

PORTFOLIO OPTIMIZATION PORTFOLIOS

Available through Pacific Life Variable Annuities



PORTFOLIO ALLOCATIONS AS OF 6/30/19

Why Portfolio Optimization Portfolios

The Portfolio Optimization Portfolios are designed to make investment diversification easier for you by offering:

- **One-Step Diversification:** Each Portfolio Optimization Portfolio is a fund-of-funds diversified among multiple asset classes, providing you with a core asset-allocation solution to help meet your financial goals.
- **A Dedicated Team that Manages Multi-Asset-Class Solutions:** The portfolio management team's investment approach uses three fundamental disciplines:
 - Asset allocation
 - Manager research
 - Investment risk management
- **Target-Risk Portfolios to Fit Your Needs:** The Portfolio Optimization Portfolios range in investment style from conservative to aggressive-growth to help match your risk tolerance and investment goals.

Why A Pacific Life Variable Annuity

A variable annuity is a long-term contract between you and an insurance company that helps you grow, protect, and manage retirement savings in a tax-advantaged way. It can help you:

- **Grow retirement savings faster** through the power of tax deferral.
- **Manage your investment strategy** by transferring among a diverse selection of investment options free of tax consequences.
- **Convert your assets** to guaranteed lifetime retirement income.
- **Leave a financial legacy** through a guaranteed death benefit.

Our variable annuities also offer features such as asset allocation and optional principal protection. Optional benefits are available for an additional cost.

Guarantees, including optional benefits, are subject to Pacific Life's financial strength and claims-paying ability and do not protect the value of the variable investment options, which are subject to market risk. Annuity withdrawals and other distributions of taxable amounts, including death benefit payouts, will be subject to ordinary income tax. For nonqualified contracts, an additional 3.8% federal tax may apply on net investment income. If withdrawals and other distributions are taken prior to age 59½, an additional 10% federal tax may apply. A withdrawal charge also may apply. Withdrawals will reduce the contract value and the value of the death benefits, and also may reduce the value of any optional benefits.

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.

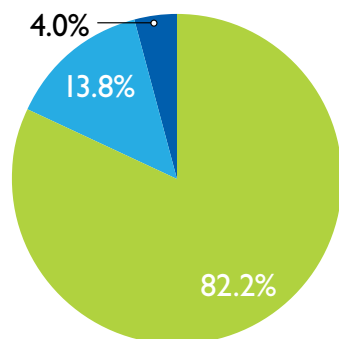
**No bank guarantee • Not a deposit • May lose value
Not FDIC/NCUA insured • Not insured by any federal government agency**

PORTFOLIO OPTIMIZATION PORTFOLIOS

PORTFOLIO ALLOCATIONS AS OF 6/30/19

CONSERVATIVE ✓

Broad Asset-Class Allocations



- Fixed Income
- Domestic Equity
- International Equity

Each underlying fund may include exposure to multiple broad asset classes. Total allocation percentages may not equal 100% due to rounding.

Although some portfolios may have names or investment goals that resemble retail mutual funds managed by the same money manager, these portfolios may not have the same underlying holdings or performance as the retail mutual funds. Investment results may be higher or lower.

Manager/ Fund Name	Morningstar Category™	Allocation (%)
Fixed Income		
Ashmore Emerging Markets Debt	Emerging-Markets Bond	4.0
Barings Inflation Strategy	Inflation-Protected Bond	1.8
Pacific Asset Management Core Income	Corporate Bond	3.8
Pacific Asset Management Floating Rate Income	Bank Loan	2.5
Pacific Asset Management High Yield Bond	High-Yield Bond	5.0
PIMCO Inflation Managed	Inflation-Protected Bond	1.7
PIMCO Managed Bond	Intermediate Core Bond	18.5
T. Rowe Price Short Duration Bond	Short-Term Bond	13.4
UBS/Neuberger Berman Currency Strategies	Multicurrency	3.7
Western Asset Management Diversified Bond	Intermediate Core Bond	27.8
Domestic Equity		
AB Small-Cap Value	Small Value	0.2
AQR Equity Long/Short	Long-Short Equity	0.8
BlackRock Equity Index	Large Blend	0.8
BlackRock Large-Cap Growth	Large Growth	0.9
Boston Partners Mid-Cap Value	Mid-Cap Value	1.8
ClearBridge Large-Cap Value	Large Value	1.1
Franklin/BlackRock Small-Cap Equity	Small Value	0.3
Invesco Comstock	Large Value	1.0
Invesco Oppenheimer Main Street® Core	Large Blend	0.5
Ivy Mid Cap Growth	Mid-Cap Growth	1.3
JPMorgan Value Advantage	Large Value	1.2
MFS® Growth	Large Growth	1.0
Principal Real Estate	Real Estate	0.5
Scout Investments Mid-Cap Equity	Mid-Cap Blend	1.4
T. Rowe Price Dividend Growth	Large Blend	1.1
International Equity		
Invesco Oppenheimer Emerging Markets	Diversified Emerging Markets	1.5
MFS® International Large-Cap	Foreign Large Growth	1.2
Wellington International Value	Foreign Large Value	1.4

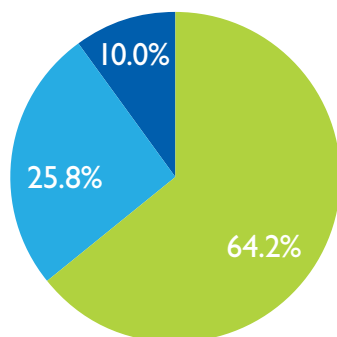
✓ Eligible for an optional living benefit.

PORTFOLIO OPTIMIZATION PORTFOLIOS

PORTFOLIO ALLOCATIONS AS OF 6/30/19

MODERATE-CONSERVATIVE ✓

Broad Asset-Class Allocations



- Fixed Income
- Domestic Equity
- International Equity

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Manager/ Fund Name	Morningstar Category	Allocation (%)
Fixed Income		
Ashmore Emerging Markets Debt	Emerging-Markets Bond	4.0
Barings Inflation Strategy	Inflation-Protected Bond	1.8
Pacific Asset Management Core Income	Corporate Bond	2.9
Pacific Asset Management Floating Rate Income	Bank Loan	2.5
Pacific Asset Management High Yield Bond	High-Yield Bond	7.0
PIMCO Inflation Managed	Inflation-Protected Bond	1.7
PIMCO Managed Bond	Intermediate Core Bond	13.9
T. Rowe Price Short Duration Bond	Short-Term Bond	6.0
UBS/Neuberger Berman Currency Strategies	Multicurrency	3.7
Western Asset Management Diversified Bond	Intermediate Core Bond	20.9
Domestic Equity		
AB Small-Cap Value	Small Value	0.4
AQR Equity Long/Short	Long-Short Equity	0.8
BlackRock Equity Index	Large Blend	1.7
BlackRock Large-Cap Growth	Large Growth	2.1
BlackRock Small-Cap Index	Small Blend	0.4
Boston Partners Mid-Cap Value	Mid-Cap Value	3.0
ClearBridge Large-Cap Value	Large Value	2.2
Franklin/BlackRock Small-Cap Equity	Small Value	0.4
Invesco Comstock	Large Value	2.1
Invesco Oppenheimer Main Street® Core	Large Blend	1.0
Ivy Mid-Cap Growth	Mid-Cap Growth	1.5
JPMorgan Value Advantage	Large Value	2.3
Lord Abbett Developing Growth	Small Growth	0.1
MFS® Growth	Large Growth	2.5
Principal Real Estate	Real Estate	1.0
Rothschild Small-Cap Growth	Small Growth	0.2
Scout Investments Mid-Cap Equity	Mid-Cap Blend	2.1
T. Rowe Price Dividend Growth	Large Blend	2.2
International Equity		
Invesco Oppenheimer Emerging Markets	Diversified Emerging Markets	2.5
MFS® International Large-Cap	Foreign Large Growth	3.2
QS Investors International Small-Cap	Foreign Small/Mid-Blend	0.5
Wellington International Value	Foreign Large Value	3.8

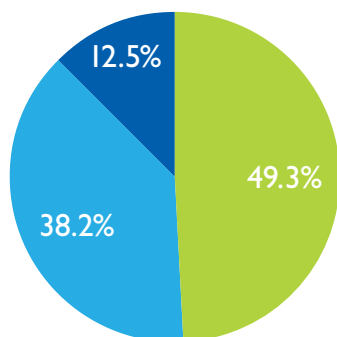
✓ Eligible for an optional living benefit.

PORTFOLIO OPTIMIZATION PORTFOLIOS

PORTFOLIO ALLOCATIONS AS OF 6/30/19

MODERATE ✓

Broad Asset-Class Allocations



- Fixed Income
- Domestic Equity
- International Equity

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Although some portfolios may have names or investment goals that resemble retail mutual funds managed by the same money manager, these portfolios may not have the same underlying holdings or performance as the retail mutual funds. Investment results may be higher or lower.

Manager/ Fund Name	Morningstar Category	Allocation (%)
Fixed Income		
Ashmore Emerging Markets Debt	Emerging-Markets Bond	3.0
Barings Inflation Strategy	Inflation-Protected Bond	0.8
Pacific Asset Management Core Income	Corporate Bond	2.5
Pacific Asset Management Floating Rate Income	Bank Loan	2.0
Pacific Asset Management High Yield Bond	High-Yield Bond	3.5
PIMCO Inflation Managed	Inflation-Protected Bond	0.7
PIMCO Managed Bond	Intermediate Core Bond	12.2
T. Rowe Price Short Duration Bond	Short-Term Bond	3.5
UBS/Neuberger Berman Currency Strategies	Multicurrency	2.8
Western Asset Management Diversified Bond	Intermediate Core Bond	18.4
Domestic Equity		
AB Small-Cap Value	Small Value	0.6
AQR Equity Long/Short	Long-Short Equity	0.6
BlackRock Equity Index	Large Blend	2.7
BlackRock Large-Cap Growth	Large Growth	4.0
BlackRock Small-Cap Index	Small Blend	0.5
Boston Partners Mid-Cap Value	Mid-Cap Value	3.7
ClearBridge Large-Cap Value	Large Value	3.0
Franklin/BlackRock Small-Cap Equity	Small Value	0.6
Invesco Comstock	Large Value	2.9
Invesco Oppenheimer Main Street® Core	Large Blend	1.7
Ivy Mid-Cap Growth	Mid-Cap Growth	2.2
JPMorgan Value Advantage	Large Value	3.2
Lord Abbett Developing Growth	Small Growth	0.1
MFS® Growth	Large Growth	4.7
Principal Real Estate	Real Estate	1.5
Rothschild Small-Cap Growth	Small Growth	0.1
Scout Investments Mid-Cap Equity	Mid-Cap Blend	2.7
T. Rowe Price Dividend Growth	Large Blend	3.5
International Equity		
Invesco Oppenheimer Emerging Markets	Diversified Emerging Markets	3.5
MFS® International Large-Cap	Foreign Large Growth	3.9
QS Investors International Small-Cap	Foreign Small/Mid-Blend	0.5
Wellington International Value	Foreign Large Value	4.6

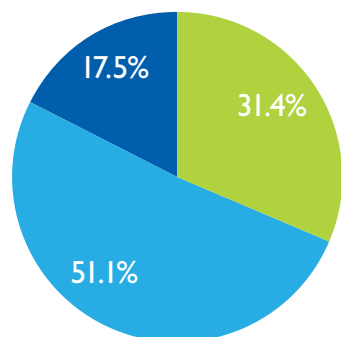
✓ Eligible for an optional living benefit.

PORTFOLIO OPTIMIZATION PORTFOLIOS

PORTFOLIO ALLOCATIONS AS OF 6/30/19

GROWTH ♦

Broad Asset-Class Allocations



- Fixed Income
- Domestic Equity
- International Equity

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Manager/ Fund Name	Morningstar Category	Allocation (%)
Fixed Income		
Ashmore Emerging Markets Debt	Emerging-Markets Bond	2.5
Barings Inflation Strategy	Inflation-Protected Bond	0.2
Pacific Asset Management Core Income	Corporate Bond	1.6
Pacific Asset Management Floating Rate Income	Bank Loan	1.0
Pacific Asset Management High Yield Bond	High-Yield Bond	2.5
PIMCO Inflation Managed	Inflation-Protected Bond	0.2
PIMCO Managed Bond	Intermediate Core Bond	7.7
T. Rowe Price Short Duration Bond	Short-Term Bond	1.5
UBS/Neuberger Berman Currency Strategies	Multicurrency	2.4
Western Asset Management Diversified Bond	Intermediate Core Bond	11.7
Domestic Equity		
AB Small-Cap Value	Small Value	0.8
AQR Equity Long/Short	Long-Short Equity	0.5
BlackRock Equity Index	Large Blend	3.7
BlackRock Large-Cap Growth	Large Growth	5.6
BlackRock Small-Cap Index	Small Blend	0.8
Boston Partners Mid-Cap Value	Mid-Cap Value	3.9
ClearBridge Large-Cap Value	Large Value	4.2
Franklin/BlackRock Small-Cap Equity	Small Value	0.8
Invesco Comstock	Large Value	4.0
Invesco Oppenheimer Main Street® Core	Large Blend	2.4
Ivy Mid-Cap Growth	Mid-Cap Growth	2.9
JPMorgan Value Advantage	Large Value	4.4
Lord Abbett Developing Growth	Small Growth	0.3
MFS® Growth	Large Growth	6.5
Principal Real Estate	Real Estate	2.0
Rothschild Small-Cap Growth	Small Growth	0.3
Scout Investments Mid-Cap Equity	Mid-Cap Blend	3.2
T. Rowe Price Dividend Growth	Large Blend	4.9
International Equity		
Invesco Oppenheimer Emerging Markets	Diversified Emerging Markets	5.0
MFS® International Large-Cap	Foreign Large Growth	5.3
QS Investors International Small-Cap	Foreign Small/Mid-Blend	1.0
Wellington International Value	Foreign Large Value	6.2

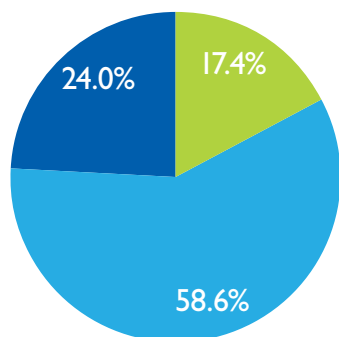
♦ Effective 9/9/19, eligible with Protected Investment Benefit, an optional living benefit.

PORTFOLIO OPTIMIZATION PORTFOLIOS

PORTFOLIO ALLOCATIONS AS OF 6/30/19

AGGRESSIVE-GROWTH

Broad Asset-Class Allocations



- Fixed Income
- Domestic Equity
- International Equity

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Manager/ Fund Name	Morningstar Category	Allocation (%)
Fixed Income		
Ashmore Emerging Market Debt	Emerging Markets Bond	2.0
Pacific Asset Management Core Income	Corporate Bond	0.7
Pacific Asset Management Floating Rate Income	Bank Loan	0.5
Pacific Asset Management High Yield Bond	High-Yield Bond	2.5
PIMCO Managed Bond	Intermediate Core Bond	3.5
T. Rowe Price Short Duration Bond	Short-Term Bond	0.5
UBS/Neuberger Berman Currency Strategies	Multicurrency	2.4
Western Asset Management Diversified Bond	Intermediate Core Bond	5.3
Domestic Equity		
AB Small-Cap Value	Small Value	1.1
AQR Equity Long/Short	Long-Short Equity	0.5
BlackRock Equity Index	Large Blend	3.9
BlackRock Large-Cap Growth	Large Growth	5.4
BlackRock Small-Cap Index	Small Blend	1.3
Boston Partners Mid-Cap Value	Mid-Cap Value	5.1
ClearBridge Large-Cap Value	Large Value	4.9
Franklin/BlackRock Small-Cap Equity	Small Value	1.2
Invesco Comstock	Large Value	4.7
Invesco Oppenheimer Main Street® Core	Large Blend	2.5
Ivy Mid-Cap Growth	Mid-Cap Growth	3.1
JPMorgan Value Advantage	Large Value	5.2
Lord Abbett Developing Growth	Small Growth	0.8
MFS® Growth	Large Growth	6.4
Principal Real Estate	Real Estate	2.9
Rothschild Small-Cap Growth	Small Growth	0.6
Scout Investments Mid-Cap Equity	Mid-Cap Blend	3.9
T. Rowe Price Dividend Growth	Large Blend	5.2
International Equity		
Invesco Oppenheimer Emerging Markets	Diversified Emerging Markets	6.5
MFS® International Large-Cap	Foreign Large Growth	7.3
QS Investors International Small-Cap	Foreign Small/Mid-Blend	1.5
Wellington International Value	Foreign Large Value	8.7

About Risk

Asset allocation, although intended to provide diversification, does not guarantee future results, ensure a profit, or protect against loss. Better returns could be achieved by investing in an individual fund or funds representing a single asset class rather than using asset allocation. A fund-of-funds is subject to its own expenses along with the expenses of the underlying funds. It is typically exposed to the same risks as the underlying funds in which it invests in proportion to the allocation of assets among those underlying funds. Each underlying fund has its own investment goal, strategy, and risks, and many are available for individual purchase. The prospectuses for the underlying funds are available at PacificLife.com.

Pacific Life is a product provider. It is not a fiduciary and therefore does not give advice or make recommendations regarding insurance or investment products.

You should carefully consider a variable annuity's risks, charges, limitations, and expenses, as well as the risks, charges, expenses, and investment goals of the underlying investment options. This and other information about Pacific Life are provided in the product and underlying fund prospectuses. These prospectuses are available from your financial professional or at PacificLife.com. Read them carefully before investing.

Pacific Life Fund Advisors LLC (PLFA), a wholly owned subsidiary of Pacific Life Insurance Company, is the investment adviser to the Portfolio Optimization portfolios and is responsible for determining the asset allocation mix for each portfolio. PLFA also does business under the name Pacific Asset Management and manages certain portfolios under that name.

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Under current law, a nonqualified annuity that is owned by an individual is generally entitled to tax deferral. IRAs and qualified plans—such as 401(k)s and 403(b)s—are already tax-deferred. Therefore, a deferred annuity should be used only to fund an IRA or qualified plan to benefit from the annuity's features other than tax deferral. These include lifetime income, death benefit options, and the ability to transfer among investment options without sales or withdrawal charges.

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Contract Form Series: 10-17800, ICC12:10-1252, 10-187OR (state variations may apply)

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