99	17.99	11.73	12.49	—	
<b>Lord Abbett Series Fund Developing Growth VC</b>	4/30/2010	0.95	-1.05	17.35	19.47	12.24	7.69	—	13.74	37.93	48.30	19.77	11.92	—	16.24	
Morningstar US VL Sub Small Growth			1.60	6.33	6.93	11.66	8.05	15.32	—	19.01	25.50	18.61	11.49	12.36	—	
<b>MFS VIT New Discovery Series Svc CI</b>	5/1/2000	1.19	2.62	8.85	9.55	13.18	7.38	17.50	6.02	20.58	28.54	19.20	10.09	13.91	6.66	
Morningstar US VL Sub Small Growth			1.60	6.33	6.93	11.66	8.05	15.32	—	19.01	25.50	18.61	11.49	12.36	—	
<b>PSF Developing Growth<sup>4</sup> (Lord Abbett)</b>	4/1/1996	0.83	-0.92	18.16	20.38	12.65	6.99	14.66	5.09	38.75	49.34	20.13	11.18	12.15	5.89	
Morningstar US VL Sub Small Growth			1.60	6.33	6.93	11.66	8.05	15.32	—	19.01	25.50	18.61	11.49	12.36	—	
<b>Small-Cap Value Funds</b>																
Lipper Index			1.36	-4.58	-4.97	7.53	5.48	12.18	—	4.22	8.05	13.66	8.86	9.24	—	
<b>PSF Small-Cap Equity (Franklin/BlackRock)</b>	5/2/2005	0.91	2.44	-1.84	-2.51	9.61	5.82	12.34	9.23	5.22	9.18	15.35	8.84	10.46	9.92	
Morningstar US VL Sub Small Value			2.17	-3.74	-3.83	8.50	6.07	13.39	—	4.06	8.84	14.36	9.20	10.29	—	
<b>Utility Funds</b>																
Lipper Index			2.80	6.47	3.50	10.95	7.59	10.35	—	4.05	4.49	10.01	7.62	8.44	—	
<b>MFS VIT Utilities Series Svc CI</b>	5/1/2000	1.05	2.44	4.02	2.96	9.08	5.19	10.76	7.09	3.71	3.93	8.90	5.77	8.75	7.14	
Morningstar US VL Sub Utilities			2.48	3.86	2.56	8.95	5.12	10.21	—	3.46	3.68	8.71	5.63	8.22	—	

## Footnotes

- Annual fund operating expenses are total operating expenses for each underlying fund. The fees and expenses are expressed as a percentage of average net assets as of the fund's most recent fiscal year end. Annual fund operating expenses for some of the funds include management fee waivers, expense caps, and reimbursements calculated at the discretion of the portfolio manager. These fee waivers, expense caps, and reimbursements may be available for a certain period of time. Performance information reflects historical or current fee waivers, expense caps, or reimbursements, without which performance would have been lower. The underlying fund expenses may vary from year to year and are fully described in each fund's prospectus. Actual fees and expenses for the underlying funds vary daily. More detail about each underlying fund's fees and expenses is available in the prospectus for each fund.
- Lipper determines the categories and classifications by reviewing portfolio holdings and associated fundamental financial characteristics. The Lipper classification is a two-step process. First it is assigned a market capitalization of small-, mid-, multi-, or large-cap, and second, it is assigned a style of core, growth, or value.
- Lazard Retirement International Equity Portfolio - Service Shares, Oppenheimer Main Street Small Cap/VA Non Service Shares, PIMCO VIT Income Fund - Administrative Class, PSF DFA Balanced Allocation Portfolio, PSF Diversified Alternatives Portfolio, PSF Core Income Portfolio, PSF Equity Long/Short Portfolio, MFS VIT Value Series Service Class, Western Asset Variable Global High Yield Bond Portfolio Class II, BlackRock iShares Dynamic Allocation V.I. Fund Class I, Lazard Retirement Global Dynamic Multi Asset Portfolio - Service Shares, and Lord Abbett Series Fund Bond Debenture VC are not available with the following variable life insurance products: Pacific Select (policy form number 87-51), Pacific Select Accumulator (policy form number P04SA), Pacific Select Choice (policy form number 93-55), Pacific Select Estate Maximizer (policy form number 97-50), Pacific Select Estate Preserver (96-56), Pacific Select Estate Preserver II (policy form number 97-56), Pacific Select Estate Preserver III (policy form number 0056), Pacific Select Estate Preserver IV (policy form number 0057), Pacific Select Estate Preserver V (policy form number P01SP5), MVP Survivorship (policy form number P03S5M). These products were issued by Pacific Life Insurance Company and are no longer available. Pacific Select Preserver-NY (P0156-NY), Pacific Select Exec II - NY (policy form number P98-52-NY), Pacific Select Exec III - NY (policy form number P03SE3-NY), Pacific Select Exec IV- NY (policy form number P07SE4-NY). These products were issued by Pacific Life & Annuity Company and are no longer available.
- Effective May 1, 2014, VUL premium allocations and transfers into the PSF Developing Growth Portfolio are no longer available.

## Changes to the Portfolios

The performance for certain portfolios includes periods of time when other investment management firms managed these portfolios and/or when investment policies, and possibly the portfolio name, differed. The applicable portfolios and dates such changes occurred are as follows:

**BlackRock Variable Series Funds, Inc.:** BlackRock Basic Value V.I. Fund Class III and BlackRock Global Allocation V.I. Fund Class III on 10/2/06.

**Fidelity Variable Insurance Products Funds:** Fidelity VIP Freedom Income Service Class 2, Fidelity VIP Freedom 2010 Service Class 2, Fidelity VIP Freedom 2015 Service Class 2, Fidelity VIP Freedom 2020 Service Class 2, Fidelity VIP Freedom 2025 Service Class 2, Fidelity VIP Freedom 2030 Service Class 2, Fidelity VIP Freedom 2035 Service Class 2, Fidelity VIP Freedom 2045 Service Class 2 on 10/1/15. Fidelity VIP Government Money Market Service Class on 12/1/15.

**Franklin Templeton Variable Insurance Products Trust:** Templeton Global Bond VIP Fund Class 2 and Templeton Foreign VIP Fund Class 2 on 5/1/14.

**Janus Aspen Series:** Janus Henderson VIT Enterprise Portfolio Service Shares and Janus Henderson VIT Overseas Portfolio Service Shares on 5/1/09 and 6/5/17.

**Lazard Retirement Series, Inc.:** Lazard Retirement US Equity Select-Service Shares on 8/31/18.

**Legg Mason Partners Variable Equity Trust:** ClearBridge Variable Aggressive Growth Portfolio Class II 11/2/09 and 4/29/13. ClearBridge Variable Mid Cap Portfolio Class II on 11/2/09, 4/29/13, and 5/2/16.

**M Fund, Inc.:** M International Equity Fund on 7/1/98, 5/1/10, 6/17/11 and 12/11/18. M Large Cap Growth Fund on 10/12/09. M Capital Appreciation Fund on 5/1/10. M Large Cap Value Fund on 5/1/10 and

**Neuberger Berman Advisers Management Trust:** Neuberger Berman AMT Sustainable Equity Portfolio - I Class on 5/1/18.

**Pacific Select Fund:** Equity Index and Small-Cap Index on 1/1/00 and 9/26/06. Inflation Managed on 5/1/01. Main Street® Core and Emerging Markets on 1/1/03. Comstock on 5/1/03 and 6/1/10. Mid-Cap Growth on 5/1/03 and 11/1/13. Real Estate on 5/1/03 and 5/1/18. International Large-Cap on 1/1/04. Health Sciences on 5/1/05 and 5/1/14. Technology on 5/1/05, 5/1/14, and 11/1/16. Developing Growth on 5/1/05, 5/1/07, 5/1/14, and 11/1/16. Large-Cap Growth on 1/1/06, 5/1/09, 1/1/13, and 5/1/13. International Value on 5/1/06, 1/1/11, and 5/1/17. Large-Cap Value on 10/1/06. Small-Cap Equity on 5/1/07 and 5/1/10. High Yield Bond on 1/1/08. Mid-Cap Equity on 5/1/08 and 1/1/13. Diversified Bond on 2/1/09. Dividend Growth and Floating Rate Loan on 5/1/10. Short Duration Bond on 5/1/11. Growth on 5/1/13. Currency Strategies on 11/1/13 and 10/16/18. Focused Growth on 5/1/14. Inflation Strategy on 5/1/14 and 11/1/17. Mid-Cap Value on 5/1/15. Small-Cap Value on 5/1/14 and 10/30/15.

International Small-Cap on 5/2/16.

**PIMCO Variable Insurance Trust:** PIMCO VIT Global Multi-Asset Managed Allocation - Advisor Class on 5/1/14.

**State Street Variable Insurance Series Funds, Inc.:** State Street Total Return V.I.S. Fund Class 3 on 11/30/16.

**VanEck VIP Trust:** VanEck VIP Global Hard Assets Fund Initial Class on 5/1/10 and 5/2/16.

## About Risks

Every variable investment option has some degree of risk depending on its investments and strategies. While all variable investment options are subject to market risk, some investment options may be subject to greater volatility than others. The variable investment options are not FDIC insured or guaranteed. The risks disclosed below are intended only to illustrate certain principal risks of the variable investment options and are not intended to be complete or exhaustive. Before investing you should carefully read the applicable fund prospectuses.

**Asset allocation** is the process of distributing a fund's investments among varying asset classes of investments (e.g., equities and debt). It does not guarantee diversification, assure a profit, or protect against loss.

**Commodities**, including commodity-linked derivative instruments, will be affected by overall market movements and factors specific to a particular industry or commodity, including factors impacting the commodity markets in general.

**Convertible securities** are generally subject to equity securities risk when the underlying stock price is high relative to the conversion price and to the risks of debt securities when the underlying stock price is low relative to the conversion price. They also tend to be of lower credit quality.

**Currency** exposure subjects a fund to changes in exchange rates between currencies, which may result in increased volatility.

The values of **Debt Securities** are affected by many factors, including prevailing interest rates and the outlook for changes in interest rates, market conditions and market liquidity.

**Derivatives** can be complex instruments that may experience sudden changes in price and liquidity, may be difficult to value, sell or unwind and may be leveraged, which can cause very large swings in value. Privately negotiated derivatives are further subject to the counterparty's ability to satisfy its obligation under the derivatives contract. Commonly-used derivatives include **forward commitments and futures contracts** - which obligate a purchaser to purchase, and a seller to sell, a specific amount of an asset at a specified future date and price; **options** - where, for a premium payment or fee, the purchaser of the option is given the right but not the obligation to buy (a call option) or sell (a put option) the underlying asset, or settle for cash an amount based on the underlying asset, at a specified price during a period of time or on a specified date; and **swap agreements** - where the parties agree to exchange the returns earned on specific assets, and are subject to risks specific to these derivatives.

**Emerging market** securities tend to be more volatile and less liquid than those in developed countries.

**Equity Securities** tend to go up or down in value, sometimes rapidly and unpredictably, in response to many factors, including for reasons related to the particular issuer, general economic conditions and investor perceptions.

## About Risks *continued*

The **Fidelity VIP Government Money Market Portfolio** is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other agency. Although the fund seeks to preserve the value of a shareholder's investment at \$1.00 per share, it is possible to lose money by investing in the fund.

**Floating rate loans** are usually rated below investment grade and thus are subject to greater risk of default than higher rated securities. In addition, their extended trade settlement periods may result in cash not being immediately available to a fund, thus subjecting the fund to greater liquidity risk.

Investments in **foreign markets** are subject to regulatory, political, economic, market and other conditions of those markets, which can make these investments more volatile and less liquid than U.S. investments.

**Fund-of-funds** are subject to risks at the fund-of-funds level and risks of the underlying funds in which they invest in proportion to their allocations to those underlying funds. They are also subject to their own expenses along with the expenses of the underlying funds, which can be higher than expenses incurred when investing directly in an underlying fund. Better returns could be achieved by investing in an individual fund or funds representing a single asset class rather than using asset allocation.

**High yield/high risk bonds** (also known as "junk bonds") have greater risk of default than higher quality bonds that may have a lower yield.

**Growth companies** are considered to have potential for above-average or rapid growth but may be subject to greater price volatility than value companies; **value companies** are considered undervalued so there is a risk that the determination that a value company's stock is undervalued is not correct or not recognized in the market.

The performance of **index funds**, whose investments track an index, may vary, sometimes substantially, from the performance of the fund's benchmark index due to imperfect correlation between the fund's investments and the index. An index fund should perform poorly when its index performs poorly, as opposed to an actively managed fund which generally seeks to outperform a benchmark index.

**Interest rate** changes, or expectations about such changes, may cause the value of debt securities to fluctuate. Debt securities with longer durations or fixed interest rates tend to be more sensitive to changes in interest rates, making them generally more volatile than debt securities with shorter durations or floating or adjustable interest rates.

**Leverage** is investment exposure that exceeds the initial amount invested. Leverage can magnify gains and losses and therefore can increase volatility and market exposure, and may subject a fund to a loss far greater than the initial amount invested.

The value of **mortgage-related and other asset-backed securities** will be affected by factors affecting the housing market or the respective market for the assets underlying these securities. Borrowers or issuers may pay principal later than expected (causing these securities to increase in duration and be more volatile in rising interest rate conditions) or pay principal sooner than expected, causing proceeds to be reinvested at lower prevailing interest rates.

A **non-diversified fund** may invest a greater percentage of its assets in a single issuer than a diversified fund thereby increasing its volatility.

**Non-traditional or alternative investment funds** typically seek one or more of the following: (1) low to moderate correlation with performance of traditional equity and debt investments; (2) to reduce losses during adverse and volatile market conditions; or (3) to outperform the broad equity or debt markets over a complete market cycle; however, these funds may not achieve their intended purpose.

**Sector and concentrated funds**, which invest significantly in an industry or sector, or **geographically concentrated funds**, which invest significantly in a single or limited number of countries or particular geographic region, may be subject to greater price volatility.

**Short positions**, whether taken through a derivative instrument or by conducting a short sale, lose value as the security's or reference asset's price increases; therefore, the loss on a short position is theoretically unlimited. Short positions are subject to leverage risk because they may result in investment exposure in an amount exceeding the initial investment.

Generally, stocks of **small-cap and mid-cap** companies may be riskier and more volatile than those of larger, more established, or **large-cap** companies, though all are subject to equity securities risk.

Sustainable Equity funds could underperform similar funds that do not have a social policy. Among the reasons for this are: undervalued stocks that do not meet the social criteria could outperform those that do, economic or political changes could make certain companies less attractive for investment, and the social policy could cause the fund to sell or avoid stocks that subsequently perform well.

Not all **U.S. government securities** are backed or guaranteed by the U.S. government and there is a risk that the U.S. government will not make timely payments on its debt or provide financial support to U.S. government agencies, instrumentalities or sponsored enterprises if these entities cannot meet their financial obligations.

## Sources and Definitions of Lipper Indices and Morningstar Category Averages

Source of Lipper Indices and Morningstar Category Averages' Month-End and Quarter-End performance: Lipper Analytical Services and Morningstar, Inc., Chicago, IL. All are unmanaged.

### Lipper Analytical Services Indices (Lipper Index)

Comprises the weighted average return of a group of the largest underlying investment options for variable insurance products, if available. If such peer group is not available for a fund, a Lipper Index comprises the weighted average return of a group of the largest funds offered outside of variable insurance products. Each of these Lipper Analytical Services Indices is grouped by Lipper according to portfolio objective.

### Morningstar Category Average Definitions

Morningstar calendar year category averages measure how a category performed over a specific year while correcting for the effects of survivorship-bias and category changes.

Survivorship bias is when mutual funds are excluded from a database because they no longer exist. This happens when a fund is liquidated or merged into another fund. Morningstar calendar year category averages address the effect of survivorship-bias by including obsolete funds in the population for calculating the category average during the historical year when those funds were active.

A fund's investment style category can change, due to changes in its holdings over a sustained period of time. When this occurs, Morningstar reassigns the fund to a new category to better reflect its portfolio positions over the previous three years. Historical calendar year performance is then recalculated to reflect the new category; this is not reflective of the funds investing style in the past. To correct for this, Morningstar calendar year category averages reflect any changes in the funds' category.

The Morningstar Category classifications break funds into peer groups based on their holdings. The categories may help investors identify the top-performing funds, assess potential risk, and build well-diversified portfolios. Morningstar regularly reviews the category structure and the portfolios within each category to ensure that the system meets the needs of investors.

## Definitions of Morningstar Category Averages

**Allocation—15% to 30% Equity**—Funds in allocation categories seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and have equity exposures between 15% and 30%.

**Allocation—30% to 50% Equity**—Funds in allocation categories seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and have equity exposures between 30% and 50%.

**Allocation—50% to 70% Equity**—Funds in allocation categories seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and have equity exposures between 50% and 70%.

**Allocation—70% to 85% Equity**—Funds in allocation categories seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and have equity exposures between 70% and 85%.

**Allocation—85%+ Equity**—Funds in allocation categories seek to provide both income and capital appreciation by investing in multiple asset classes, including stocks, bonds, and cash. These portfolios are dominated by domestic holdings and have equity exposures of over 85%. These funds typically allocate at least 10% to equities of foreign companies and do not exclusively allocate between cash and equities.

**Bank Loan**—Bank-loan portfolios primarily invest in floating-rate bank loans instead of bonds. In exchange for their credit risk, these loans offer high interest payments that typically float above a common short-term benchmark such as the London Interbank Offered Rate, or LIBOR.

**Corporate Bond**—Corporate Bond portfolios concentrate on bonds issued by corporations. These tend to have more credit risk than government or agency-backed bonds. These portfolios hold more than 65% of their assets in corporate bonds, hold less than 40% of their assets in foreign bonds, less than 35% in high yield bonds, and have an effective duration of more than 75% of the Morningstar Core Bond Index.

**Diversified Emerging Markets**—Diversified emerging-markets portfolios tend to divide their assets among 20 or more nations, although they tend to focus on the emerging markets of Asia and Latin America rather than on those of the Middle East, Africa, or Europe. These portfolios invest predominantly in emerging market equities, but some funds also invest in both equities and fixed income investments from emerging markets.

**Emerging-Markets Bond**—Emerging-markets bond portfolios invest more than 65% of their assets in foreign bonds from developing countries. The largest portion of the emerging-markets bond market comes from Latin America, followed by Eastern Europe. Africa, the Middle East, and Asia make up the rest.

**Foreign Large-Blend**—Foreign large-blend portfolios invest in a variety of big international stocks. Most of these portfolios divide their assets among a dozen or more developed markets, including Japan, Britain, France, and Germany. These portfolios primarily invest in stocks that have market caps in the top 70% of each economically integrated market (such as Europe or Asia ex-Japan). The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios typically will have less than 20% of assets invested in U.S. stocks.

## Definitions of Morningstar Category Averages *continued*

**Foreign Large-Growth**—Foreign large-growth portfolios focus on high-priced growth stocks, mainly outside of the United States. Most of these portfolios divide their assets among a dozen or more developed markets, including Japan, Britain, France, and Germany. These portfolios primarily invest in stocks that have market caps in the top 70% of each economically integrated market (such as Europe or Asia ex-Japan). Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields). These portfolios typically will have less than 20% of assets invested in U.S. stocks.

**Foreign Large-Value**—Foreign large-value portfolios invest mainly in big international stocks that are less expensive or growing more slowly than other large-cap stocks. Most of these portfolios divide their assets among a dozen or more developed markets, including Japan, Britain, France, and Germany. These portfolios primarily invest in stocks that have market caps in the top 70% of each economically integrated market (such as Europe or Asia ex-Japan). Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow). These portfolios typically will have less than 20% of assets invested in U.S. stocks.

**Foreign Small/Mid-Blend**—Foreign small/mid-blend portfolios invest in a variety of international stocks that are smaller. These portfolios primarily invest in stocks that fall in the bottom 30% of each economically integrated market (such as Europe or Asia ex-Japan). The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios typically will have less than 20% of assets invested in U.S. stocks.

**Health**—Health portfolios focus on the medical and health-care industries. Most invest in a range of companies, buying everything from pharmaceutical and medical-device makers to HMOs, hospitals, and nursing homes. A few portfolios concentrate on just one industry segment, such as service providers or biotechnology firms.

**High-Yield Bond**—High-yield bond portfolios concentrate on lower-quality bonds, which are riskier than those of higher-quality companies. These portfolios generally offer higher yields than other types of portfolios, but they are also more vulnerable to economic and credit risk. These portfolios primarily invest in U.S. high-income debt securities where at least 65% or more of bond assets are not rated or are rated by a major agency such as Standard & Poor's or Moody's at the level of BB (considered speculative for taxable bonds) and below.

**Inflation-Protected Bond**—Inflation-protected bond portfolios invest primarily in debt securities that adjust their principal values in line with the rate of inflation. These bonds can be issued by any organization, but the U.S. Treasury is currently the largest issuer for these types of securities.

**Intermediate-Term Bond**—Intermediate-term bond portfolios invest primarily in corporate and other investment-grade U.S. fixed-income issues and typically have durations of 3.5 to 6.0 years. These portfolios are less sensitive to interest rates, and therefore less volatile, than portfolios that have longer durations. Morningstar calculates monthly breakpoints using the effective duration of the Morningstar Core Bond Index in determining duration assignment. Intermediate-term is defined as 75% to 125% of the three-year average effective duration of the MCB1.

**Large Blend**—Large-blend portfolios are fairly representative of the overall US stock market in size, growth rates and price. Stocks in the top 70% of the capitalization of the US equity market are defined as large cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate. These portfolios tend to invest across the spectrum of US industries, and owing to their broad exposure, the portfolios' returns are often similar to those of the S&P 500 Index.

**Large Growth**—Large-growth portfolios invest primarily in big U.S. companies that are projected to grow faster than other large-cap stocks. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields). Most of these portfolios focus on companies in rapidly expanding industries.

**Large Value**—Large-value portfolios invest primarily in big U.S. companies that are less expensive or growing more slowly than other large-cap stocks. Stocks in the top 70% of the capitalization of the U.S. equity market are defined as large cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

**Long-Short Equity**—Long-short portfolios hold sizeable stakes in both long and short positions in equities, exchange traded funds, and related derivatives. Some funds that fall into this category will shift their exposure to long and short positions depending on their macro outlook or the opportunities they uncover through bottom-up research. At least 75% of the assets are in equity securities or derivatives, and funds in the category will typically have beta values to relevant benchmarks of between 0.3 and 0.8 over a three-year period.

**Mid-Cap Blend**—The typical mid-cap blend portfolio invests in U.S. stocks of various sizes and styles, giving it a middle-of-the-road profile. Most shy away from high-priced growth stocks but aren't so price-conscious that they land in value territory. The U.S. mid-cap range for market capitalization typically falls between \$1 billion and \$8 billion and represents 20% of the total capitalization of the U.S. equity market. The blend style is assigned to portfolios where neither growth nor value characteristics predominate.

**Mid-Cap Growth**—Some mid-cap growth portfolios invest in stocks of all sizes, thus leading to a mid-cap profile, but others focus on midsize companies. Mid-cap growth portfolios target U.S. firms that are projected to grow faster than other mid-cap stocks, therefore commanding relatively higher prices. The U.S. mid-cap range for market capitalization typically falls between \$1 billion and \$8 billion and represents 20% of the total capitalization of the U.S. equity market. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

**Mid-Cap Value**—Some mid-cap value portfolios focus on medium-size companies while others land here because they own a mix of small-, mid-, and large-cap stocks. All look for U.S. stocks that are less expensive or growing more slowly than the market. The U.S. mid-cap range for market capitalization typically falls between \$1 billion and \$8 billion and represents 20% of the total capitalization of the U.S. equity market. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

**Money Market—Taxable**—These portfolios invest in short-term money market securities in order to provide a level of current income that is consistent with the preservation of capital. These funds do not designate themselves as Prime in Form N-MFP.



## Definitions of Morningstar Category Averages *continued*

**Multialternative**—These funds offer investors exposure to several different alternative investment tactics. Funds in this category have a majority of their assets exposed to alternative strategies. An investor's exposure to different tactics may change slightly over time in response to market movements. Funds in this category include both funds with static allocations to alternative strategies and funds tactically allocating among alternative strategies and asset classes. The gross short exposure is greater than 20%.

**Multicurrency**—Currency portfolios invest in multiple currencies through the use of short-term money market instruments; derivative instruments including and not limited to forward currency contracts, index swaps, and options; and cash deposits. These funds include both systematic currency traders and discretionary traders.

**Multisector Bond**—Multisector-bond portfolios seek income by diversifying their assets among several fixed-income sectors, usually U.S. government obligations, U.S. corporate bonds, foreign bonds, and high-yield U.S. debt securities. These portfolios typically hold 35% to 65% of bond assets in securities that are not rated or are rated by a major agency such as Standard & Poor's or Moody's at the level of BB (considered speculative for taxable bonds) and below.

**Natural Resources**—Natural-resources portfolios focus on commodity-based industries such as energy, chemicals, minerals, and forest products in the United States or outside of the United States. Some portfolios invest across this spectrum to offer broad natural-resources exposure. Others concentrate heavily or even exclusively in specific industries. Portfolios that concentrate primarily in energy-related industries are part of the equity energy category.

**Nontraditional Bond**—The Nontraditional Bond category contains funds that pursue strategies divergent in one or more ways from conventional practice in the broader bond-fund universe. Many funds in this group describe themselves as "absolute return" portfolios, which seek to avoid losses and produce returns uncorrelated with the overall bond market; they employ a variety of methods to achieve those aims. Another large subset are self-described "unconstrained" portfolios that have more flexibility to invest tactically across a wide swath of individual sectors, including high-yield and foreign debt, and typically with very large allocations. Funds in the latter group typically have broad freedom to manage interest-rate sensitivity, but attempt to tactically manage those exposures in order to minimize volatility. The category is also home to a subset of portfolios that attempt to minimize volatility by maintaining short or ultra-short duration portfolios, but explicitly court significant credit and foreign bond market risk in order to generate high returns. Funds within this category often will use credit default swaps and other fixed income derivatives to a significant level within their portfolios.

**Real Estate**—Real estate portfolios invest primarily in real estate investment trusts of various types. REITs are companies that develop and manage real estate properties. There are several different types of REITs, including apartment, factory-outlet, health-care, hotel, industrial, mortgage, office, and shopping center REITs. Some portfolios in this category also invest in real estate operating companies.

**Short-Term Bond**—Short-term bond portfolios invest primarily in corporate and other investment-grade U.S. fixed-income issues and typically have durations of 1.0 to 3.5 years. These portfolios are attractive to fairly conservative investors, because they are less sensitive to interest rates than portfolios with longer durations. Morningstar calculates monthly breakpoints using the effective duration of the Morningstar Core Bond Index in determining duration assignment. Short-term is defined as 25% to 75% of the three-year average effective duration of the MCBFI.

**Small Blend**—Small-blend portfolios favor U.S. firms at the smaller end of the market-capitalization range. Some aim to own an array of value and growth stocks while others employ a discipline that leads to holdings with valuations and growth rates close to the small-cap averages. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. The blend style is assigned to portfolios where neither growth nor value characteristics predominate.

**Small Growth**—Small-growth portfolios focus on faster-growing companies whose shares are at the lower end of the market-capitalization range. These portfolios tend to favor companies in up-and-coming industries or young firms in their early growth stages. Because these businesses are fast-growing and often richly valued, their stocks tend to be volatile. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. Growth is defined based on fast growth (high growth rates for earnings, sales, book value, and cash flow) and high valuations (high price ratios and low dividend yields).

**Small Value**—Small-value portfolios invest in small U.S. companies with valuations and growth rates below other small-cap peers. Stocks in the bottom 10% of the capitalization of the U.S. equity market are defined as small cap. Value is defined based on low valuations (low price ratios and high dividend yields) and slow growth (low growth rates for earnings, sales, book value, and cash flow).

**Tactical Allocation**—Tactical Allocation portfolios seek to provide capital appreciation and income by actively shifting allocations across investments. These portfolios have material shifts across equity regions, and bond sectors on a frequent basis. To qualify for the tactical allocation category, the fund must have minimum exposures of 10% in bonds and 20% in equity. Next, the fund must historically demonstrate material shifts in sector or regional allocations either through a gradual shift over three years or through a series of material shifts on a quarterly basis. Within a three-year period, typically the average quarterly changes between equity regions and bond sectors exceeds 15% or the difference between the maximum and minimum exposure to a single equity region or bond sector exceeds 50%.

**Target-Date 2000-2010**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2000-2010) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date 2015**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2011-2015) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date 2020**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2016-2020) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

## Definitions of Morningstar Category Averages *continued*

**Target-Date 2025**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2021-2025) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date 2030**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2026-2030) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date 2035**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2031-2035) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date 2045**—Target-date portfolios provide diversified exposure to stocks, bonds, and cash for those investors who have a specific date in mind (in this case, the years 2041-2045) for retirement. These portfolios aim to provide investors with an optimal level of return and risk, based solely on the target date. Management adjusts the allocation among asset classes to more-conservative mixes as the target date approaches, following a preset glide path. A target-date portfolio is part of a series of funds offering multiple retirement dates to investors.

**Target-Date Retirement**—Target-Date Retirement portfolios provide a mix of stocks, bonds, and cash for those investors already in or entering retirement. These portfolios tend to be managed to more of a conservative asset-allocation strategy. These portfolios aim to provide investors with steady income throughout retirement.

**Technology**—Technology portfolios buy high-tech businesses in the U.S. or outside of the U.S. Most concentrate on computer, semiconductor, software, networking, and Internet stocks. A few also buy medical-device and biotechnology stocks, and some concentrate on a single technology industry.

**Ultrashort Bond**—Ultrashort-bond portfolios invest primarily in investment-grade U.S. fixed-income issues and have durations typically of less than one year. This category can include corporate or government ultrashort bond portfolios, but it excludes international, convertible, multisector, and high-yield bond portfolios. Because of their focus on bonds with very short durations, these portfolios offer minimal interest-rate sensitivity and therefore low risk and total return potential. Morningstar calculates monthly breakpoints using the effective duration of the Morningstar Core Bond Index in determining duration assignment. Ultrashort is defined as 25% of the three-year average effective duration of the MCBI.

**Utilities**—Utilities portfolios seek capital appreciation by investing primarily in equity securities of U.S. or non-U.S. public utilities including electric, gas, and telephone-service providers.

**World Allocation**—World-allocation portfolios seek to provide both capital appreciation and income by investing in three major areas: stocks, bonds, and cash. While these portfolios do explore the whole world, most of them focus on the U.S., Canada, Japan, and the larger markets in Europe. It is rare for such portfolios to invest more than 10% of their assets in emerging markets. These portfolios typically have at least 10% of assets in bonds, less than 70% of assets in stocks, and at least 40% of assets in non-U.S. stocks or bonds.

**World Bond**—World-bond portfolios invest 40% or more of their assets in foreign bonds. Some world-bond portfolios follow a conservative approach, favoring high-quality bonds from developed markets. Others are more adventurous and own some lower-quality bonds from developed or emerging markets. Some portfolios invest exclusively outside the U.S., while others regularly invest in both U.S. and non-U.S. bonds.

**World Stock**—World-stock portfolios have few geographical limitations. It is common for these portfolios to invest the majority of their assets in the U.S., Europe, and Japan, with the remainder divided among the globe's smaller markets. These portfolios typically have 20%-60% of assets in U.S. stocks.

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